

BIBLIOGRAPHIC DATA SHEET

1. CONTROL NUMBER
PN-AAJ-0612. SUBJECT CLASSIFICATION (695)
AE50-0000-0000

3. TITLE AND SUBTITLE (240)

Rural women in Paraguay: the socio-economic dimension

4. PERSONAL AUTHORS (100)

Laird, J. F.

5. CORPORATE AUTHORS (101)

6. DOCUMENT DATE (110)

1979

7. NUMBER OF PAGES (120)

183p.

8. ARC NUMBER (170)

PA301.412.L188

9. REFERENCE ORGANIZATION (130)

Laird

10. SUPPLEMENTARY NOTES (590)

(In English and Spanish. Spanish, 183p.: PN-AAJ-062)

11. ABSTRACT (950)

12. DESCRIPTORS (920)

Rural women
Women in development
Fertility
Socioeconomic status
Families
Paraguay

13. PROJECT NUMBER (150)

14. CONTRACT NO. (140)

AID-526-446

15. CONTRACT
TYPE (140)

16. TYPE OF DOCUMENT (160)

JRAL WOMEN IN PARAGUAY : THE SOCIO-ECONOMIC DIMENSION

By

JUDITH FINCHER LAIRD

Prepared For

United States Agency for International Development, Washington, D.C.

**Determinants and Consequences of Fertility
Project Agreement No. 932-0616 No. 7 (FY'77)
Contract No. 526-446**

December 1979

Asunción, Paraguay

**República del Paraguay, Ministerio de Hacienda,
Dirección General de Estadística y Censos,
and USAID, Paraguay**

PRESENTATION

This report summarizes the results of the SOCIO-ECONOMIC SURVEY OF RURAL WOMEN IN PARAGUAY, 1978, as well as the comments and conclusions suggested by those who undertook this significant effort, the first of its kind to be undertaken in our country.

The principal task of this research consisted in studying the interdependence and interaction of economic patterns in relation to the rural female work force and in examining other critical socio-cultural factors which affect the participation of this very important sector of our population in the country's development.

This project has been possible due to the economic assistance of the Agency for International Development of the United States of America (USAID) in Paraguay.

Dr. Judith Fincher Laird, who was contracted by USAID for the purpose, was responsible for the technical direction of the research work and for the preparation of the final report, and was basically responsible for designing the survey questionnaire, for preparing the coding manual and for performing the data analysis.

The Dirección General de Estadística y Censos, through its Census Department, was responsible for executing the project. The Head of this Department, Mr. F. David Vera, was responsible for directing the field work, for supervising the design of the survey and of the questionnaire, for the preparation of the interviewer's manual and for the revision of the final report. Lic. Fulvia Brizuela de Ramírez and Lic. Juan Schoemaker acted as demographic consultants. The field team was composed of supervisors and interviewers who were responsible for the quality of the basic data.

Finally, the processing of preliminary data was performed by the National Computer Center of the National University, while the processing of the complete set of three hundred and forty seven survey variables was performed by the USAID data Management Division, Washington D.C., using a pre-packed software program for the Social Sciences (SPSS).

In presenting this report, we wish to make public our deepest gratitude to all those institutions and persons who helped fulfill the expectations we nourished as we embarked upon this research.

La Dirección General

TABLE OF CONTENTS

	Page
PRESENTATION	i
TABLE OF CONTENTS	ii
LIST OF TABLES AND ILLUSTRATIONS	iii
CHAPTER I: INTRODUCTION	i
CHAPTER II: THE RURAL FAMILY	13
CHAPTER III: WOMEN HEADED HOUSEHOLDS	42
CHAPTER IV: DETERMINANTS AND CONSEQUENCES OF FERTILITY	66
CHAPTER V: SOCIO-ECONOMIC PARTICIPATION PATTERNS	96
CHAPTER VI: CONCLUSION	156
Appendix 1: Confidence Intervals	161
Appendix 2: Correlation Matrices	162
Appendix 3: The Urban Sample	167
Appendix 4: Guide to the Use of FEMRURAL Archives	169
BIBLIOGRAPHY	170

LIST OF TABLES

Table I, 1:	Interview of Status of Socio - Economic Survey of Rural Paraguayan Woman (FEMRURAL), 1978	Page 3
Table I, 2:	Role of the Interviewees in FEMRURAL Households	4
Table I, 3:	Relationship of the Interviewee to the Head of Household	4
Table I, 4:	Relation of the Interviewee to the Head of Household by Marital Status	5
Table I, 5:	Age Breakdown of FEMRURAL Interviewees	6
Table I, 6:	Sample Design	8
Table I, 7:	Expansion Factor	8
Table I, 8:	Total Population Surveyed in FEMRURAL Compared to the 1972 Census	10
Figure 1:	Population Pyramid FEMRURAL (1978)	11
Figure 2:	Rural Population Pyramid, 1972 Census	12
Table II, 1:	Discount Rates for Gross to Net Conversions	14
Table II, 2:	Net Family Income (Per Capita), FEMRURAL, 1977	15
Table II, 3:	Household Possessions Inventoried	16
Table II, 4:	Type of Toilet Facility by Income Group	17
Table II, 5:	Type of Cooking Apparatus by Income Level	18
Table II, 6:	Source of Water Supply by Income Level	19
Table II, 7:	Educational Level of FEMRURAL Interviewees by Family Income	20
Table II, 8:	Educational Level of Interviewees by Family Type	21
Table II, 9:	Per Capita Family Income by Economic Zone (All Families, 1977)	22
Table II, 10:	Length of Residence by Income Level	23
Table II, 11:	Length of Residence of Interviewees by Zone	24
Table II, 12:	Principal Economic Activity of Families Surveyed	25
Table II, 13:	Farm Families by Zone	26
Table II, 14:	Farm Family Income (Per Capita) in 1977 by Economic Zone	27
Table II, 15:	Number of Hectares Cultivated by Farming Families, Per Income Level	28
Table II, 16:	Size of Units of Production by Regional Zones	29
Table II, 17:	Cotton Farmers by Family Income (Per Capita) and Number of Hectares Cultivated in 1977	29
Table II, 18:	Tobacco Farmers by Family Income (Per Capita) and Number of Hectares Cultivated in 1977	29
Table II, 19:	Soybean Farmers by Net Family Income (Per Capita) and Number of Hectares Cultivated in 1977	30
Table II, 20:	Regional Distribution of Principal Economic Activities (FEMRURAL)	31
Table II, 21:	Tenancy Structure by Economic Zone (Families with Land Available for Crops and/or Livestock)	32
Table II, 22:	Land Tenancy by Income Level (Families with Land)	33
Table II, 23:	Family Structure of FEMRURAL Households	34
Table II, 24:	Regional Variations in Family Type	35
Table II, 25:	Housing Types of FEMRURAL Families	36
Table II, 26:	Housing Type Compared to Families Earning Less than \$20,000 Per Capita (1977)	37
Table II, 27:	Regional Distribution of Languages Used Habitually by FEMRURAL Families	38

	Page
Table II, 28: Language Used Habitually at Home, Compared to Language of the Interview	39
Table II, 29: Language Used at Home by Family Income (Per Capita)	40
Table III, 1: Female - Headed Households	42
Table III, 2: Percentage of Women - Headed Households	43
Table III, 3: Regional Distribution of Male and Female - Headed Households	44
Table III, 4: Comparison of Male and Female - Headed Households (By Type)	45
Table III, 5: Net Per Capita Family Income by Family Type (Families with Incomes in 1977)	45
Table III, 6: Family Structure of Women - Headed Households	46
Table III, 7: Place of Childhood Socialization	47
Table III, 8: Educational Levels of Respondents (Male and Female - Headed Households)	48
Table III, 9: Relation of the Interviewee to the Head of Household by Marital Status	49
Table III, 10: Age Structure by Role Within the Family	50
Table III, 11: Occupational Classification by Sex of Head	51
Table III, 12: Income Structure by Sex of Head of Households	52
Table III, 13: Role of Interviewee, by Net Family Income (Per Capita)	52
Table III, 14: Value of Household Possessions Inventoried by Sex of Head of Household	53
Table III, 15: Male and Female - Headed Family Units with Swine, Milk Cows and Chickens	54
Table III, 16: Family Size by Sex of Household Head (Interviewed Households)	55
Table III, 17: Management of Daily Household Expenses (Female - Headed Households)	56
Table III, 18: Management of Daily Household Expenses (Male - Headed Households)	56
Table III, 19: Co - operative Decision - Making in Male - Headed Households by Income Level, Guaranties (Education of Children)	57
Table III, 20: Basic Decision - Making by Role (Female - Heads, Consensual Partners and Wives)	58
Table III, 21: Basic Decision - Making in Male - Headed Households	59
Table III, 22: Interviewee Involvement in Decision - Making (Male - Headed Households)	60
Table III, 23: Animal Care Tasks by Role (Female - Headed Households)	61
Table III, 24: Animal Care Tasks by Role (Male-Headed Households)	63
Table III, 25: Number of Tasks Performed in the Care of Swine	64
Table III, 26: Number of Tasks Performed in the Care of Cattle	64
Table III, 27: Number of Tasks Performed in the Care of Chickens	65
Table IV, 1: Estimation of Present Fertility Levels of All Respondents, Aged 15 - 49	67
Table IV, 2: Marital Status of Respondents by Number of Live Births	68
Table IV, 3: Marital Status of Respondents by Number of Live Births (15-29 Year Olds)	69
Table IV, 4: Marital Status of Respondents by Number of Live Births (30-49 Year Olds)	69
Table IV, 5: Marital Status of Respondents by Number of Live Births (50 Years of Age and Older)	70
Table IV, 6: Number of Live Births by Educational Level of Respondents	71
Table IV, 7: Number of Live Births of Respondents by Per Capita Family Income (1977)	73
Table IV, 8: Current Use of Contraception by Method and Place Obtained (Women "At Risk")	74
Table IV, 9: Regional Distribution of Contraceptive Use	76
Table IV, 10: Family Planning by Role	77
Table IV, 11: Roles in Family Planning by Control Groups	78
Table IV, 12: Contraception by Control Groups	78
Table IV, 13: Family Planning Attitudes of the Interviewee Compared to Family Planning Decision-Making Roles	79

	Page
Table IV, 14: Contraceptive Use by Respondent's Family Planning Attitude (Women "At Risk")	80
Table IV, 15: Number of Live Births by Respondent's Attitude Toward Family Planning (Women "At Risk")	81
Table IV, 16: Contraceptive Behavior by Number of Live Births (Women "At Risk")	82
Table IV, 17: Contraceptive Status by Per Capita Family Income Level (Women "At Risk")	83
Table IV, 18: Contraceptive Use by Educational Level (Women "At Risk")	84
Table IV, 19: Educational Level of Contraceptive Users	85
Table IV, 20: Contraceptive Use by Educational Level (15-29 Year Olds "At Risk")	86
Table IV, 21: Contraceptive Use by Educational Level (30-49 Year Olds "At Risk")	87
Table IV, 22: Per Capita Family Income Level by Family Size	89
Table IV, 23: Per Capita Family Income by Family Type	89
Table IV, 24: Fertility Levels of Participants in Socio-Educational Activities	90
Table IV, 25: Fertility by Tasks Performed During the Crop Cycle	91
Table IV, 26: Type of Economic Participation by Fertility Level	93
Table IV, 27: Women Status Groups by Fertility Level (Women Who Worked Only at Home)	93
Table IV, 28: Type of Economic Participation by Fertility Level (Women Aged 50 and More)	94
Table V, 1: Agricultural Activities of FEMRURAL Families (1977-78 Agricultural Year)	97
Table V, 2: Agricultural Typologies	97
Table V, 3: Crop Cycle Participation by Respondents whose Families Marketed A Crop	98
Table V, 4: Average Number of Tasks Performed in the Crop Cycle by Respondents from Farm and Part-Time Farm Households	99
Table V, 5: Selected Principal Cash Crops by Difficulty of Tasks Performed	100
Table V, 6: Regional Distribution of Crop Cycle Participants (All Commercial Agricultural Operations)	101
Table V, 7: Participation Patterns (Selected Principal Cash Crops)	102
Table V, 8: Number of Tasks Performed (Selected Principal Cash Crops)	103
Table V, 9: Crop Cycle Participation by Per Capita Family Income (Farm Households)	104
Table V, 10: Crop Cycle Participation by Income Level (Cotton Farmers)	105
Table V, 11: Participants by Per Capita Family Income (Part-Time Farming Households)	105
Table V, 12: Crop Cycle Participation by Hectares Cultivated (Farm Families Only)	106
Table V, 13: Crop Cycle Participants by Hectares Cultivated (Farm Families Only)	107
Table V, 14: Crop Cycle Participants by Family Type	108
Table V, 15: Educational Level by Agricultural Type	109
Table V, 16: Branch of Economic Activity by Economic Zones (Families with Subsistence Crops Only)	110
Table V, 17: Hectares Cultivated (Male and Female-Headed Farm Families Only)	111
Table V, 18: Number of Tasks Per Hectares Cultivated (Participants from Female-Headed Farm Families)	111
Table V, 19: Number of Tasks per Hectares Cultivated (Participants from Male-Headed Farm Families)	112
Table V, 20: Difficulty of Tasks Performed in Field Work by Female Heads, Consensual Partners and Wives (Participants only from Commercial Agricultural Operations)	112
Table V, 21: Per Capita Income Levels (Male and Female-Headed Farm Families)	113
Table V, 22: Social Role of Respondent by the Agricultural Status of the Family	113
Table V, 23: Average Number of Tasks Performed in the Crop Cycle	114

	Page
Table V, 24: Social Roles by Crop Specializations (Selected Crops)	
Table V, 25: Comparison of Commercial Production Units (Participants and Non-Participants)	114
Table V, 26: Comparison of Income Levels (Non-Participants to All Farm Families)	115
Table V, 27: Age Specific and Crude Rates of Economic Participation (FEMRURAL)	115
Table V, 28: Social Roles of Respondents in Each Household Compared to Female Family Members (Fifteen Years of Age and Older) Who Worked During the Reference Week	122
Table V, 29: Women Family Members Who Worked During the Reference Week by the Per Capita Family Income	123
Table V, 30: Economic Participation of FEMRURAL Respondents	124
Table V, 31: Work Status of FEMRURAL Respondents	125
Table V, 32: Branches of Economic Activity (Work Performed At Home)	126
Table V, 33: Activities Performed at Home	127
Table V, 34: Number of Respondents Who Worked At Home By Number of Tasks Performed	128
Table V, 35: Branches of Economic Activity of Respondents Who Worked Away from Home	129
Table V, 36: Number of Activities Performed Away From Home	130
Table V, 37: Regional Distribution of Economic Activity Patterns	131
Table V, 38: Respondent's Economic Activity Pattern by Family's Principal Economic Activity	132
Table V, 39: Economically Active Respondents by Social Role (Reference Week)	133
Table V, 40: Respondents Who Worked Away from Home by Social Role in the Family (Reference Week)	134
Table V, 41: Economic Activity Patterns of Female Heads by Age Group	134
Table V, 42: Economic Activity Pattern of Respondents by Per Capita Family Income	135
Table V, 43: Work Performed At Home by Number of Hectares Cultivated in the 1977-78 Agricultural Year	
Table V, 44: Economic Activity Patterns of Respondents by the Number of Hectares Cultivated in the 1977-78 Agricultural Year	136
Table V, 45: Economic Activity Status by Respondent's Educational Level	137
Table V, 46: Weekly Earnings of All Respondents Engaged in Remunerative Work	138
Table V, 47: Principal Work Activity of Other Female Family Members	139
Table V, 48: Ratio of All Women Family Members Earnings to Total Family Income During the Reference Week	140
Table V, 49: Ratio of Respondents Weekly Earnings to Total Family Income During the Reference Week	140
Table V, 50: Ratio of Respondents' Weekly Earnings to the Total Weekly Earnings of All Female Family Members (Week of Reference)	141
Table V, 51: Respondents Weekly Earnings by Social Role	142
Table V, 52: Total Weekly Earnings of Respondents by Age	142
Table V, 53: Earning Capacity of Respondents by Their Education Level	143
Table V, 54: Respondents' Weekly Earnings Compared to Their Participation in Special Training Courses	
Table V, 55: Weekly Income Generated Away from Home	144
Table V, 56: Per Capita Family Income Level Compared to Respondent's Total Weekly Earnings	145
	146

		Page
Table V,	57: Arithmetic Means of Earnings from Activities Performed At Home and Total Weekly Earnings of the Respondent and Family Income (Per Capita) by Activity Performed During the Reference Week	147
Table V,	58: Arithmetic Means of Earnings from Activities Performed Away from Home and Total Weekly Earnings of the Respondents and Family Income (Per Capita) by Activity Performed During the Reference Week	148
Table V,	59: Crop Cycle Activity Status (Agricultural Year) of Respondents Compared to Their Economic Activity Pattern (Reference Week)	150
Table V,	60: Field Work by Economic Activity Status During the Reference Week	151
Table V,	61: Crop Cycle Participants (Agricultural Year) of Respondents by Economic Activity Pattern For Male and Female-Headed Households	151
Table V,	62: Family's Principal Income-generating Activity by Per Capita Family Income of Respondents Who Did Unremunerated Family Work Only	152
Table V,	63: Socio-Economic Participation of Respondents by Number of Tasks Performed During the Crop Cycle	153
Table V,	64: Socio-Educational Participation Compared to Economic Participation Patterns	154

CHAPTER I

INTRODUCTION

The primary purpose of the Socio-Economic and Demographic Survey of Rural Paraguayan Women (FEMRURAL) is to generate base-line data on rural women's socio-economic participation and contribution. International donor agencies and local government agencies need precise, detailed data on the rural female population in order to effectively plan and implement rural development programs. Data are needed on the living arrangements, ways of earning a living, income levels, productive and reproductive capacities, educational levels, skills possessed and the standard of living (status) of rural women. FEMRURAL supplies much of this information, although many areas of investigation are touched on peripherally. Consequently, there is a need for follow-up case studies at the micro-level of analysis to focus more upon interpersonal relations and the socialization process within the familial context. This type of research lies beyond the scope of this survey and report.

This report defines rural women in terms of their personal characteristics, such as age, marital status, fertility, education, etc., and family characteristics, such as family size, income level, housing type, etc., and compares women's socio-economic behavior patterns with their personal attributes and family backgrounds in the appropriate dimensions. Thus, rural women are examined in relation to the households, or family groups to which they belong. This technique is particularly useful in describing the differences between women living in women-headed households, compared to other respondents.

Before conducting the field test, the preliminary version of the questionnaire was distributed to several institutions engaged in rural sector activities so that they might make comments and suggestions. The field test of the instrument was conducted in a minifundia area which is assumed to contain a continuum of economic activities and land tenancy types. The pre-coded format of the questionnaire was designed on the basis of the findings of the field test. If the respondent's answer did not appear in the pre-coded list, the actual response was noted for recoding later. Also, interviewers noted "not applicable" in those cases when the question did not apply to the respondent.

Women's work activities are studied in several dimensions: their participation in agricultural production and their participation in various kinds of non-domestic work activities in any work locale or combination of work locales. Since agricultural work is cyclical, women's activities are examined in two periods of reference: during the cycle of the family's principal cash crop and during the week prior to the interview. In recognition that rural women often undervalue their own contributions and do not consider their work as economic activities, FEMRURAL utilizes a list of activities women may have engaged in, rather than asking if they "worked" ^{1/} In this manner a more complete description of women's economic participation is obtained.

In the rural environment women often work in more than one branch of economic activity, performing complementary tasks during the course of a week. In order to measure all economic activities performed by interviewees during the reference week, FEMRURAL imposes no arbitrary minimum time per activity during the period. Time use in rural areas is difficult to ascertain by survey methodology and should be left to participant-observer researchers working on the micro-level. ^{2/}

1/

This technique has been enthusiastically acclaimed by researchers studying women's labor force participation in Latin America. The RAND-INCAP Guatemala survey (1974-75), also utilized this technique.

2/

This is also the conclusion reached by S. D'Souza in his report to the Statistical Office of the United National Secretariat on the problems encountered by national statistical offices in studying the role and status of women. See Stanislas D'Souza, "Sex-Based Stereotypes: Sex Biases and National Data Systems," paper presented to the IUPERJ Seminario a Mulher na Força de Trabalho na América Latina, 23-26 November 1978, Rio de Janeiro, Brazil.

2

Since time use is not a reliable tool by which to gauge women's economic contribution in rural Paraguay, FEMRURAL uses the earnings record of women engaged in remunerative work. In this way the actual economic contribution of rural women to the family can be measured. (See Chapter V.)

In order to study the role of women within the family FEMRURAL sought to identify the woman in each household who had the primary economic and socialization responsibilities. Since social roles are not evenly spread in the population, a hierarchy of selection was established to identify the women to be interviewed. The interviewee selection was as follows: first priority, female head of household, if any; second priority, spouse or consensual partner (*compañera*) of the male head; third, daughter of the male head, in the absence of other adult females; and fourth, the senior woman in charge of household management, if there was more than one woman with a management role. All respondents were fifteen years of age or older.

FEMRURAL elicited information directly from the rural women, allowing them to consult with other family members, if necessary, to supply the desired data. Only 0.5 o/o of the women were unable to do so. (See Table I, 1.) To lessen the social distance between the interviewers and the respondents and to create a woman-to-woman interview environment, only female interviewers were used. Whenever possible the interviewers attempted to isolate the respondent from other family members in order that they not influence the responses, although this proved difficult. Questionnaires were pre-coded to indicate the presence of other adults during the interview.

The interviewer selection was made after two weeks of theoretical and practical training using simulated interviews and a field-work trial in a rural area in Paraguari. Of the 25 participants in the training course, 12 were chosen. The use of bi-lingual (Spanish-Guaraní) interviewers is essential for conducting field work in rural Paraguay. All interviewers used in the survey are fluent in Spanish and Guaraní and some also speak Portuguese. The Portuguese-speaking interviewers were assigned to work in areas of Brazilian colonization. 76 o/o of all interviews were conducted in Guaraní and 7.4 o/o were conducted in Jopará, a mixture of Spanish and Guaraní.

The most critical questions were translated into Guaraní so that the translation would be uniform. The use of dual-language questionnaires has not been a common practice in past surveys undertaken in Paraguay because it is felt that inclusion of Guaraní in the same questionnaire is felt to be more confusing than helpful or simply not necessary since Guaraní is the first language of most Paraguayans. The field test convinced this team that at the very least the translation of technical questions was necessary to assure a uniform translation.

Interviewees

Interviews were completed in 88.8 o/o of all rural households in the sample, and in 92.6 o/o of those households containing an eligible woman. The completion rate was slightly lower in the urban sample. 3/ (Table I, 1)

3/

Data from the urban sample are reported in Appendix 3.

TABLE 1.1
Interview Status of Socio - Economic Survey of
Rural Paraguayan Women (FEMRURAL) 1978.

Households Selecteds	Rural Sample	Urban Sample
<u>Total Households</u>	<u>2649</u>	<u>281</u>
Eligible Respondent Interviewed	2352	237
No Eligible Respondent	106	11
Eligible Respondent Absent	177	22
Refusals & Incapacitation	11	6
Data Not Ascertained	3	5
	100.0 o/o	100.0 o/o
	88.8 o/o	84.3 o/o
	4.0 o/o	3.9 o/o
	6.7 o/o	7.8 o/o
	0.4 o/o	2.1 o/o
	0.1 o/o	1.8 o/o
<hr/>		
Individual Selection		
<u>Total Respondents*</u>	<u>2540</u>	<u>270</u>
Completed Interview	2352	223
Eligible Respondent Absent	177	22
Refusals	5	4
Mental or physical Incapacitation of Respondent	6	2
Not Ascertained	0	5
	100.0 o/o	100.0 o/o
	92.6 o/o	87.8 o/o
	7.0 o/o	8.1 o/o
	0.2 o/o	1.5 o/o
	0.2 o/o	0.7 o/o
	0.0 o/o	1.9 o/o

* Includes all households with eligible respondents.

Of all women interviewed, wives constituted 66.8 o/o of the respondents, followed by female heads of household, 15.3 o/o ; female consensual partners, or *compañeras*, 14.1 o/o; and all other women other than the above who managed rural households, 3.8 o/o. (Table 1, 2) The majority of "others" who acted as household managers were daughters of the head of household. Grand-daughters, nieces, sisters, mothers and other female relatives, etc., also occasionally fulfilled this role. (Table 1, 3) Throughout this report the social role of the interviewees are explored in relation to their socio-economic characteristics and activity patterns. Female heads of household are treated in a separate chapter since their characteristics set them aside from other rural women.

TABLE 1, 2
Role of the Interviewees in FEMRURAL Households

Social Roles	Number	Percent of Total
Total	2352	100.0
Female Heads of Household	360	15.3
Female Consensual Partners	321	14.1
Wives	1572	66.8
Others	89	3.8

TABLE 1, 3
Relationship of the Interviewee to the Head of Household

Relation to Head	Total	Percent of Total
Total	2352	99.9 o/o
Female Heads	360	15.3 o/o
Wives/Consensual Partners	1904	81.0 o/o
Daughters	50	2.1 o/o
Sisters	8	0.3 o/o
Sisters-in-law	1	0.0 o/o
Daughters-in-law	5	0.2 o/o
Mothers	9	0.4 o/o
Mothers-in-law	1	0.0 o/o
Others (nieces, grand-daughters, aunts, etc.)	14	0.6 o/o

* Any discrepancies in the total percentage in this and subsequent tables are due to rounding off.

The marital status of each of these groups of interviewees is presented in Table 1, 4. The overwhelming majority of single, widowed and divorced/separated women were female heads, 74 o/o, 93 o/o and 88 o/o, respectively. Note that six female heads and eleven other women who were not the consensual partner of the head of the household listed themselves as living in consensual union. These are not discrepancies, but merely indicate that these women maintained sexual liaisons with a man who was not the head of household, nor a member of the household.

TABLE 1, 4

67

Relation of the Interviewee to the Head of Household by Marital Status

Relation to Head	Marital Status					Total
	Single	Consensual Union	Married	Widow	Divorced/ Separated	
Female	205	6	8	119	22	360
Head	56.9	1.7	2.2	33.1	6.1	
	74.0	1.8	0.5	93.0	88.0	15.3
Wife-	7	324	1572	0	1	1904
Consensual	0.4	17.0	82.6	0.0	0.1	
	2.5	96.7	99.1	0.0	4.0	81.0
Daughter	43	1	3	1	2	50
	86.0	2.0	6.0	2.0	4.0	
	15.5	0.3	0.2	0.8	8.0	2.1
Sister	6	0	0	2	0	8
	75.0	0.0	0.0	25.0	0.0	
	2.2	0.0	0.0	1.6	0.0	0.3
Sister-in-law	0	0	1	0	0	1
	0.0	0.0	100.0	0.0	0.0	
	0.0	0.0	0.1	0.0	0.0	0.0
Daughter in-law	0	2	3	0	0	5
	0.0	40.0	60.0	0.0	0.0	
	0.0	0.6	0.2	0.0	0.0	0.2
Mother	5	0	0	4	0	9
	55.6	0.0	0.0	44.4	0.0	
	1.8	0.0	0.0	3.1	0.0	0.4
Mother-in-law	0	0	0	1	0	1
	0.0	0.0	0.0	100.0	0.0	
	0.0	0.0	0.0	0.8	0.0	0.0
Others	11	2	0	1	0	14
	78.6	14.3	0.0	7.1	0.0	
	4.0	0.6	0.0	0.8	0.0	0.6
Total	277	335	1587	128	25	2352
	11.8	14.2	67.5	5.4	1.1	100.0

6.

All children born into consensual unions or to other unmarried women are classified as "illegitimate." Since 44.5 o/o of all registered births in Paraguay in 1974 were illegitimate, one might assume that the percentage of consensual unions is much higher. Yet, both the 1972 Census and FEMRURAL reported the percentage of consensual unions as less than 15.0 o/o. 4/

The census data are comparable with those of FEMRURAL, which reported on women fifteen years of age and older. Both the census and FEMRURAL defined consensual partners as convivientes, a couple sharing a dwelling unit. Therefore, the sexual liaisons of secondary members of each household are not reported in either source. Unmarried daughters who maintain relations with a man living in another dwelling are listed in the census as "single," not as participants in a "free union." Estimates which place the number of "free unions" at between 32 o/o and 50 o/o of all couples, should not be confused with households headed by consensual partners. 5/

The high percentage of married couples (66.8 o/o) in the households interviewed would suggest that the nuclear family is alive and well in rural Paraguay. But the high illegitimacy rates testify to the family turmoil which exists. Illegitimates are the product not only of consensual unions, but also of unwed mothers.

The breakdown of respondents by age groups appears in Table I, 5. The mean age of all respondents is 41.5 and the median age, 40.0. 6/

TABLE I; 5

Age Breakdown of FEMRURAL Interviewees

Age Groups	Number	Percentage of Total
Total	2352	99.9 o/o
15 - 19	80	3.4 o/o
20 - 24	226	9.6 o/o
25 - 29	269	11.4 o/o
30 - 35	289	12.3 o/o
35 - 39	278	11.8 o/o
40 - 44	262	11.1 o/o
45 - 49	254	10.8 o/o
50 - 54	207	8.8 o/o
55 - 59	169	7.2 o/o
60 - 64	135	5.7 o/o
65 & More	183	7.8 o/o

4/

The 1972 Census reported 9.9 o/o of rural males and 11.3 o/o of rural females (twelve years of age and older) lived in consensual union. Censo Nacional de Población y Viviendas, 1972, Cuadro 4. The differences in the male-female percentages is attributed to the fact that some men declared themselves "single" even though they lived in a consensual union.

5/

Darío Castagnino, La Mujer en el Contexto Socio-Económico y Jurídico del Paraguay (Asunción, Paraguay: Centro Paraguayo de Estudios de Población, n.d.), pp. 24-29, 62-65.

6/

FEMRURAL, Frequency, EDADRES.

The FEMRURAL survey consists of two portions: a one-stage probability sample of approximately one percent of all rural dwelling units in Eastern Paraguay and a small urban sample of households in five urban communities adjacent to the rural sampling units. ^{7/} The urban sample provides information on women's socio-economic participation continuum and is used for purposes of comparison. (See Appendix 3.)

The rural sample consists of 2353 completed interviews in 100 sampling units in 83 Districts. All Departments in Eastern Paraguay are represented in the sample. The sample excludes the Chaco (Western Paraguay), an area which contains only 3.0 o/o of the country's population, as well as 0.8 o/o of the population in Eastern Paraguay, who according to the Paraguayan Bureau of the Census lived in inaccessible areas.

To achieve optimum geographical representation of rural women, the sample combined a probability sample with a quota (at the segmental level). The resulting blending of two sampling methodologies results in a sample which is geographically representative and proportional to size at the Departmental, District and locality level, but not at the segmental level. (See Table I, 6.) Since no list frame was made of the selected segments, the probability of selection at the household level is not known. Consequently, although the sample is representative, the precision of the sample cannot be determined with statistical rigor. This loss of precision in not knowing the probability of selection of each household resulted from an attempt to cut costs by eliminating listing the dwelling units in each sampling segment in favor of a fixed cluster, or quota. Since the clusters are large (over half of the dwellings per sampling unit) and the population within each sampling segment is fairly homogeneous, it is unlikely that the resulting sample would have been significantly different had a list frame been incorporated. Nevertheless, although the Expansion Factor calculated from the FEMRURAL sample is presented in Table I, 7, this calculation is not used in this report, although it is felt to be fairly accurate. ^{8/}

7/

The basic geo-political unit in Paraguay is the Department (Departamento) which is sub-divided into Districts (Distritos). Below the District level are colonies and rural villages (compañías).

8/

The schematic of the sampling methodology was drawn up by Carlos Cavillini, a sampling statistician with CEPAL (Comisión Económica Para América Latina). Other statisticians and sampling experts consulted in connection with the FEMRURAL sampling methodology include Leo Morris of the Center for Disease Control in Atlanta, Ga.; Jerry Weaver, formerly of the Technical Support Bureau of the Rural Development Division of the Agency for International Development; Don Lurey of the U.S. Bureau of the Census; and Jack Rosholt, formerly with the Inter-American Geodetic Survey, Paraguay.

TABLE 1, 6
SAMPLE DESIGN

Step	Sampling	Size of Population	Sample	Methods of Selection	Probability of Selection in Sampling Segment	Fractional Sample	Field of Variation
1	Segment	N = 4810	n = 100	pptv Δ	$P_i = \frac{M_i}{M} = \frac{50}{240539}$ $= \frac{1}{4810}$	$f_i = nP_i = \frac{100}{4810}$	$i = \frac{1}{1; N}$ $i = \frac{1}{1; m}$
2	Dwelling	$M_i = 50$	$m_i = 27$	quota *	$P_{ij} = \frac{1}{M_i}$	$f_2 = \frac{27}{50}$	$j = \frac{1}{1; M_i}$ $j = \frac{1}{1; m_i}$

Variables: M = 240, 539 (total number of dwelling units in area studied)
 m = 2700
 $M_i = 50$ (one sampling unit, 50 dwelling units) j = dwelling
 N = 4810 (total number of segments) i = segment
 pptv Δ = (systematic probability sample) n = (segments in the sample)
 p = probability

Up to this point the sampling methodology is statistically rigorous. Due to the fact that some precision is lost because the probability of selection of the household is not known, the final steps of the sampling design are not statistically rigorous.

TABLE 1, 7
Expansion Factor

$$\left(\hat{Y} = \sum_{i=1}^n \sum_{j=1}^{m_i} \frac{1}{f_1 f_2} Y_{ij} \right) = \frac{4810}{100} \frac{(50)}{(27)} \sum_{i=1}^1 \sum_{j=1}^{m_i} Y_{ij} = \frac{240500}{2700} \sum_{i=1}^n \sum_{j=1}^{m_i} Y_{ij} = 89 \sum_{i=1}^n \sum_{j=1}^{m_i} Y_{ij}$$

Example:

$\hat{Y}(\text{modista}) = 89 (200) = 17,800$ When 200 women report their occupation as modista, then 17,800 can be expected in the total population.

$\hat{Y}(\text{persons}) = 89 (100) 27 (6) = 1,441,800$ persons (if average family size is 6)

Another indication of the representativeness of the data is that the variables in all major crosstabulations are highly associated and systematically related, and the data are internally consistent. Furthermore, a comparison of the age structure of FEMRURAL households with that of the total rural population in 1972 shows a high degree of similarity. (Table I, 8) This data is represented as population pyramids in Figures 1 and 2. The two population pyramids when superimposed nearly coincide. The largest difference between the pyramids is found among the younger age groups. Underenumeration of younger household members is consistently found in censuses and surveys.^{9/}

Presentation of Data

Most tables which appear in this report give the number of cases per cell with two percentages below. The first percentage compares the number of cases per cell to the Row Total, and the second, to the Column Total. Occasionally, only one set of percentages is given, in which case ROW PCT (row percentage) or COL PCT (column percentage) appears below the table. All tables are from FEMRURAL unless otherwise noted.

The software package used in processing survey data automatically applied the Chi Square test of significance to all crosstabulations. All tables presented here are significant at $\leq .001$, which means that systematic relationships exist between the variables and that a table with as large a deviation from expected frequencies would occur by chance in only one sample out of 1,000. This level of significance is considered to be a very strict criteria for social science research. Therefore, the variables in the tables presented here are highly associated and the relationships between the variables examined in any table are systematic.

The statistical test used for regression analyses is the F Test, which gives the level of significance of the correlation coefficient. The interpretation of significance is the same as for the Chi Square.

9/

See the study by E.S. Marks, "Informe sobre algunos resultados preliminares de la Encuesta Post Censal de Corea (1970) y Paraguay (1972)," U.S. Bureau of the Census.

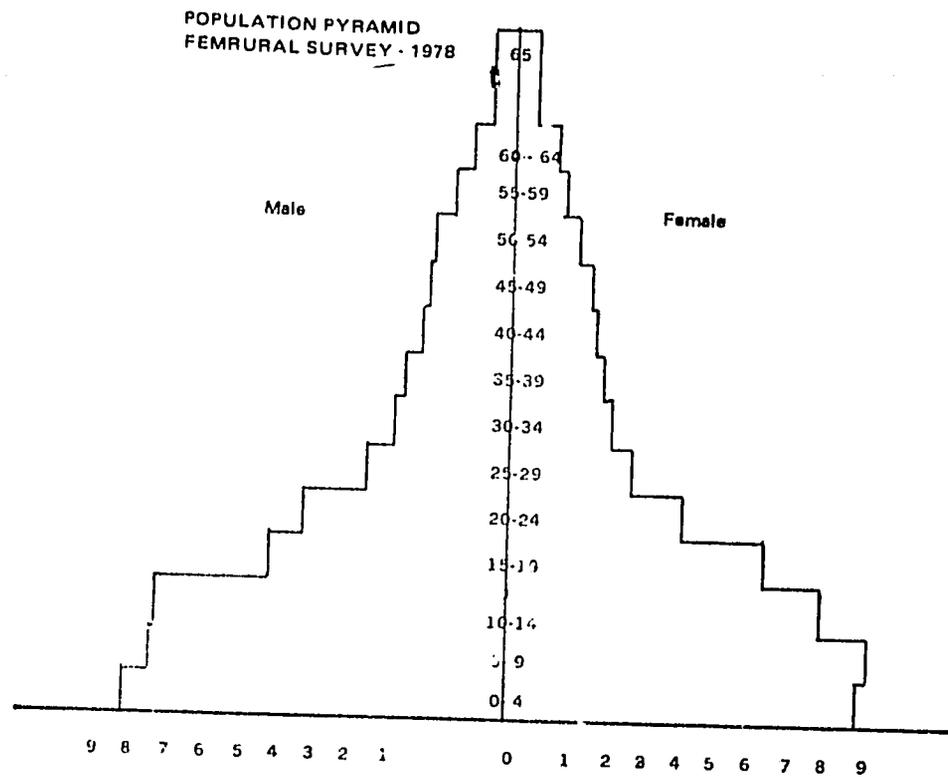
TABLE 1, 8
Total Population Surveyed in FEMRURAL,
Compared to the 1972 Census

	FEMRURAL		Census (1972)	
	Males	Females	Males	Females
0 - 4	8.4	7.9	9.0	8.7
5 - 9	7.7	8.1	8.6	8.2
10 - 14	7.6	7.1	7.4	6.6
15 - 19	5.1	5.8	5.1	5.0
20 - 24	4.4	4.0	3.9	3.7
25 - 29	3.0	2.9	3.0	3.0
30 - 34	2.4	2.4	2.6	2.5
35 - 39	2.2	2.2	2.1	2.2
40 - 44	1.8	2.0	2.2	2.0
45 - 49	1.7	1.9	1.7	1.7
50 - 54	1.6	1.6	1.7	1.5
55 - 59	1.2	1.3	1.1	1.1
60 - 64	0.8	1.1	0.9	0.9
65 & More	1.6	1.2	1.7	2.0
Total	6,865 49.6 o/o	6,987 50.4 o/o	752,431 51.0 o/o	723,179 49.0 o/o

Source: FEMRURAL and 1972 Census.

Figure 1

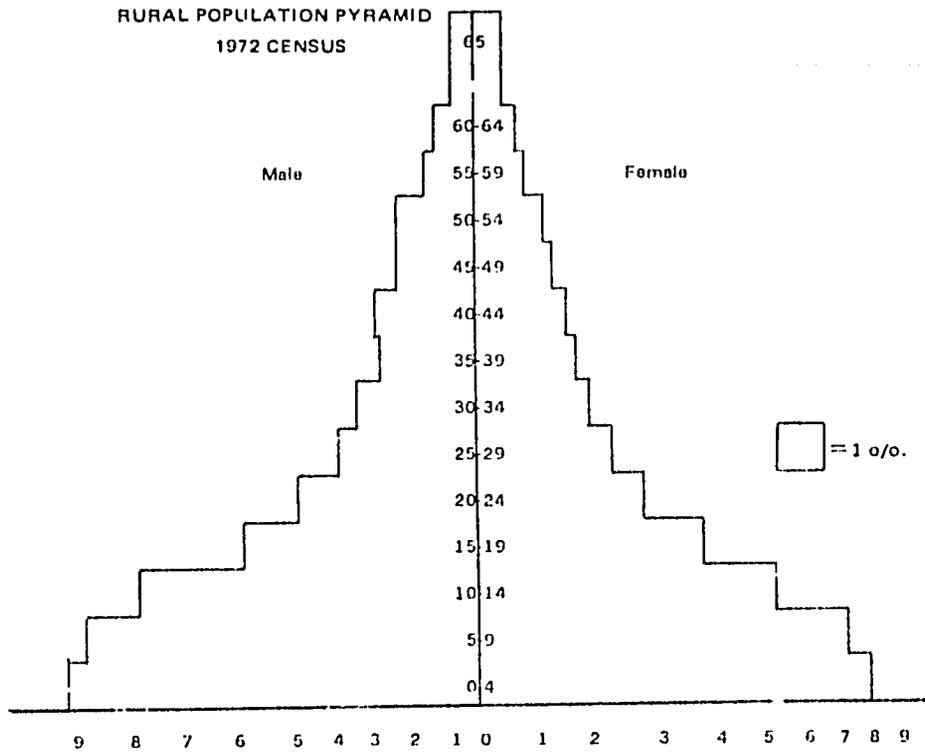
Population Pyramid FEMRURAL (1978)



Scale: Each square of 10 units = one percent of the total.

Figure 2

Rural Population Pyramid, 1972 Census



Scale: Each square of 10 units = one percent of the total.

Source : República del Paraguay, Dirección General de Estadística y Censos, Censo Nacional de Población y Viviendas, 1972 (Asunción, Paraguay: D.G.E.C., Julio de 1975).

The Rural Family

This chapter examines the socio-economic strata which comprise rural Paraguayan society, using the family as the unit of analysis. Since the family is the basic social unit among rural Paraguayans, any study of rural women must explore the situation of the families in which the interviewees live. This description of the rural family is designed to provide a frame of reference through which to understand the family environment of the respondents, as well as the interviewee's behavior. A recurrent theme in this report is that the family environment is the most important factor in determining what a woman does and how she performs her work.

Rural Income Distribution

The principal measure of economic well-being of rural families used in this report is net annual family income, expressed in per capita terms per family unit. This is a measure of liquid, or cash, income from all family members, including proceeds from the sales of agricultural products, animals, processing and manufactured goods, labor and other goods and services. It is not to be construed as a measure of capital goods, assets, or consumption, nor as an exact measure of real income, but as a very acceptable approximation.

Reliance upon cash transactions as an indicator of relative family economic standing is a realistic approach in the capital-poor environment of rural Paraguay. It is unlikely that the few highly capitalized farming operations have any significant statistical impact upon the data presented here, especially in reference to low-income groups. The cash economy is so pervasive in rural Paraguay that no purely-subsistence farming operations were encountered. It can be assumed that all rural Paraguayan families interact in a capitalistic economy and that farming is a commercial venture.

To obtain net income, the total value of all products, goods and services generated by the family in 1977, i.e., the gross annual family income, was converted to net income and was then divided by the number of family members to obtain net family income, per capita. Rather than attempt a complicated study of costs and expenses to obtain net income, FEMRURAL utilized gross-to-net income discount rates supplied by the Central Bank of Paraguay. The conversion to net family income was made per family, according to its chief income-producing activity, at the rates given in Table II, 1 during the computer processing.

TABLE II, 1
Discount Rates for Gross to Net Conversions

Principal Income-generating Activity*	Discount Rate
Agriculture	10 o/o
Livestock	20 o/o
Services	20 o/o
Commerce	70 o/o
Manufacturing	60 o/o
Transportation	65 o/o

Source: Central Bank of Paraguay

- * Incomes from families engaged in home industries, small manufacturing or transportation were not discounted because the high discount rates established by the Central Bank apply to the heavily-capitalized urban-based industries and transportation companies clustered around Asunción, rather than to the small family enterprises and bullock cart traffic of the interior.

For purposes of this report, low-income families, also referred to as the rural poor, are defined as those with per capita family incomes (1977) of less than $\text{₡}20,000$ (US\$160).^{1/} 53.6 o/o of all rural families surveyed fall into this category. Families earning between $\text{₡}20,000$ and $\text{₡}40,000$ (US\$160-320) belong to the middle-income group; and those with incomes of $\text{₡}40,000$ or more (US\$320), to the high-income group. Middle and high-income groups constitute 22.8 o/o and 20.9 o/o of the families surveyed, respectively. Families with no income reported in 1977 constitute 2.7 o/o of the sample. These include charity cases, older people supported by their families, and newly-formed households. (Table II, 2) The mean family income (expressed as per capita) is $\text{₡}32,782$ (US\$260); and the median was $\text{₡}16,900$ (US\$135), including the families with no income.

Although FEMRURAL does not report on-farm consumption data, some idea of the level of family income with on-farm consumption included may be obtained by multiplying the FEMRURAL income by 82 o/o, assuming that on-farm consumption represents about 45 o/o of annual family income.^{2/}

1/

All U.S. dollar conversions are calculated at the official rate of 126 guaraníes (₡) to the U. S. dollar. The unofficial rate averaged about ₡ 133 to the dollar in 1977 and ₡ 136 in 1978 and 1979. At the official rate, income levels are lower than those reported here.

2/

These estimates were supplied by the USAID Mission Economist, Mr. Ralph Holben, and are based upon data from the Ministry of Agriculture and from data from the USAID Market Town Survey.

Thus, a family with a per capita net income of $\$20,000$ would have a per capita income of $\$36,400$ (US\$290), if the value of home consumption is included. 53.6 o/o of FEMRURAL families had per capita incomes, including consumption, of less than $\$36,400$ (US\$290) 22.8 o/o had per capita incomes of between $\$36,400$ and $\$72,800$ (US\$291-580), and 20.9 o/o of the families had per capita incomes of more than $\$72,800$ (US\$580). These adjusted figures are presented in cognizance that international agencies often base their level of assistance to a particular country on the basis of per capita income, which usually includes a measure of consumption. ^{3/}

TABLE II, 2
Net Family Income (Per Capita) FEMRURAL, 1977

Income Level in Guaranies	US Dollar Equivalent	Total	Sub-total	Percent of total	Percent of sub-total
No Income		63	63	2.7	2.7
Less than \$ 20,000	Less than US\$ 160	1251		53.6	
\$ 1.000 - 9.999	Less than US\$ 80		663		28.4
\$ 10.000 - 19.999	Less than US\$ 160		588		25.2
\$ 20.000 - 39.999	US\$ 160 - 320.	532		22.8	
\$ 20.000 - 39.999	US\$ 160 - 239.		325		13.9
\$ 30.000 - 39.999	US\$ 240 - 319.		207		8.9
\$ 40.000 & More	US\$ 320 & More	489		20.9	
\$ 40.000 - 59.999	US\$ 320 - 379.		207		8.9
\$ 60.000 - 99.999	US\$ 480 - 799.		156		6.7
\$ 100.000 & More	US\$ 800 & More		126		5.4
Total		2335*	2335*	100.0 o/o	100.1 o/o

* 17 Missing Observations

^{3/} USAID/Paraguay directs its assistance efforts to those portions of the population earning less than US\$300 per capita per annum. Therefore, approximately 54 o/o of all rural families probably qualify for USAID assistance.

Although per capita income is usually reported as the mean earning per person per year, FEMRURAL reports per capita income per family unit per year, thereby permitting stratification of individual respondents by income level, while maintaining the economic relationship of the respondent to the family. This approach permits comparisons between family characteristics and the respondents' activity patterns which are basic to this study.

Status Indicators

Socio-economic status indicators utilized include the possession of convenience items, and the type of sanitary facilities and water supply available to the family. A list of household items inventoried with the percentage of families who possessed each item is presented in Table II, 3. The only household convenience item of common usage among FEMRURAL families was the hand grinder (for meat or corn). This inventory shows that rural families enjoy few modern conveniences. The lack of basic amenities is also reflected in the quality of sanitary facilities, cooking facilities, and the type of potable water supply to which these families have access. 79.2 o/o of all families interviewed have only rustic outdoor letrines; 10.3 o/o have no toilet facilities; 10.1 o/o have an "improved" outdoor letrine (*letrina seca*); and less than one half of one percent of families surveyed have modern water closets. 4/ (Table II, 4)

TABLE II, 3
Household Possessions Inventoried

Item	Percentage of Families with the Item
Pounding Mortar	67.0 o/o
Lantern	72.3 o/o
Flashlight	79.6 o/o
Earthen Pitcher	71.9 o/o
Food Storage Container	14.1 o/o
Radio	79.2 o/o
Sewing Machine	28.2 c/o
Grinder (<i>Molinito</i>)	58.2 o/o
Bullock or horsedrawn cart	25.4 o/o
Motocycle	3.5 o/o
Refrigerator	8.8 o/o
Truck/Auto	3.0 o/o
Electricity	4.1 o/o
None of these items	0.5 o/o

4/

FEMRURAL defined improved outhouses as those with wooden or brick walls and a wooden or cement floor. Rustic outhouses consisted of a simple excavation with wooden, wattle or coconut tree walls.

TABLE II, 4
Type of Toilet Facility by Income Group

Type of Toilet	None	Less than ¢ 20.000.	¢ 20.000 39.999.	¢ 40.000 & More	Total
Letrine Improved	4 1.7 6.3	68 28.8 5.4	62 26.3 11.7	102 43.2 20.9	236 10.1
Letrine Rustic	43 2.3 68.3	1027 55.6 82.2	428 23.2 80.6	350 18.9 71.6	1848 79.2
Modern Water Closet **	0 0.0 0.0	2 22.2 0.2	1 11.1 0.2	6 66.7 1.2	9 0.4
None	16 6.7 25.4	153 63.8 12.2	40 16.7 7.5	31 12.9 6.3	240 10.3
Total	63 2.7	1250 53.6	531 22.8	489 21.0	2333*

* 19 Missing Observations.

** All cases with Modern Water Closets are from a "company town" adjacent to an industry. Workers' houses are supplied by a public water system installed by the company.

Irrespective of income level, the majority, or 79.2 o/o, of the families surveyed have letrines. There is a direct relation between income and toilet type for families with improved letrines, and inverse relation between income and toilet type for families with rustic letrines. As incomes rise the proportion of families with no facilities or rustic outhouses falls and the proportion of families with improved letrines rises. This suggests that sanitary conditions will improve as family incomes rise.

An indicator of low income among the families surveyed is the type of cooking facility utilized by the family. 86 o/o of all families earning less than \$20,000 per capita per annum cook on the ground, over a fire, with every increment in income the proportion of families without cooking facilities declines. 10.6 o/o of low-income families have a fogón, a brick or cement cooking range which uses firewood or charcoal for fuel. 3.0 o/o have modern gas or wood ranges. There is an inverse relation between type of cooking facility and income for families with fogons and those using modern cookers. With every increment in income the proportion of families with fogons and modern ranges increases. Therefore, rural families will be more inclined to invest in more efficient, convenient cooking apparatuses as incomes rise. At present, 72.7 o/o of families surveyed cook on the ground; 15.1 o/o use fogons; 11.7 o/o use modern cookers, and 0.5 o/o use other types of cooking apparatuses, usually of an improvised nature. (Table II, 5)

65.5 o/o of rural families get their drinking water from wells; 29.2 o/o, springs; 2.9 o/o, streams or rivers; 1.0 o/o, public water systems; and, 1.4 o/o, other sources. The data reflect the drought conditions which prevailed in Paraguay at the time of the survey. Use of well water is directly related to income. Thus, rural affluence is most closely associated with the use of wells than with other sources. (Table II, 6)

TABLE II, 5
Type of Cooking Apparatus by Income Level

Type of Cooker	None	Less than G 20,000.	G 20,000 -- 39,999.	G 40,000 -- & More	Total
None or Cooks on Ground	49 77.8	1076 86.0	360 67.7	212 43.4	1697 72.7
Egón.*	11 17.5	133 10.6	101 19.0	107 21.9	352 15.1
Modern (Gas or firewood)	3 4.8	38 3.0	65 12.2	168 34.4	274 11.7
Other Types	0 0.0	4 0.3	6 1.1	2 0.4	12 0.5
Total	63	1251	532	489	2335**

COL PCT only.

* 17 Missing Observations

TABLE II, 6
Source of Water Supply by Income Level

Source	None	Less than G 20,000.	G 20,000 -- 39,999.	G 40,000 -- & More	Total
Spring	21 33.3	437 34.9	130 24.4	94 19.2	682 29.2
Stream or River	1 1.6	39 3.1	17 3.2	10 2.0	67 2.9
Well	39 61.9	757 60.5	370 69.5	364 74.4	1530 65.5
Public Water System **	0 0.0	11 0.9	4 0.8	8 1.6	23 1.0
Other	2 3.2	7 0.6	11 2.1	13 2.7	3 1.4
Total	63	1251	532	48	2335*

* 17 Missing Observations.

** Definition: All 23 cases are located in a "company town" adjacent to an industry which installed public water systems in the workers' housing area.

Another indicator of rural status is the educational level achieved by the respondent. 43.7 o/o of the respondents have one to three years of primary school education; 29.8 o/o have four to six years; and 4.2 o/o have secondary-level education or above. 22.4 o/o have no formal education. ^{5/}

There is an inverse relation between interviewees with no education and Some Primary education with income level. Among interviewees who have Completed Primary, Some Secondary or Completed Secondary, there is a direct relation between income and education level. (Table II, 7)

Rural women's educational levels are closely associated with the families from which they come, as Table II, 8 shows. Respondents who live in disorganized families and other irregular living arrangements are heavily represented among the ranks of women with no formal education.

Regional Variation of Family Incomes

Family income levels are disaggregated by regional groupings which correspond to the five economic zones in Eastern Paraguay delineated by the Secretaría Técnica de Planificación (Technical Planning Secretariat, or STP). These zones are the Minifundia region, also known as the Central Zone (Zona Central), comprising the departments of Central, Guairá, Caazapá, Cordillera, and Paraguarí, the site of traditional Paraguayan agriculture; the Ganadero region, a ranching and mixed minifundia-latifundia agricultural area which covers the Departments of Misiones and Ñeembucú; Itapúa, synonymous with the Department of Itapúa, a modernizing agricultural zone undergoing rapid economic expansion; the Eje Norte (Northern Axis), an older settlement area with extensive new colonization areas; and the Neo Colonización (New Colonization) zone, an area of recent colonization along the northeastern border with Brazil.

^{5/}

See the FEMRURAL frequency run for the variable, YEASED.

TABLE II, 7

Educational Level of FEMRURAL Interviewees By Family Income

Educational Level	Family Income (Per Capita)				Total
	None	Less than ₱ 20,000 (Low)	₱ 20,000-- 39,999. (Middle)	₱ 40,000-- & More (High)	
Some Primary	28	838	332	294	1492
	1.9	56.2	22.3	19.7	
	44.4	67.0	62.4	60.1	63.9
Completed Primary	6	73	64	81	224
	2.6	32.6	28.6	36.2	
	9.5	5.8	12.3	16.6	9.6
Some Secondary	1	19	16	38	74
	1.4	25.7	21.6	51.4	
	1.6	1.5	3.0	7.8	3.2
Completed Secondary	0	6	3	14	23
	0.0	26.1	13.0	60.9	
	0.0	0.5	0.6	2.9	1.0
None	28	315	117	61	521
	5.4	60.5	22.5	11.7	
	44.4	25.2	22.0	12.5	22.3
Total	63	1251	532	489	2334*
	2.7	53.6	22.8	21.0	

* 17 Missing Observations and one universityeducated woman not shown.

TABLE II, 8

Educational Level of Interviewees By Family Type

Educational Level	Nuclear Organized	Nuclear Disorganized	Extended Organized	Extended Disorganized	Others	Total
Some Primary	1060	125	97	191	29	1502
	70.6	8.3	6.5	12.7	1.9	
	64.3	56.8	59.1	54.6	44.6	63.9
Completed Primary	180	14	11	18	3	226
	79.6	6.2	4.9	8.0	1.3	
	11.6	6.4	6.7	5.1	4.6	9.6
Some Secondary	58	5	6	4	1	74
	78.4	6.8	8.1	5.4	1.4	
	3.7	2.3	3.7	1.1	1.5	3.1
Completed Secondary	19	0	1	3	0	23
	82.6	0.0	4.3	13.0	0.0	
	1.2	0.0	0.6	0.9	0.0	1.0
None	235	76	49	134	32	526
	44.7	14.4	9.3	25.5	6.1	
	15.1	34.5	29.9	38.3	49.2	22.4
Total	1552	220	164	350	65	2351*
	66.0	9.4	7.0	14.9	2.8	

- * Excludes one university educated woman.

There are significant regional variations in income levels within these zones. In the Eje Norte, 66.3 o/o of all families surveyed were in the low-income group, followed by 60.0 o/o in the Ganadero zone; 55.2 o/o in the Central Zone; and 48.6 o/o in the New Colonization zone; and 35.1 o/o in Itapúa. Viewed in terms of population density, as reflected in the sample, most low-income families are concentrated in the more densely populated Central Zone. 50.0 o/o of low-income families are found there; 19.0 o/o in the New Colonization zone; 16.9 o/o in the Eje Norte; and about 7.0 o/o each in the Ganadero zone and Itapúa. (Table II, 9)

TABLE II, 9
Per Capita Family Income by Economic Zone
(All Families, 1977)

Zone	Less than ¢ 20,000.	¢ 20,000-- 39,999.	¢ 40,000-- & More	No Income	Total
Minifundia, or	626	250	224	34	1134
Central Zone	55.2	22.0	19.8	3.0	
a/	50.0	47.0	45.8	54.0	48.6
Ganadero b/	91	34	25	2	152
	60.0	22.4	16.4	1.3	
	7.3	6.4	5.1	3.2	6.5
Itapúa c/	84	63	87	5	239
	35.1	26.4	36.4	2.1	
	6.7	11.8	17.8	7.9	10.2
Eje norte d/	212	68	27	13	320
	66.3	21.3	8.4	4.1	
	16.9	12.8	5.5	20.6	13.7
Neo-coloni- zation e/	238	117	126	9	490
	48.6	23.9	25.7	1.8	
	19.0	22.0	25.8	14.3	21.0
Total	1251	532	489	63	2335*
	53.6	22.9	20.9	2.7	

Significant at 0.0000. $\chi^2 = 167.6$ at 28 degrees of freedom.

17 Missing Observations

N.B. Ordinarily the Chi Square Significance is not reported for each table. This table and other core income tables are so basic to the study that the level of Significance for Chi Square is reported to underscore the degree of association of these variables.

a/ Caazapá, Central, Cordillera, Guairá, Paraguari

b/ Misiones and Neembucú

c/ Itapúa

d/ San Pedro and Concepción.

e/ Amambay, Alto Paraná, Caaguazú and Canendiyú.

The majority of respondents have lived for ten years or more in the interview site. 46.7 o/o have always lived in their place of birth, and 28.5 o/o have lived in the interview site for at least ten years. Only 24.8 o/o have lived in the interview site less than 10 years. Table II, 10 shows that the more sedentary the respondent, the more likely the family is to have low income. Income and immobility are inversely related. The same relationship pertains to those families who had lived for at least ten years (but not forever) in the interview site, although the number of points difference between the low and high income group is not as large as in the case of non-movers. Geographic mobility is directly related to income level. As incomes rise, the proportion of movers increases, from 20.6 o/o (low-income group), to 26.9 o/o (middle-income group), to 33.2 o/o (high-income group).

TABLE II, 10
Length of Residence By Income Level

Length of Residence	¢ 1.000 - 19.999-	¢ 20.000 - 39.999.	¢ 40.000 - & More	None	Total
Less than 10 Years	257 44.5 20.6	142 24.6 26.9	162 28.1 33.2	16 2.8 26.2	577 24.8
10 Years & More, but not always	362 54.8 29.1	151 22.8 28.6	133 20.1 27.3	15 2.3 24.6	661 28.5
Always (Non-Movers)	627 57.8 50.5	235 21.7 44.5	193 17.8 39.5	30 2.8 49.2	1085 46.7
Total	1246 53.6	528 22.7	488 21.0	61 2.6	2323

Length of residence is also strongly associated with zones. The two zones with the largest proportions of high income families (Itapúa and the Neo-Colonización zone) are also the zones with the smallest proportion of non-movers, and the highest proportions of respondents who had lived in the interview site for less than 10 years. (Table II,11)

TABLE II, 11
Length of Residence of Interviewees By Zone

Length of Residence	Minifundia	Ganadero	Itapúa	Eje Norte	Neo-Colonization	Total
Less than 10 Years	158	24	79	84	240	585
	27.0	4.1	13.5	14.4	41.0	
	14.0	15.6	33.1	26.3	48.5	25.0
10 Years & More, but not always	262	30	89	118	165	664
	39.5	4.5	13.4	17.8	24.8	
	23.1	19.5	37.2	36.9	33.3	28.4
Always (Non-Movers)	712	100	71	118	90	1091
	65.3	9.2	6.5	10.8	8.2	
	62.9	64.9	29.7	36.9	18.2	46.6
Total	1132	154	239	320	495	2340*
	48.4	6.6	10.2	13.7	21.2	

* 12 Missing Observations.

Family's Principal Income Source

FEMRURAL reports the primary income-generating activity of the family, rather than the occupations of each family member. The majority of families surveyed, 54.4 o/o, reported farming as their principal economic activity. Manufacturing activities were second in importance, followed by commerce and agricultural wage labor. Funds from all other sources represented less than 4.0 o/o each of the total. (Table II, 12)

TABLE II, 12
Principal Economic Activity of Families Surveyed

Economic Activity	Total Families	Percent of Total
Farming	1280	54.4
Livestock Industry	64	2.7
Extractive	29	1.2
Transport	32	1.4
Home Craft	40	1.7
Food Processing	80	3.4
Manufacture	237	10.1
Service	84	3.6
Commerce	218	9.3
Agricultural Wage Labor (peón)	196	8.3
Others	15	0.6
Transference	47	2.0
Retirement	9	0.4
Not Applicable	14	0.6
Not Known	7	0.3
Total	2352	100.0 o/o

No income data is available for families who are classified under "Transferences" or "Not Applicable." Transferences are funds generated outside the household which are transferred to household members. The most typical pattern of transferred income is that of the elderly being maintained by their offspring. Only 0.3 o/o of the respondents were unable to supply income data after being allowed to consult with other family members.

Farmers

Farm families are defined as those whose principal income-generating activity was farming. Specifically excluded in this category are families engaged in agricultural activities who received the bulk of their incomes from some other activity. Livestock producers may or may not also have farmed, but their primary income came from livestock production. Of these families, 67.2 o/o raised cattle; 18.8 o/o, swine; and 10.9 o/o, poultry.^{6/}

The regional distribution of farming families interviewed appears in Table II, 13. Non-farming families predominate only in the Minifundia zone, an indication of the continuing erosion of traditional agriculture in that zone and of the existence of alternative sources of livelihood, notably in the manufacturing and commercial sectors. In the other four zones non-farming families constitute an average of 33.9 o/o, compared to 58.0 o/o in the Minifundia zone.

TABLE II,13
Farm Families by Zone

Zone	Farm Families	Non - Farm Families	Total Families
Minifundia	478 42.0	661 58.0	1139
Agriculture / Livestock	110 71.0	45 29.0	155
Itapúa	161 67.4	78 32.6	239
Eje norte	218 67.5	105 32.5	323
New Colonization	313 63.1	183 36.9	496
Total	1280	1072	2352

COL PCT only.

^{6/} See the FEMRURAL frequency run for the variable, ANIMALIN. Data was ascertained for two families, or 3.0 o/o of the total.

Farm families as a group appear to be more heavily clustered in the low-income group than non-farmers. 61.6 o/o of farm families earned less than ₡20,000 per capita, in 1977, compared to 53.8 o/o of all families. Viewed zone by zone, farm families in the Minifundia zone and the Eje Norte were more clustered in the low-income group than were farmers in other zones--70.2 o/o and 69.7 o/o, respectively. Next came the Ganadero zone, with 62.4 o/o of all farm families in the low-income group, followed by the Neo-Colonización zone with 55.8 o/o. Farm families in Itapúa tend to be more prosperous than in other zones. Only 36.0 o/o belonged to the low-income group, and 39.1 o/o earned ₡40,000 or more per capita. Or, viewed from a different perspective, 27.9 o/o of all farm families earning ₡40,000 or more are located in Itapúa, although only 12.6 o/o of the sample correspond to that zone. (Table II, 14)

TABLE II, 14
Farm Families, Income (Per Capita) in 1977
By Economic Zone

Zone	Per Capita Family Income			
	Less than ₡ 20,000	₡ 20,000 - 39,999.	₡ 40,000 - & More	Total
Minifundia	335 70.2 42.6	80 16.8 30.3	62 13.0 27.4	477 37.4
Ganadero	68 62.4 8.6	22 20.2 8.3	19 17.4 8.4	109 8.5
Itapúa	58 36.0 7.4	40 24.8 15.2	63 39.1 27.0	161 12.8
Eje norte	152 69.7 19.3	46 21.1 17.4	20 9.2 8.8	218 17.1
New Colonization	174 55.8 22.1	76 24.4 28.8	62 19.9 27.4	312 24.4
Total	787 61.6	264 20.7	226 17.7	1277*

3 Missing Observations

$\chi^2 = 19$ at 8 degrees of freedom, Significance < .001.

The principal determinant of income level among farming families appears to be the size of the unit of production, i.e., number of hectares cultivated. ^{7/} Among low-income farm families (less than ₡20,000 per capita), there is an inverse relation between income and the number of hectares cultivated. The opposite is the case among families earning ₡20,000 or more, i.e., there is a direct relation between income level and the size of the production unit. The size of the production unit is a good gauge of the

^{7/} One hectare (ha.) = 10,000 m² = 2,471 acres.

potential earning ability of the family. 83.4 o/o of all families cultivating less than three hectares (about 7 acres) earned less than \$20,000. The smaller the unit of production, the less a family is likely to earn; and conversely, the larger the unit of production, the more a family will earn. 82.2 o/o of all families in the middle and 87.6 o/o of all families in the upper-income group cultivated three hectares or more. (Table II, 15)

TABLE II, 15
Number of Hectares Cultivated By Farming Families, Per Income Level

Family Income (per capita) 1977	Number of Hectares Cultivated			
	0.1 - 2.99	3.00 - 4.99	5.0 & More	Total
Less than \$ 20,000	378 48.1 83.4	263 33.5 68.7	145 18.4 33.0	786
\$ 20,000 - 39,999.	47 17.8 10.4	84 31.8 21.9	133 50.4 30.2	264
\$ 40,000 & More	28 12.4 6.2	36 15.9 9.4	162 71.7 36.8	226
Total	453 35.5	383 30.0	440 34.5	1276*

* 4 Missing Observations

$\chi^2 = 279.8$ at 4 degrees of freedom, Significance = $\ll .001$.

The size of land units under cultivation varies considerably from zone to zone, as Table II, 16 shows. The Minifundia zone, the site of traditional agriculture, contains the largest proportion of small holdings, followed by the Ganadero region.^{8/} Only 13.1 o/o of families in the Minifundia region cultivated five hectares or more, compared to 22.4 o/o in the Ganadero zone; 28.8 o/o in the Eje Norte; 30.4 o/o in the New Colonization area; and 50.6 o/o in Itapúa. Since income is so closely tied to the number of hectares under cultivation, it would be expected that income levels in Itapúa would be higher, and that, in fact, is the case.^{9/}

8/

It should be noted that the sample reflects population density, and hence tends to sample more heavily in the small-holding region of Misiones and Neembucú where population density is greater than in the less-densely populated large farm and ranching areas.

9/

A regression analysis between the number of hectares cultivated and per capita family income gives a correlation coefficient of 0.3377, significant at 0.001. Since cases with no land are also included, this correlation should be viewed as moderately strong. FEMRURAL hypothesized that the cultivation unit would be a better predictor of family income level than the amount of land a family possessed, or farm size per se. Land is not a constant, nor is all land equally productive. The regression analysis between the amount of land available to each family (or farm size) and family income gives a correlation coefficient of 0.1462, significant at 0.001. This regression analysis also includes families with no land, but comparison of the two regression analyses demonstrates that the size of the unit of cultivation is more closely tied to the income level of the family than is the amount of land a family possesses.

TABLE II, 16
Size of Units of Production By Regional Zones

Zona	Number of Hectares Cultivated					Total
	None	Less than 3 Has.	3.0 - 4.99 Has.	5.0 - 9.99 Has.	10 & More Has.	
Minifundia	252	515	218	124	25	1134
	22.2	45.4	19.2	10.9	2.2	
	64.9	56.6	44.3	31.6	16.4	48.6
Ganadero	19	64	35	20	14	152
	12.5	42.1	23.0	13.2	9.2	
	4.9	7.0	7.1	5.1	9.2	6.5
Itapúa	17	58	43	67	54	239
	7.1	24.3	18.0	28.0	22.6	
	4.4	6.4	8.7	17.0	35.5	10.2
Eje norte	49	106	73	81	11	320
	15.3	33.1	22.8	25.3	3.4	
	12.6	11.0	14.8	20.6	7.2	13.7
New Colonization	51	167	123	101	48	490
	10.4	34.1	25.1	20.6	9.8	
	13.1	18.4	25.0	25.7	31.6	21.0
Total	388	910	492	393	152	2335*
	16.6	39.0	21.1	16.8	6.5	

* 17 Missing Observations

$\chi^2 = 288.4$ at 16 degrees of freedom, $p = < .001$.

The relationship between the size of the unit of production and income level is pointedly illustrated by a comparison of the mean family income (expressed in per capita terms) of families who cultivated less than five hectares and those who cultivated five hectares or more. The mean income of the former is $\$24,113$ (US\$190) and the latter, $\$40,023$ (US\$320). Families with large units of production (five hectares and more) earn on the average 66 o/o more than those with small units (less than five hectares).

Income level and the size of the production unit are also strongly associated with the family's crop specialization. Cotton farmers constitute 66.7 o/o of all farm families surveyed. The overwhelming majority of cotton farmers who cultivated less than three hectares earned less than $\$20,000$. But cotton farmers with five hectares or more under cultivation are clustered more among the middle and upper-income groups. (Table II, 17) The same pattern is observed in the case of tobacco farmers, who represent 6.1 o/o of the farm families surveyed. (Table II, 18)

20

TABLE II, 17
Cotton Farmers By Family Income (Per Capita) and Number of Hectares Cultivated
in 1977

Income Level, Cotton Farmers	Number of Hectares Cultivated				Total
	Less than 3 Has.	3.0 - 4.99 Has.	5.0 - 9.99 Has.	10 & More	
Less than ₤ 20,000	298 50.6 88.1	194 33.1 70.3	89 15.2 43.4	5 0.9 13.9	586 68.6
₤ 20,000 - 39,999.	27 15.8 8.0	60 35.1 21.7	75 43.9 36.6	9 5.2 25.0	171 20.0
₤ 40,000 & More	13 13.4 3.9	22 22.7 8.0	41 42.3 20.0	21 21.6 61.0	97 11.4
Total	338 39.6	276 32.3	205 24.0	36 4.2	854 100.0

N.B. 66.7 o/o of all farm families listed cotton as their principal crop (854/1280).
 Significance = 0.0000

TABLE II, 18
Tobacco Farmers By Family Income (Per Capita) and Number of Hectares Cultivated
in 1977

Income Level, Tobacco Farmers	Number of Hectares Cultivated				Total
	Less than 3 Has.	3.0 - 4.99 Has.	5.0 - 9.99 Has.	10 & More	
Less than ₤ 20,000	25 44.6 78.1	25 44.6 78.1	6 10.8 46.1	0 0.0 0.0	56 100.0 71.8
₤ 20,000 - 39,999.	5 35.7 15.6	4 28.6 12.6	5 35.7 38.5	0 0.0 0.0	14 100.0 17.9
₤ 40,000	2 23.0 6.3	3 37.5 9.3	2 25.0 15.4	1 12.5 100.0	8 100.0 10.3
Total	32 41.0	32 41.0	13 16.7	1 1.3	78 100.0

N.B. 6.1 o/o of all farm families listed tobacco as their principal cash crop.
 Significance = 0.0066.

The income structure of families specializing in soybeans is very different from the cotton and tobacco farmers. Whereas 68.6 o/o and 71.8 o/o of cotton and tobacco farmers, respectively, belong to the low-income group, only 29.0 o/o of soybean farmers have low incomes. Moreover, the units of production among soybean farmers are much larger than among cotton and tobacco farmers and a larger proportion, 45.0 o/o, of soybean farmers belong to the high-income group. (Table II, 19) Only 11.4 o/o and 10.2 o/o of cotton and tobacco farmers earn \$40,000 or more.

TABLE II, 19
Soybean Farmers By Net Family Income (Per Capita) and Number of Hectares Cultivated in 1977

Income Level, Soybean Farmers	Number of Hectares Cultivated				Total
	Less than 3 Has.	3.0 - 4.99 Has.	5.0 - 9.99 Has.	10 & More	
Less than \$20,000.-	7 18.4 50.0	12 31.6 57.2	12 31.6 23.5	7 18.4 15.6	38 29.0
\$ 20,000- 39,999.-	4 11.8 28.6	4 11.8 19.0	20 58.8 39.2	6 17.6 13.3	34 26.0
\$ 40,000 & More	3 5.1 21.4	5 8.5 23.8	19 32.2 37.3	32 54.2 71.1	59 45.0
Total	14 10.7	21 16.0	51 38.9	45 34.4	131 100.0

N.B. 10.2 o/o of farm families listed soybeans as their principal cash crop. (131/1280)

Significance : = 0.0006.

Non-Farmers

Non-farmers constitute 45.6 o/o of the families surveyed. Table II, 20 shows the regional distribution of the major economic activities reported by all families surveyed. The highest incidence of non-farm families is found in the Minifundia zone where 15.7 o/o of all families are engaged in manufacturing; 11.5 o/o, commerce; 7.8 o/o, agricultural wage labor; and 19.8 o/o, other non-farm activities. In the Ganadero zone are found the lowest proportion of non-farm families.

Families dependent upon manufacturing are heavily concentrated in the Minifundia zone, 75.0 o/o, and to a lesser extent, 11.4 o/o in the Neo-Colonización zone, particularly the area around Presidente Stroessner. Home crafts, services and animal industry are also heavily represented in the Minifundia zone. Families dependent upon commerce are somewhat more regionally dispersed, with 59.9 o/o located in the Minifundia zone, and 22.1 o/o in the colonization area adjacent to Brazil in Alto Paraná. The remaining families are dispersed more or less evenly in the other three zones. Agricultural

laborers are disproportionately represented in Itapúa, where 13.6 o/o of all families are dependent upon wage labor in agriculture for their primary source of income. (Table II, 20) Agricultural wage labor provides the mainstay of about 8 o/o of FEMRURAL families. About 93 o/o of these families also engaged in agriculture. 67.4 o/o had subsistence crops only, while 32.6 o/o marketed a crop. 10/

TABLE II, 20
Regional Distribution of Principal Economic Activities (FEMRURAL)

Zone	Economic Activities											Total
	Farmers	Animal Industry	Home Crafts	Food Processing	Pro-Manuf- ature(In- dus,Cas)	Service	Commer- ce.	Agri- cultural Labor	Other	Transfe- rences	Retired	
Minifundio	477	33	35	47	177	61	130	88	43	29	5	1130
	42.2	3.4	3.1	4.2	15.7	5.4	11.5	7.8	3.8	2.6	0.4	
	37.4	60.3	87.5	58.8	75.0	73.5	59.9	45.8	56.6	81.7	55.6	48.7
Ganadero	109	3	1	0	6	0	13	13	4	2	1	152
	71.7	2.0	0.7	0.0	3.9	0.0	8.6	8.6	2.6	1.3	0.7	
	8.5	4.8	2.5	0.0	2.5	0.0	6.0	6.8	5.3	4.3	11.1	6.6
Itapúa	161	2	0	4	14	3	15	32	3	2	0	236
	68.2	0.8	0.0	1.7	5.9	1.3	6.4	13.6	1.3	0.5	0.0	
	12.6	3.2	0.0	5.0	5.9	3.6	6.9	16.7	3.9	4.3	0.0	10.2
Eje norte	218	8	3	17	12	6	11	29	3	9	0	316
	69.0	2.5	0.9	5.4	3.8	1.9	3.5	9.2	0.9	2.8	0.0	13.6
	17.1	12.7	7.5	21.3	5.1	7.2	5.1	15.1	3.9	19.1	0.0	
Neo-Colonización	312	12	1	12	27	13	48	30	25	5	3	486
	64.2	2.5	0.2	2.5	5.6	2.7	9.9	6.2	4.7	1.0	0.6	
	24.4	10.0	2.5	15.0	11.4	15.7	22.1	15.6	30.3	10.6	33.3	20.9
Total	1277	63	40	80	236	83	217	192	78	47	9	2320*
	55.0	2.7	1.7	3.4	10.2	3.6	9.4	8.3	3.3	2.0	0.4	

Tenancy Status

87.3 o/o of all FEMRURAL families have land available for cultivation or livestock. Of these families, 47.0 o/o are land owners; 16.3 o/o have land claims pending from the Instituto de Bienestar Rural (Rural Welfare Institute), the government land colonization institution; 6.9 o/o rent land; 27.0 o/o occupy land with no legal title; and 2.9 o/o are sharecroppers, caretakers, etc. Viewed regionally, the lowest percentages of property owners are found in the Eje Norte and Neo-Colonización zones where the percentage of land claimants is highest. The proportion of occupants (without legal claim) is fairly uniform in all zones, ranging from 21.4 o/o to 29.0 o/o. The lowest percentages of renters is found in the Eje Norte and Itapúa. (Table II, 21)

10/

See the FEMRURAL frequency run for the variable, SUBSIST.

TABLE II,21
Tenancy Structure By Economic Zone
(Families with Land Available for Crops and/or Livestock)

Tenancy	Zone					Total
	Minifundia	Ganadero	Itapúa	Eje norte	Neo-Colonización	
Landowners	479 51.5	82 56.6	129 56.1	94 32.4	181 39.5	965 47.0
In Litigation [*]	81 8.7	10 6.9	27 11.7	111 38.3	106 23.1	335 16.3
Renters	76 8.2	16 11.0	7 3.0	3 1.0	39 8.5	141 6.9
Occupants ^{**}	270 29.0	31 21.4	66 28.7	79 27.2	108 23.6	554 27.0
Others ^{***}	25 2.7	6 4.1	1 0.4	3 1.0	24 5.2	59 2.9
Total	931 100.1	145 100.0	230 99.9	290 99.9	458 99.9	2054

COL PCT only.

$\chi^2 = 224$ With 16 degrees of freedom $p < .001$.

^{*} In Litigation: Title to fiscal lands not yet secured from IBR, the land reform institution.

^{**} Occupants: Includes occupants without title, caretakers, and those occupying loaned or ceded lands.

^{***} Others: Sharecroppers and others.

Land ownership does not necessarily guarantee higher income, but there is a direct relation between land ownership and income. No direct relations exist between other types of tenancy and income, although there is an inverse relation between tenancy and income for occupants and for sharecroppers and caretakers. (Table II, 22)

TABLE II, 22
Land Tenancy By Income Level
(Families with Land)

Tenancy	Income Level				Total
	None	Less than \$ 20,000.	\$ 20,000 - 39,999.	\$ 40,000. & More	
Landowners	16	472	234	237	959
with title	1.7	49.2	24.4	24.7	
	47.1	41.2	51.0	59.4	47.0
In Litigation ^{a/}	2	197	79	53	331
	9.6	59.5	23.9	16.0	
	5.9	17.2	8.3	5.5	16.2
Renters	4	75	30	32	141
	2.8	53.2	21.3	22.7	
	11.8	6.5	6.5	8.0	6.9
Occupants ^{b/}	10	352	100	61	523
	1.9	67.3	19.1	11.7	
	29.4	30.7	21.8	15.3	25.6
Others ^{c/}	2	51	19	16	88
	2.0	58.0	21.6	18.2	
	5.9	4.4	4.1	4.0	4.3
Total	34	1147	459	399	2042
	1.7	56.2	22.5	19.5	

a/ In Litigation includes those who had not yet secured their land titles from the IBR, the land reform institution.

b/ Occupants includes those occupying lands without a title, those occupying loaned or ceded lands.

c/ Others includes Sharecroppers, Caretakers, and others.

Rural Family Types

The family classification system developed for FEMRURAL contains five categories, defined below:

Nuclear (organized): Couple, with or without children and with or without non-lineal relatives.

Nuclear (disorganized): One parent with child(ren), with or without other non-lineal relatives; or grandparents with grandchildren with the intermediate pair absent.

Extended (organized): Three generations in lineal descent (intermediate pair is complete), or two nuclear families (Lateral), of two generations only

Extended (disorganized): Three generations in lineal descent, including grandparent(s), grandchild(ren), with the intermediate pair absent (lineal relatives and/or lineal and non-lineal relatives present).

Other: Person living alone, non-related persons sharing a dwelling, etc. (All other cases).

The classification of families as "organized" or "disorganized" is not to be construed as a moralistic or judgmental designation. Rather, it is assumed that the absence of a partner is an economic hardship for the family unit due to the loss of additional source of income and labor. The absence of an adult worker presumably would have a greater impact among families engaged in agricultural production and in general would constitute an adversity in the rural environment. The relationships between income and family structure are examined in Chapter III.

The majority of FEMRURAL families, 66.0 o/o, are of the Nuclear (organized) type, consisting primarily of couples with their children. Nuclear (disorganized) families represent 9.4 o/o of the total households and are composed principally of mothers with children (*madres solteras*). Extended families (organized) represent only 7.0 o/o of all cases, but Extended (disorganized), 14.9 o/o. All other living arrangements constitute only 2.8 o/o of all cases. (Table II, 23)

This organizational schema of family types shows that single-family dwelling units are the most typical living arrangement among rural Paraguayan families. The extended family, popularly conceived as the "typical" Paraguayan rural family, comprises less than a quarter of all rural households. That is not to say, however, that the extended family is unimportant in rural Paraguay--only that it is not housed under one roof.

TABLE II, 23
Family Structure of FEMRURAL Households

Nuclear (Organized)	1552	66.0 o/o
Couple, No children	141	
Couple, child(ren) with or without lateral relatives	1411	
Nuclear (Disorganized)	220	9.4 o/o
Mother, child(ren)	136	
Mother, child(ren), lateral relatives	34	
Father, child(ren), with or without lateral relatives	14	
Grandparents, grandchild(ren) Lateral Relatives	36	
Extended (Organized)	165	7.0 o/o
Two Nuclear Families	17	
Three Generations (lineal)	148	
Extended (Disorganized)	350	14.9 o/o
Grandparent, grandchild(ren), with intermediate pair present	165	
Grandparent, grandchild(ren), etc. intermediate pair absent	185	
Others	65	2.8 o/o
Groups of Non-related Persons	1	
Women Living Alone	39	
Female Head, lateral relatives	15	
Male Head, lateral relatives	7	
Other Situation	2	
Total	2352	100.1 o/o

The average size of the rural family in the FEMRURAL sample is 5.8, but when family size is examined by the sex of the head of household, it is seen that female-headed households are smaller than those headed by males. The average size of female-headed households is 4.5, compared to 6.1, for male-headed units. (These and other differences between male and female-headed households are explored in depth in Chapter III.)

There were very few families composed of only one or two persons, 10.7 o/o. 39.8 o/o of the families had three to five members; 38.3 o/o had six to nine, and 11.3 o/o had ten or more. ¹¹Smaller families, i.e., those with less than six members, are less heavily represented among the lowest income group than are larger families. 41.0 o/o of smaller families earned less than \$20,000, per capita, in 1977, compared to 66.3 o/o of larger families. (See Table IV, 22)

Viewed region by region, the colonization areas (Itapúa and the Neo-Colonización zone) have a higher proportion of nuclear families and lower proportions of disorganized families than the other three zones. (Table II, 24) Disorganized families are more clustered in the low-income group than are organized families. (See Chapter III.) It is not surprising, therefore, that departments with a high proportion of disorganized families also contain a high proportion of low-income families.

TABLE II, 24
Regional Variations in Family Type

Family Type	Zona					Total
	Motifundia	Ganadero	Itapúa	Eje norte	Neo-Colonización	
Nuclear	716	87	172	202	375	1552
Organized	62.9	56.1	72.0	62.5	75.6	66.0
Nuclear	113	16	19	37	35	220
Disorganized	9.9	10.3	7.9	11.5	7.1	9.4
Extended	83	14	17	22	29	165
Organized	7.3	9.0	7.1	6.8	5.8	7.0
Extended	189	30	27	50	54	350
Disorganized	16.6	19.4	11.3	15.5	10.9	14.9
Other Situation	38	8	4	12	3	65
	3.3	5.2	1.7	3.7	0.6	2.8
Total	1139	155	239	323	498	2352

COL. PCT. only.

Rural Housing

The preference for single-family dwellings among FEMRURAL families is probably a reflection of rural housing standards. 82.1 o/o of all rural dwellings in the sample consist of one or two rooms, with an average of 3.3 persons per room. ¹²

¹¹

See the FEMRURAL frequency run for the variable, NOMEMFAM.

¹²

See the FEMRURAL frequency run for the variable, NOROOMS. The total number of household members (13,852) divided by the total number of rooms (4,199) in these units is 3.3.

The majority of all housing types among the FEMRURAL sample were ranchos, those containing at least two traditional building materials such as wattle (estaqueo) or adobe walls, thatch roofs and earthen floors. 58.7 o/o of all dwelling units surveyed are ranchos, by this definition. 32.1 o/o of housing units surveyed are casas de material. (Table II, 25) Substantial dwellings (casas de material) are defined as having at least two modern building materials such as brick, tile, concrete, wood, tin, etc. A rancho-style structure with walls of wattle, a thatch roof and earthen floor of approximately 36 meters square cost about ₡106,000 in 1978 (US\$800) and required two months for construction. A more substantial dwelling of approximately 38 meters square with brick walls, a tile or thatch roof and brick floor, with a built-in bathroom, costs about ₡267,000 (US\$2,000) and requires six months for construction. ^{13/}

TABLE II, 25
Housing Types of FEMRURAL Families

Building Materials, Walls, Roof, Floor **	Total Dwellings	
Rancho Types	1365	58.7 o/o
Wattle-Thatch-Earth	594	
Wattle-Thatch-Brick	3	
Adobe-Thatch-Earth	147	
Adobe-Thatch-Brick	11	
Adobe-Tile-Earth	12	
Brick-Thatch-Earth	192	
Wood-Thatch-Earth	406	
Substantial Housing Types	716	32.1 o/o
Adobe-Tile-Brick	6	
Brick-Thatch-Brick	113	
Brick-Tile-Earth	76	
Brick-Tile-Brick	314	
Brick-Wood-Earth	1	
Brick-Wood-Brick	3	
Wood-Thatch-Brick	29	
Wood-Thatch-Wood	6	
Wood-Wood-Earth	113	
Wood-Wood-Brick	24	
Wood-Wood-Wood	61	
Other Combinations	213	9.2 o/o
Total	2324*	100.0 o/o

* 28 Missing Observations

** These designations of building materials used for walls, roofs and floors refer to the principal room of the dwelling only.

13/

These cost estimates were supplied by the Secretaría Técnica de Planificación (Technical Planning Secretariat) in October, 1978. The estimates are based upon contracted housing units in the interior of the country and the cost is supplied for one-room units. A two-room structure would cost twice as much, etc.)

These dwelling type definitions provide a practical guide to low-income families. Table II, 26 shows the proportion of families surveyed by housing type who may be considered as belonging to the rural poor, i.e., those families with net family incomes (per capita) of less than ₱20,000 (US\$160) in 1977. 66.1 o/o of families living in rancho type housing belong to the bottom strata, as compared to 36.5 o/o of those living in substantial housing and 30.1 o/o of those living in houses which utilize zinc, poured concrete and other non-traditional materials. Certain types of housing are very closely tied to family income level. 75.6 o/o of those families living in houses with wattle walls, thatch roofs and earthen floors have per capita incomes of less than ₱20,000, whereas, tile and wooden roofs are definitely associated with more affluent rural dwellers.

TABLE II,26
Housing Types Compared to Families Earning Less Than ₱ 20,000 Per Capita (1977)

Building Materials Walls-Roof-Floor **	Total Families Reporting Income	Total with Less than ₱ 20,000	Percentages of Families with less than ₱ 20,000
Rancho Type	1356	896	66.1
Wattle-Thatch-Earth	590	446	75.6
Wattle-Thatch-Brick	3	2	66.7
Adobe-Thatch-Earth	146	88	60.3
Adobe-Thatch-Brick	10	3	30.0
Adobe-Tile-Earth	12	5	41.7
Adobe-Thatch-Earth	192	114	59.4
Adobe-Thatch-Earth	403	238	59.1
Substantial Housing Types	742	271	36.5
Adobe-Tile-Brick	6	3	50.0
Brick-Thatch-Brick	113	59	52.2
Brick-Tile-Earth	76	36	47.4
Brick-Tile-Brick	312	88	28.2
Brick-Wood-Earth	1	1	100.0
Brick-Wood-Brick	3	1	33.3
Wood-Thatch-Brick	29	12	41.4
Wood-Thatch-Wood	6	2	33.3
Wood-Wood-Earth	112	54	48.2
Wood-Wood-Brick	23	5	21.7
Wood-Wood-Wood	61	10	16.4
Other Combinations	209	63	30.1
Total	2307*	1230	53.3

COL PCT only.

- * 45 Missing Observations
- ** The designations of building materials used for walls, roof and floors refer to the principal room of the dwelling only.

Nationality and Language Groups

Almost all of the households surveyed are headed by Paraguayans, 93.3 o/o. Brazilians constitute the largest non-Paraguayan group, with 5.2 o/o of the total, followed by Japanese with 0.6 o/o and all others, 0.4 o/o. ^{14/} Most of the families surveyed are mono-lingual speakers of Guaraní, according to information supplied by the interviewees. Families who habitually speak only Guaraní constitute 76.3% of all FEMRURAL families. 13.0 o/o speak a combination of Spanish and Guaraní (often referred to as Jopará); 5.0 o/o, Portuguese; 4.1 o/o, only Spanish; and 1.6 o/o, other languages, usually German, Polish, or Japanese.

Language use varies by region. The use of Portuguese is limited to the colonization area along the Brazilian border in the Departments of Alto Paraná, Canendiyú and Amambay. ^{15/} The incidence of Guaraní as the sole language used at home also varies. 96.6 o/o of the households surveyed in the Eje Norte region use only Guaraní, compared to 81.9 o/o in the Ganadero region and 78.2 o/o in the Central Zone (or Minifundia region). Fewer families, proportionately, in Itapúa and the New Colonization area along the Brazilian border are mono-lingual speakers of Guaraní due to the presence there of Japanese and Portuguese speakers (Table II, 27)

TABLE II, 27
Regional Distribution of Languages Used Habitually By
FEMRURAL Families

Language Spoken At Home	Regional Economic Zones					Total
	Minifundia	Ganadero	Itapúa	Eje norte	Neo-Colonización	
Only Guaraní	891 78.2	127 81.9	140 62.2	312 96.6	312 63.0	1782 76.3
Only Spanish	62 5.4	4 2.6	14 6.2	2 0.6	14 2.8	96 4.1
Guaraní & Spanish	185 16.2	24 15.5	45 20.0	9 2.8	41 8.3	304 13.0
Portuguese	0 0.0	0 0.0	0 0.0	0 0.0	117 23.6	117 5.0
Others (Japanese, German, Polish)	1 0.1	0 0.0	26 11.6	0 0.0	11 2.2	38 1.6
Total	1139	155	225	323	495	2337*

COL PCT only.

* 15 Missing Observations

14/

See the FEMRURAL frequency run for the variable, NATIEFE.

15/

Tri-lingual interviewers (Spanish-Guaraní-Portuguese) were used in this region. Although Portuguese speakers are also found in other Departments, they are concentrated in the areas mentioned above. Because of the size of the FEMRURAL sample and the fact that Brazilian colonists tend to settle in clusters, isolated pockets of Brazilian settlement in Itapúa and other Departments were not picked up in the sample.

The language used habitually is not necessarily a reflection of the respondent's language capabilities, but it appears to be a reliable index of mono-lingualism among rural families. When the language used by the respondent during the interview is compared to habitual Guaraní speakers, there is a 95.4 o/o coincidence. 92.7 o/o of those whose families use only Spanish habitually spoke Spanish in the interview. But the pattern of Jopará use is less clear, possibly due to value judgements made by respondents and interviewers as to the allowable mix of the languages. For instance, 23.4 o/o of respondents who claimed they used Jopará at home were considered by the interviewer to have used only Guaraní during the interview. (Table II, 28)

TABLE II, 28
Language Used Habitually At Home, Compared To
Language of the Interview

Language Spoken At Home	Language of the Interview				Total
	Only Guaraní	Guaraní and Spanish	Only Spanish	Other	
Only Guaraní	1699 95.4	40 2.2	41 2.3	0 0.0	1780
Only Spanish	5 5.2	2 2.1	89 92.7	0 0.0	96
Guaraní & Spanish	71 23.4	131 43.1	102 33.6	0 0.0	304
Portuguese	3 2.6	0 0.0	8 6.8	106 90.6	117
Others (Japanese, German, Polish)	0 0.0	0 0.0	30 78.9	8 21.1	38
Total	1778 76.1	173 7.4	270 11.6	114 4.9	2335*

ROW PCT only.

* 17 Missing Observations

The use of Guaraní is inversely related to the income level of the family. With every increment in income level, the proportion of mono-lingual speakers of Guaraní drops, from 87.9 o/o (lowest-income level) to 36.5 o/o (highest-income level). There is a tendency for the proportion of Spanish speakers to rise as income rises. The proportion of Jopará speakers increases with every increment in income except for those in the highest income group. (Table II, 29)

The inverse relation between income and mono-lingual speakers of Guaraní implies that rural dwellers who cannot use Spanish are at a disadvantage economically, even in the rural environment. It should be noted that there are no Guaraní-language newspapers and few other public informative services which would enable mono-lingual speakers to inform themselves of market trends, prices, etc. Moreover, few Paraguayans, except among the educated middle and upper classes, read Guaraní fluently.

TABLE 11, 29
Language Used At Home by Family Income (Per Capita)

Language Used	Family Income (Per Capita)							Total	
	₡ 1.000- 9.999	₡ 10.000 19.999	₡ 20.000 29.999	₡ 30.000 39.999	₡ 40.000 59.999	₡ 60.000 99.999	₡ 100.000		
Only Guaraní	583 87.9	497 84.5	249 76.9	137 66.2	128 61.8	81 52.3	46 36.5	48 76.2	1769 76.3
Only Spanish	11 1.7	17 2.9	15 4.6	14 6.8	9 4.3	12 7.7	12 9.5	5 7.9	95 4.1
Guaraní & Spanish	47 7.1	58 9.9	41 12.6	41 19.8	51 24.6	39 25.2	22 17.5	5 7.9	304 13.1
Portuguese	20 3.0	15 2.6	18 5.6	15 7.2	14 6.8	17 11.0	12 9.5	4 6.3	115 5.0
Others	2 0.3	1 0.2	1 0.3	0 0.0	5 2.4	6 3.9	21 16.7	1 1.6	37 1.6
Total	663	588	324	207	207	155	126	63	2320*

COL PCT only.

* 32 Missing Observations

Over half of rural Paraguayan families, 53.6 o/o, belong to the low-income group identified in this study. These families may be considered the logical target group for rural assistance programs aimed at improving the quality of life and productivity of rural dwellers. Members of this low-income group are not evenly distributed per economic zone, but are more heavily represented in the Eje Norte zone and in the Ganadero zone. Areas of recent in-migration such as Itapúa and the New Colonization zone contain fewer members of this group than do the other three zones.

Farmers are somewhat more heavily represented among the low-income group than are non-farmers engaged in manufacturing, transportation, etc. The regional analysis of income levels of farm families shows that the zones with the largest proportion of low-income farm families are the Minifundia zone, the Eje Norte zone and the Ganadero zone. Farm income levels are directly related to the size of the unit of production, i.e., number of hectares cultivated. 33.4 o/o of all families who cultivated less than three hectares (about 7 acres) belong to the low-income group. Or, the mean income of farm families who cultivated less than five hectares is 24,113 ₡ . (US\$190), compared to 40,023 ₡ . (US\$320) for those who cultivated five hectares or more. Areas of more extensive cultivation and recent in migration in the colonization areas in Itapúa and the New-Colonization zone contain few farmers in the low-income strata. The crop specialization and tenancy status of farm families are also closely associated with the income-generating potential of the family as are family type, family size, and housing characteristics.

Most rural Paraguayan families are mono-lingual speakers of Guaraní and have similar cooking, sanitary and potable water facilities.

CHAPTER III

WOMEN-HEADED HOUSEHOLDS

Incidence

Women-headed households have long been "the ignored factor" in development planning. ^{1/} There is evidence that the incidence of female-headed households is relatively high in Paraguay, as a result of family instability, rural to urban migration and the decline of subsistence agriculture. ^{2/}

The proportion of women-headed households in rural areas is about half that of Asunción and, apparently, of other market towns in the interior. Women-headed households constitute 15.9 o/o of the total rural sample of FEMRURAL. (Table III, 1) The best estimate for urban areas in Paraguay, including Asunción and interior towns, is 27.0 o/o. These estimates are based on three recent works: the 1976 Household Survey of Greater Asunción, the 1977 Market Town Survey and the urban sample of FEMRURAL. (Table III, 2)

TABLE III, 1
Female-Headed Households

Total Households		Households Interviewed	
Total	2645	Total	2352
Percent	100.0 o/o	Percent	100.0 o/o
Total	2224	Total	1969
Percent	84.1 o/o	Percent	83.7 o/o
Total	421	Total	383
Percent	15.9 o/o	Percent	16.3 o/o

^{1/} See Marya Buvinić and Nadia H. Youssef, with Barbara Von Elm, "Women-headed Households: The Ignored Factor in Development Planning" (Washington, D.C.: International Center for Research on Women, March, 1978), for an overview of findings on women-headed households in Latin America.

^{2/} Luis A. Galeano, "Las Mujeres como Proveedoras de Fuerza de Trabajo en el Paraguay, 1972," Vol III, "La Participación de las Mujeres en la Actividad Económica en el Paraguay" (Asunción Paraguay: Centro Paraguayo de Estudios Sociológicos, 1977), pp. 7-20; Centro Paraguayo de Estudios Sociológicos, "Estudio de la Migración Interna al Área de Asunción," Tomo II. "Resultados" (Asunción, Paraguay: CPES, 1973); and Francis Patrick Gillespie, "Constancy and Change: A Demographic Ecological Study of Paraguay, 1950-1972" (Ph.D. Dissertation, University of Texas at Austin, 1977).

Nationally, estimates of the percentage of women-headed households have ranged from a low of 11.0 o/o to a high of 22.0 o/o. A recent AID-sponsored study by Buvinić and Youssef estimated the percentage at 11.0 o/o, thereby classifying Paraguay as a country with "low" potential female heads of household, i.e., 10 o/o to 14 o/o. ^{3/} The Human Resources Division of the Paraguayan Ministry of Justice and Labor, using 1972 census data, estimated that 22 o/o of all women fifteen years of age and older were "madres abandonadas," abandoned mothers. ^{4/}

TABLE III, 2
Percentage of Women-Headed Households

Total ^{7/}	Urban ^{5/}	Rural ^{6/}
21.4 o/o	27.0 o/o	15.9 o/o

Since such classifications ultimately may influence program and funding priorities of national and international organizations, it is important to establish reliable estimates. Calculations based upon the three recent works show that 21.4 o/o of all households in Eastern Paraguay are headed by women. Since the Paraguayan Chaco contains only 3.0 o/o of dwelling units in Paraguay, the percentage of 21.4 o/o may be considered representative of Paraguay.

Using 21.4 o/o as a more reasonable estimate of the number of women-headed households, Paraguay would belong to the "High-Medium" group in the Buvinić-Youssef ranking, placing it in the category with Guatemala and Honduras, among Latin American countries, and with countries such as Chad, Madagascar, Yemen, Uganda and Vietnam in the non-Latin America area. Of the countries examined by Buvinić and Youssef, only El Salvador, Panama, the Virgin Islands, Botswana and Lesotho have higher proportions of women-headed households than does Paraguay.

^{3/} Buvinić and Youssef, "Women-Headed Households," Tables 1 and 2.

^{4/} Facultad de Ciencias Médicas, Universidad Nacional de Asunción, "Integración de la Enseñanza en Salud Materno Infantil y Reproducción Humana" (Asunción, Paraguay: Facultad de Ciencias Médicas, 1977), p. 13.

^{5/} The estimate of 27 o/o is the average of the percentages of women-headed households presented in two studies: Republica del Paraguay, Dirección General de Estadística y Censos, "Encuesta de Hogares por Muestra, Mano de Obra, 1976," (Asunción, Paraguay: D.G.E.C., Julio, 1977), and Judith Fincher Laird, "A Study of Income Structure in Two Paraguayan Towns" (Asunción, Paraguay: USAID/Paraguay, Market Town Survey, January 12, 1978). Mimeo. The urban sample of FEMRURAL also indicates that the percentage of women-headed households is 27 o/o.

^{6/} See Table III, 1.

^{7/} 21.4 o/o is obtained by calculating the number of women-headed households in Eastern Paraguay (urban and rural) and dividing by the total number of households.

The calculation is as follows: .27 X 168,000 (urban) = 45,468
.59 X 247,000 (rural) = 43,407

88,875 ÷ 415,700 = 21.4 o/o

The highest proportion of women-headed households encountered in the FEMRURAL sample was 44.0 o/o in a *compañía* in the Department of Concepción. The second-highest proportion was 41.7 o/o, found in two *compañías* in the minifundia area of Paraguarí, and third, 40.0 o/o, notably in a handicraft village in Paraguarí. The proportion of female-headed households constituted less than 35.0 o/o in all other sampling units. ^{8/}

Women-headed households are concentrated in the Minifundia zone, the area which is the primary source of migrants to Asunción. That zone contained 56.1 o/o of all women-headed households encountered, as Table III, 3 shows. There are significant regional variations. Viewed zone by zone, the poverty belt which extends across Misiones and Ñeembucú contains the largest proportion of female-headed households. Almost 23 o/o of all households interviewed in that zone are headed by women. In the Minifundia zone and the Eje Norte (Northern Axis), a mixed minifundia and colonization area, women-headed households comprised 18.9 o/o of all households. The lowest incidence of women-headed households was in the colonization zones (Itapúa, 11.3 o/o, and the New Colonization zone, 9.1 o/o), areas which are not characterized by the decaying agricultural and social systems typical of the moribund minifundia area.

TABLE III, 3
Regional Distribution of Male and Female-Headed Households

Households	Minifundia	Ganadero	Itapúa	Eje norte	New Colonización	Total
Male-Headed	924	120	212	262	451	1969
Units	46.9	6.1	10.8	13.3	22.9	
	81.1	77.4	88.7	81.1	90.9	83.7
Female-Headed	215	35	27	61	45	383
Units	50.1	9.1	7.0	15.9	11.7	
	18.9	22.6	11.3	18.9	9.1	16.3
Total	1139	155	239	323	496	2352

Composition of Women-Headed Households

The family classification system developed for FEMRURAL is described in Chapter II. The composition of women-headed households, compared to male-headed households, is presented in Table III, 4. Note that women-headed households predominate among disorganized families. Only about 14 o/o of male-headed families are disorganized, compared to 79 o/o of women-headed units.

Female-headed households predominate among the family type with the lowest income, or the Extended (disorganized) families. Nearly 74 o/o of these families have net per capita family incomes of less than \$20,000 (US\$160), compared to 51.1 o/o of Nuclear (organized), 54.2 o/o of Nuclear (disorganized), 54.8 o/o of Extended (organized), and 56.2 o/o of other types. The percentage of nuclear families increases with every increase in income, whereas the proportion of extended disorganized families falls as the income level rises. There are no obvious linear relationships between income and type for Nuclear (disorganized) and Extended (organized) family types. (Table III, 5)

8/

See Frequency, *COMPANIA*, controlling by women-headed households.

TABLE III, 4
Comparison of Male and Female-Headed Households (By Type)

Family Type	Male-Headed Units	Female-Headed Units	Total
Nuclear (Organized)	1551 59.9 78.8	1 0.1 0.3	1552 66.0
Nuclear (Disorganized)	64 29.1 3.3	156 70.9 40.7	220 9.4
Extended (Organized)	141 85.5 7.2	24 14.5 6.3	165 7.0
Extended (Disorganized)	204 58.3 10.4	146 41.7 38.1	350 14.9
Others	9 13.8 0.5	56 86.2 14.6	65 2.8
Total	1969 83.7	383 16.3	2352 100.1

TABLE III, 5
Net Per Capita Family Income by Family Type
(Families with Incomes in 1977)

Family Type	Income Level			Total
	Less than \$ 20,000.-	\$ 20,000 - 39,999.-	\$ 40,000 - & More	
Nuclear (Organized)	777 51.1 62.1	362 23.8 68.0	382 25.1 78.1	1521 66.9
Nuclear (Disorganized)	115 54.2 9.2	55 25.9 10.3	42 19.8 8.6	212 9.3
Extended (Organized)	90 54.8 7.2	42 25.6 7.9	32 19.5 6.5	164 7.2
Extended (Disorganized)	244 73.7 19.5	63 19.0 11.8	24 7.3 4.9	331 14.6
Others	25 56.8 2.0	10 22.7 1.9	9 20.5 1.8	44 1.9
Total	1251 55.1	532 23.4	489 21.5	2272

Typically, women-headed households embrace a variety of living arrangements. Usually there is no resident adult male, but some women living in consensual union declare themselves to be the head, relegating the male to the status of a transient partner. In some cases a wife becomes the de facto head when the male head loses his job, becomes ill or is otherwise incapacitated.

The majority of women-headed households in the FEMRURAL sample consist of disorganized nuclear families (40.7 o/o) and disorganized extended families (38.1 o/o). All but one of the disorganized nuclear family units consist of *madres solteras*, i.e., unmarried mothers with their children. Typically these families contain female relatives. About ten percent of female heads live alone; 6.3 o/o live in organized extended families; and 4.8 o/o live with lateral relatives, groups of non-related persons and in other situations. See Table III, 6.

TABLE III, 6
Family Structure of Women-Headed Households

Nuclear (Organized)	1	0.3 o/o
Couple, Child(ren)	1	0.3 o/o
Nuclear (Disorganized)	156	40.7 o/o
Mother, Child(ren), (<i>madre soltera</i>)	129	33.7 o/o
Mother, Child(ren), Lateral Relatives (<i>madre soltera</i>)	26	6.8 o/o
Grandparents, grandchild(ren), Lateral Relatives	1	0.3 o/o
Extended (Organized)	24	6.3 o/o
Two Nuclear Families	1	0.3 o/o
Three Generations (lineal)	23	6.0 o/o
Extended (Disorganized)	146	38.1 o/o
Grandparents, grandchild(ren), with intermediate pair present	145	37.9 o/o
Grandparents, grandchild(ren), etc., intermediate pair absent	1	0.3 o/o
Others	56	14.6 o/o
Groups of Non-Related Persons	1	0.3 o/o
Women Living Alone	39	10.2 o/o
Female Head, lateral relatives	15	3.9 o/o
Other Situation	1	0.3 o/o
Total	383	100.0/o

Socio-Demographic Characteristics of Female Heads

Female heads share socio-demographic characteristics which are different from those of respondents in male-headed households. Female heads tend to be older, more sedentary and less well educated than other respondents. It appears that the majority of female heads are either former consensual partners or widows.

Of all respondents interviewed in both male and female-headed households in FEMRURAL, 85.3 o/o of all female heads had lived ten years or more in the interview site, compared to 72.5 o/o of other respondents. ^{9/} A large proportion of female heads (84.3 o/o) listed their place of childhood socialization as "rural," compared to 76.5 o/o of other respondents, as Table III, 7 shows.

Respondents in female-headed households were less well educated than other respondents. (Table III, 8) A large percentage, 86.2 o/o, were monolingual speakers of Guaraní, compared to 73.6 o/o of other respondents. ^{10/} The fact that a larger proportion of female heads tend to be monolingual speakers of Guaraní and are less well educated than other women respondents is probably due to the fact that 64 o/o are 50 years of age or older. Women of that generation had fewer educational opportunities and less contact with Spanish-speaking culture than do younger women.

TABLE III, 7
Place of Childhood Socialization

Place of Childhood Socialization	Male-Headed Units	Female-Headed Units	Total
Rural Areas	1500 76.5	322 84.3	1822 77.6
Town/City	300 15.3	48 12.6	348 14.8
Foreign Countries	162 8.3	12 3.1	174 7.4
Total	1962	382	2.344

^{9/} FEMRURAL frequency run for variable, *TIMERES*, controlling by Sex of Household Head.

^{10/} Unpublished table.

TABLE III, 8

**Educational Levels of Respondents
(Male and Female-Headed Households)**

Level of Education	Female-Headed Units	Male-Headed Units	Total
None	41.8	18.6	526 22.4 o/o
Some Primary	53.0	66.0	1502 63.9 o/o
Completed Primary	4.2	10.7	266 9.6 o/o
Some Secondary	0.8	3.6	74 3.1 o/o
Completed Secondary	0.3	1.1	23 0.8 o/o
Total	383	1968	2351

The majority of all female heads interviewed are single, 56.9 o/o. A third are widows, and 6.1 o/o list their marital status as "separated or divorced."^{11/} About 4.0 o/o are consensual partners or wives. See Table III, 9.

An analysis of the age structure of female heads, consensual partners and wives suggest that these roles are somewhat age specific. Female heads are older than wives or consensual partners. 64 o/o of female heads were 50 years of age or more, compared to 24.8 o/o of wives and 14.5 o/o of consensual partners. These age differences influence the manner and degree to which women participate in the rural economy.

Consensual unions flourish among younger women, coinciding with their peak productive and reproductive years. The proportion of consensual unions falls with every rise in age level, while the proportion of female heads rises, i.e., there are inverse and direct relationships, respectively. The proportion of wives, however, is fairly constant for women under 50 years of age, but drops off sharply thereafter. This pattern of age-specific roles suggests that former consensual partners, separated women and widows join the ranks of female headship increasingly after the age of 50. See Table III, 10.

The proportion of interviewees living in consensual unions was 14.1 o/o, but the majority of all families studied were headed by males living with their wives, 66.8 o/o. About 4.0 o/o of all households did not contain a female head, wife or consensual partner. The respondent in these cases was usually a daughter, niece or other blood relative of the head of household.

^{11/}

Paraguayan law does not permit divorce, although some Paraguayan women obtain divorces in other countries. The term is often used colloquially to refer to separated marital partners, although only "separation of possessions" is permissible under existing law.

TABLE III, 9
Relation of the Interviewee to the Head of Household by Marital Status

Relation to Head	Marital Status					Total
	Single	Consensual Union	Married	Widow	Divorced/ Separated	
Female Head	205	6	8	119	22	360
	56.9	1.7	2.2	33.1	6.1	15.3
	74.0	1.8	0.5	93.0	88.0	
Wife- Consensual	7	324	1572	0	1	1904
	0.4	17.0	82.6	0.0	0.1	81.0
	2.5	96.7	99.1	0.0	4.0	
Daughter	43	1	3	1	2	50
	86.0	2.0	6.0	2.0	4.0	2.1
	15.5	0.3	0.2	0.8	8.0	
Sister	6	0	0	2	0	8
	75.0	0.0	0.0	25.0	0.0	0.3
	2.2	0.0	0.0	1.6	0.0	
Sister-in-law	0	0	1	0	0	1
	0.0	0.0	100.0	0.0	0.0	0.0
	0.0	0.0	0.1	0.0	0.0	
Daughter-in-law	0	2	0	0	0	5
	0.0	40.0	60.0	0.0	0.0	0.2
	0.0	0.6	0.2	0.0	0.0	
Mother	5	0	0	4	0	9
	55.6	0.0	0.0	44.4	0.0	0.4
	1.8	0.0	0.0	3.1	0.0	
Mother-in-law	0	0	0	1	0	1
	0.0	0.0	0.0	100.0	0.0	0.0
	0.0	0.0	0.0	0.8	0.0	
Others	11	2	0	1	0	14
	78.6	14.3	0.0	7.1	0.0	0.6
	1.0	0.6	0.0	0.8	0.0	
Total	277	335	1587	128	25	2352
	11.8	14.2	67.5	5.4	1.1	100.0

TABLE III,10
Age Structure by Role Within the Family

Role	15-29	30-39	40-49	50 or more	Total
Female Heads	15	39	75	231	360
	4.2	10.8	20.8	64.2	
	2.6	6.9	14.5	33.3	15.3 o/o
Consensual Partners	132	93	58	48	331
	39.9	28.1	17.5	14.5	
	23.0	16.4	11.2	6.9	14.1 o/o
Wives	400	414	368	310	1,572
	25.4	26.3	23.4	24.8	
	69.6	73.0	71.3	56.2	66.8 o/o
Others	28	21	15	25	89
	31.5	23.6	16.9	28.1	
	4.9	3.7	2.9	3.6	3.8 o/o
Total	575	567	516	694	2,352

Socio-Economic Characteristics

The implicit accusation contained in the epithet, "the ignored factor in development planning," is valid only if it can be shown that women-headed households are in some way economically or socially disadvantaged. Data from FEMRURAL provides strong evidence of the economically marginal existence of women-headed households, and, at the same time, provides evidence of their economic contributions to the rural family and society.

The following discussion shows that women-headed households are poorer, smaller and less likely to be dependent upon agriculture as their primary source of income than are male-headed households. The occupational structure and division of labor within the family, as well as decision-making roles, are distinctive in female-headed families and sets them apart from other households.

Few women-headed households depend upon farming as the primary source of family income. They rely more upon agricultural wage labor, livestock raising, home manufacturing and processing and services (laundresses, domestic servants, etc.), 36 o/o of female-headed households engaged in farming, compared to 57.9 o/o of male-headed units. Female-headed units are much more dependent upon wage labor than are male-headed households. Nearly one and one half times as many female-headed families reported their chief economic activity as "agricultural laborer," for instance. And many female service workers (laundresses, domestics, etc.) are also wage laborers. The primary occupations of male and female-headed units is given below in Table III, 11.

TABLE III, 11
Occupational Classification By Sex of Head

Primary Economic Activity	Female-Headed Units	Male-Headed Units
Agriculture (Farmers)	36.3 o/o	57.9 o/o
Agricultural Laborers	11.2	7.8
Commerce	9.7	9.2
Manufacturing	7.8	10.5
Service	6.5	3.0
Home Crafts	5.5	1.0
Home Processing of Foods	6.5	2.8
Animal Industry	5.5	2.2
Others	1.9	5.2
Transferences	9.4	0.6
Total	383	1,969

Women-headed households are heavily represented among the lower-income levels in all occupational groups. 89 o/o of those engaged in farming, 87.5 o/o performing service work, and between 60 and 75 o/o of those who worked in livestock, commerce and food processing earn less than ₡20,000. 12/

Female heads in rural Paraguay comprise an identifiable, quantifiable group among rural women and a special subgroup among the rural poor, set apart by the simultaneity of sexual and economic roles which impinge upon them.

Women-headed households are more heavily represented in the lowest income category than are male-headed units and 10.3 o/o report no income. 60.6 o/o of female-headed units earn less than ₡20,000, compared to 51.8 o/o of male units. Most families reporting no income in 1977 depend upon transferences, i.e., cash or in-kind income, generated outside the household. See Table III, 12. The mean, or average, income for women-headed units is ₡20,825 (US\$165), and ₡36,584 (US\$290) for male-headed units, or 43.0 o/o less than in male-headed households. The median income level for male units is ₡18,854 (US\$150) and for female units ₡10,639 (US\$85).

It should be noted that the income level of families headed by consensual partners is lower than that of married partners, although these differences are not as great as between female and male-headed households. Consensual unions occupy an intermediate position between women-headed households and those headed by a married couple. See Table III, 13.

12/

Unpublished table (Principal Economic Activity by Income Level, controlling by sex of Head of Household).

TABLE III, 12
Income Structure by Sex of Head of Household

Per Capita Income	Male Heads	Female Heads	Total
No Income	25 1.3	38 10.3	63 2.7
Less than C 20,000	1008 51.8	223 60.6	1231 53.2
C 20,000 - 39,999.-	463 23.8	69 18.8	532 23.0
C 40,000 and More	451 23.2	38 10.3	489 21.1
Total	1947	368	2315*

COL PCT only.

TABLE III, 13
Role of Interviewee, By Net Family Income (Per Capita)

Per Capita Income	Female Heads	Consensual Partner	Wives	Total
Less than C 20,000.-	216 60.7	181 56.6	801 51.2	1198 53.5
C 20,000 or more	103 28.9	136 42.5	743 47.5	982 43.8
No Income	37 10.4	3 0.9	20 1.3	60 2.7
Total	356	320	1564	2240

COL PCT only.

Not only in cash income measures are women headed households poorer. The standard of living of female-headed households was lower on all counts than in male-headed units: housing standards, the value of household possessions, and other socio-economic indicators such as sanitary facilities, source of water supply, etc. An inventory of some common household goods reveals that 79.1 o/o of women-headed units possess goods value at less than C6,500 (US\$50), compared to 51.6 o/o of male-headed units. See Table III; 14.

TABLE III, 14
Value of Household Possessions Inventoried By Sex Of Head Of Household

Value of Possessions	MALE	FEMALE	TOTAL
Less than ₡ 6.500 (US\$ 50)	995	293	1288
	77.3	22.7	
	51.2	76.8	55.6
₡ 6.500 or more	948	79	1027
	92.3	7.7	
	48.8	21.2	44.4
Total	1943	372	2315
	83.9	16.1	

Another measure of standard of living is housing type, ranked by the economic value of wall, roof and floor building materials. Most families in the low income group (75 o/o) live in houses with walls of estaqueo (a rustic wall structure made of intertwined branches, covered or not with mud, equivalent of wattle), thatch roofs and dirt floors. This is the most typical type of housing found among farm and farm laborers' families. About 35 o/o of all women-headed families lived in this type of dwelling, compared to 23 o/o of male heads. 13/

Other standard of living indicators reinforce the picture of female heads as an economically underprivileged sub-strata of rural society. Only 9.0 o/o of male-headed units have no bathroom facilities of any type, however rustic, compared to 17.2 o/o of female-headed units. Two thirds of male units have wells, compared to 59 o/o of female-headed units. 14/

Furthermore, the structure of wealth or assets as measured in terms of farm animals owned reveals the same pattern of economic deprivation among female heads. Female-headed families are less likely to own swine or milk cows than are male heads. 27.0 o/o of male-headed units have no swine, compared to 40.7 o/o of female-headed households. Likewise, 38.5 o/o of male-headed units have no milk cows, compared to 56.4 o/o of the female units. See Table III, 15. Roughly twice as many male-headed units have five or more pigs; and the proportion of male-headed units with five or more cattle, or with 20 or more chickens, is 1.6 and 1.5 times greater, respectively. The reasons for these differences in income structure between male and female-headed households no doubt lie in the conditions which give rise to female-headed households: widowhood, abandonment, etc.

13/ Unpublished tables. (Housing Type by Sex of Head; Income and Principal Economic Activity).

14/ See FEMRURAL frequency run for variables BATHTYPE, WATERSPY, controlling by female headed households.

TABLE III, 15
Male and Female-Headed Family Units with Swine, Milk Cows and Chickens

	Female-Headed Households				Male-Headed Households			
	None	1 - 5 animals	5 or more animals	Total	None	1 - 5 animals	5 or more animals	Total
Swine	156 40.7	189 49.3	38 9.9	383 99.9	532 27.0	1040 52.9	395 20.1	1967 100.0
Milk Cows	223 58.4	87 22.7	72 18.8	382 99.9	753 38.5	627 32.0	577 29.5	1957 100.0
	None	Less than 20	20 or more animals	Total	None	Less than 20	20 or more animals	Total
Chickens	35 9.1	203 53.0	145 37.9	383 100.0	123 6.2	755 38.3	1091 55.4	1969 99.9

The existence of female-headed households among the low-income group and their lower-standard of living (as measured in housing, household goods and animal wealth), has obvious program implications for USAID since it is specifically charged with identifying and assisting subgroups among the poor.

The lower incomes of women-headed families mean that a rural female head of family probably cannot support a large family. These units are smaller than male-headed units. The estimated average family size of female units is 4.5, compared to 6.1 for male units and 5.8 for all households. These calculations are based on Table III, 16.

Apart from these general socio-economic distinctions between male and female-headed units, female heads share certain group characteristics in decision-making, when compared to women living in male-headed units as wives or as consensual partners.

TABLE III, 16
Family Size by Sex of Household Head
(Interviewed Households)

Number of Family Members	Male-Headed Units	Female-Headed Units	Total
1	0*	41	41
		100.0	1.7
		10.7	
2	151	60	211
	71.6	28.4	9.0
	7.7	15.7	
3 - 5	768	167	935
	82.1	17.9	39.8
	39.0	43.6	
6 - 9	800	101	901
	88.8	11.2	38.3
	40.6	26.4	
10 - 15	264	14	260
	94.6	5.4	11.1
	12.5	3.7	
16 and More	4	0	4
	100.0	0.0	
	0.2	0.0	0.2
Total	1969	383	2352

* Interviewed households do not include males living alone.

Decision-Making

Women's role in decision-making is closely associated with their role within the family, the major difference being between the role played by female heads as opposed to wives or consensual partners. Female heads manage daily household expenses in 84 o/o of all cases, at all income levels. About 5 o/o of female heads manage daily expenses in conjunction with an adult male, and in 7.6 o/o of all cases, adult males manage daily expenses, as Table III, 17 shows.

In male-headed households the pattern of the sex-role division in decision-making is nearly identical for consensual partners and wives. 72.9 o/o of consensual partners and 73.8 o/o of spouses had some role in household expenses management. Nearly 50 o/o of both consensual partners and wives manage daily household expenses alone. Table III, 18.

TABLE III, 17
Management of Daily Household Expenses
(Female-Headed Households)

Income Level	Decision-Maker				Total
	Interviewee	Interviewee & Adult Male	Adult Male	Other Person	
Less than \$ 20,000	186 86.1	8 3.7	19 8.8	3 1.4	216
\$ 20,000 - 39,999	53 80.3	7 10.6	6 9.1	0 0.0	66
\$ 40,000 and More	31 83.8	4 10.8	1 2.7	1 2.7	37
No Income	29 78.4	0 0.0	1 0.3	7 18.9	37
Total	299 84.0	19 5.3	27 7.6	11 3.1	356*

* 9 Missing Observations.

TABLE III, 18
Management of Daily Household Expenses
(Male-Headed Households)

Decision Maker	Role	
	Consensual Partner	Wife
Interviewee, alone	49.1	48.0
Interviewee and Adult Male	23.8	25.8
Adult Male	26.2	25.6
Other Person	0.6	0.3

The fact that consensual unions are more frequently found among the low-income group, may influence the woman's behavior, making her less likely to identify her economic fate with that of the man. Table III, 19 analyzes cooperative decision-making between married and consensual couples in the area of children's education, the area in which women exert the greatest influence. This table better illustrates the difference which exists between wives and consensual partners with respect to their children's education.

TABLE III, 19
Co-operative Decision-Making In Male-Headed Households By Income Level, Guaranties
(Education of Children)

Male-Headed Households	Income Level						Total	
	61000 9.000	10.000 19.999	20.000 29.999	30.000 39.999	40.000 59.999	60.000 99.999		
Consensual Partners (Interviewee)	35 55.6	25 47.2	12 52.2	14 87.5	9 69.2	8 66.7	2 100.0	105 57.7
Interviewee and her Consensual Partners	28 44.4	28 52.8	11 47.8	2 12.5	4 30.8	4 33.3	0 0.0	77 42.3
Total	63	53	23	16	13	12	2	183
Married Interviewee	168 59.6	126 50.2	59 42.8	38 42.7	44 43.1	54 43.9	3 50.0	492 49.5
Married Interviewee and her Husband together	114 40.4	125 49.8	79 57.2	51 57.3	58 56.9	69 56.1	3 50.0	499 50.5
Total	282	251	138	89	102	123	6	991

In consensual unions, as the income level rises, the woman exercises greater control over her children's behavior. With respect to joint decision-making by the consensual partners, no clear cut pattern exists with relation to income level. However, for married couples, joint decision-making is directly related to income level. Married women at the two lowest income levels are most actively involved in decisions about their children's educations, and since roughly half of all households surveyed belong to these income strata, this control is not insignificant.

It appears then, that due to the unstable condition of consensual unions, female consensual partners maintain more independence, as measured in terms of power to make decisions concerning education, than do legal spouses. It is probable that female consensual partners act in this manner because these women sometimes have children from former unions and, therefore, retain more control over their own children when they form a new partnership.

Analysis of decision-making roles in male and female-headed households reveals that women tend to take decision-making responsibility for those activities in which they are most actively engaged: children's education and the purchase and sale of animals. There is, after all, a certain logic in assuming responsibility for tasks which one is performing. Therefore, it should not be surprising to learn that women actively participate in the purchase and sale of animals such as pigs and chickens. Likewise, since women are responsible for the socialization of children, one would expect them to participate in decisions affecting children.

In most areas of decision-making, there is little noticeable difference between the roles of consensual partners and legal spouses. Consensual partners, however, maintained a much more independent role with regard to the purchase and sale of animals, respectively, than did wives, according to Table III, 20. 16.1 o/o of consensual partners control decision-making with respect to purchase of animals and 21.7% decide on sale of animals, compared to 7.1 o/o and 11.0 o/o, respectively, for wives. The difference in behavior patterns of the consensual partners probably can be attributed to the nature of the consensual union. It would appear that a larger proportion of consensual partners maintain a separate economic existence, instead of identifying their particular income-generating activity with that of their companion or compañero.

TABLE III, 20
Basic Decision-Making By Role
(Female Heads, Consensual Partners and Wives)

Role	Education of Children	Purchase of Land	Purchase of Tools	Purchase of Animals	Crop Management	Sale of Animals	Sale of Principal Products	Join Cooperative
Female Head Alone	157 79.7	149 72.3	114 55.1	151 74.8	105 45.3	177 79.7	110 54.7	18 58.1
Female Head & Other Adults	4 2.0	14 6.8	5 2.4	10 5.0	14 6.0	11 5.0	13 6.5	3 9.7
Others	36 18.3	43 20.9	88 42.5	41 20.3	113 48.7	34 15.3	78 38.8	10 32.3
Total Decisions	197 100.0	206 100.0	207 100.0	202 100.0	232 100.0	222 100.0	201 100.0	31 100.0
Interviewee (Consensual Partner) Alone	105 43.8	7 3.0	3 1.1	36 16.1	4 1.6	47 21.7	8 3.9	1 2.5
Consensual Partners Together	78 32.5	49 21.2	10 3.8	57 25.4	22 8.8	57 26.3	20 9.8	5 12.5
Male Head and Others	57 23.8	175 75.8	248 95.0	131 58.5	224 89.6	113 52.1	177 86.3	34 85.0
Total	240 100.0	231 100.0	261 100.0	224 100.0	250 100.0	217 100.0	205 100.0	40 100.0
Wives Alone	494 40.4	15 1.1	15 1.1	93 7.1	20 1.4	133 11.0	41 3.2	1 0.3
Couple Together	501 41.0	327 25.0	98 6.9	386 29.7	96 6.8	471 38.9	169 13.2	60 20.7
Male Head and Others	227 18.6	968 73.9	1299 92.0	822 63.2	1288 91.7	607 50.1	1075 83.7	229 79.0
Total *	1222 100.0	1310 100.0	1412 100.0	1301 100.0	1404 100.0	1211 100.0	1285 100.0	290 100.0

* Differences in the totals are due to the elimination of "Not Applicables" and missing data. There were a total of 360 female heads interviewed, 324 consensual partners and 1572 wives.

In female-headed households the interviewees have the predominant decision-making responsibility for all of the activities investigated, although other adults in the household often supplant the female head.

The most striking similarity between decision-making patterns in male and female households is that the interviewees are able to influence decision-making in exactly the same activities: children's education, purchase of land and animals, and sale of animals. The interviewees exert less control in decision-making involving farming such as crop management, sales of principal products, purchase of tools, etc. (Table III, 20)

Male heads effectively controlled agricultural production, making basic decisions in agricultural-related areas. Specifically, they controlled 90.4 o/o of decisions concerning tool purchases; 86.5 o/o, in crop management; 80.5 o/o, marketing of principal crops; and 76.5 o/o, in joining cooperatives. (Table III, 21)

Joint decision-making in male-headed households is most pronounced in the areas of education and animal purchases and sales, where interviewees and their male partners share the responsibility in 38.8%, 38.6% and 36.2 o/o, respectively, of all cases. Viewed from a different perspective, the interviewees have some influence in decision-making in all areas examined, from a minimum of 7.6 o/o to a maximum of 79.9 o/o, as Table III, 22 shows.

TABLE III,21

Basic Decision-Making In Male-Headed Households

Person Making Decision	Education of Children	Purchase of Land	Purchase of Tools	Purchase of Animals	Crop Management	Sale of Animals	Sale of Principal Products	Join Cooperative
Interviewee	612 40.7	23 1.4	18 1.0	134 8.5	27 1.6	186 12.6	57 3.7	2 0.6
Male Head or Partner	277 18.4	1167 73.4	1515 90.4	973 62.0	1482 86.5	743 50.3	1241 80.5	267 78.5
Interviewee Male Partner	584 38.8	382 24.0	112 6.5	449 28.6	120 7.0	534 36.2	190 12.3	65 19.5
Other Adults In Household	27 1.8	14 0.9	34 2.0	11 0.7	79 4.6	10 0.7	46 3.0	6 1.8
Other Persons	1 0.1	1 0.1	0 0.0	0 0.0	1 0.1	0 0.0	1 0.1	0 0.0
Interviewee and other persons in Household	3 0.2	2 0.1	1 0.1	2 0.1	6 0.3	4 0.3	6 0.4	0 0.0
Total Decisions	1504	1589	1726	1569	1715	1477	1541	340
Decisions Taken	1504 76.7	1589 81.2	1726 88.2	1569 80.2	1715 87.6	1477 75.4	1541 79.1	340 17.4
Decisions Not Applicable	458 23.3	368 18.8	231 11.8	388 19.8	243 12.4	481 24.6	408 20.9	1610 82.6
Total *	1962 100.0	1957 100.0	1957 100.0	1957 100.0	1958 100.0	1958 100.0	1947 100.0	1950 100.0

Animal Care Activities

Rural women in Paraguay, irrespective of their particular family environment, bear the primary responsibility for small animal care, in particular, swine and poultry. They are the mainstay of domestic animal production. In the female-headed households surveyed, female heads perform 52.4 o/o of all tasks associated with swine production, and 72.0 o/o of poultry related tasks, and play an important, though not dominant role, in cattle raising. See Table III, 23. In male-headed households, wives and consensual partners exhibit an identical pattern, performing 49.7 o/o of all tasks associated with swine production, 83.1 o/o of poultry related tasks, and 33.7 o/o of all cattle care tasks. See Table III, 24.

Animal care tasks differ from animal to animal, and some animals require more labor than others, so that the number of tasks involved in proper animal care is not the same for all animals. For that reason, one must examine the workload separately per animal, and, comparing swine-care tasks in male and female headed units, and so on. This analysis reveals that the structure of work as well as the labor supply available, are quite different in female-headed units; i.e., there is a fairly well-accepted division of labor *vis à vis* specific animals and *vis à vis* the tasks associated with each animal. These points will now be discussed in more detail.

a) Animal-specific tasks - Upon the recommendation of small animal specialists working in Paraguay, it was decided to examine four tasks for swine, six for cattle and five for poultry. The only common activities examined were feeding, sanitary care, management and slaughtering.

b) Labor Utilization - Tables III, 25, III, 26 and III, 27 show that irrespective of the number of animals, the work pattern in male-headed units is more labor intensive than in female-headed units. Animals in male-headed units received more attention in all cases. This may simply be a reflection of the available labor supply in the two different types of households. Obviously, a *madre soltera* cannot do as much work as a couple. Therefore, it appears that non-essential tasks are simply ignored, or done sporadically, in female-headed units. A shortage of labor in these households, rather than negligence or ignorance of proper animal care explains the difference in work patterns. Female-headed units, for instance, utilize veterinarians in approximately the same proportion of cases per animal as did male heads. Veterinarians perform 2.1 o/o of swine-related tasks, 12.1 o/o of cattle-related tasks, and 1.2 o/o of tasks for poultry in female-headed units, compared to 3.9 o/o, 12.6 o/o and 0.4 o/o in male units. (See Tables III, 23 and III, 24.)

TABLE III, 22
Interviewee Involvement In Decision-Making
(Male-Headed Households)

Participation	Education of Children	Purchase of Land	Purchase of Tools	Purchase of Animals	Crop Management	Sale of Animals	Sale of Products	Joining Cooperative
Interviewee Involvement	1199 79.7	407 25.6	131 7.6	585 37.3	153 8.9	724 49.0	253 16.4	67 19.7
No Interviewee Involvement	305 20.3	1182 74.4	1595 92.4	984 62.7	1562 91.1	753 51.0	1288 83.6	273 80.3
Total	1504	1589	1726	1569	1715	1477	1541	340

TABLE III, 23

**Animal Care Tasks By Role
(Female-Headed Households)**

Tasks	Tasks Performed By				Total Tasks
	Swine	Female Head	Children	Veterinarian	
Feeding	166	32	0	27	225
	73.8	14.2	0.0	12.0	
Sanitary Care	5	2	11	19	27
	18.6	7.4	40.7	70.4	
Management	84	17	0	15	116
	72.4	14.7	0.0	12.9	
Slaughtering	23	62	0	78	163
	14.1	38.0	0.0	47.9	
Total Tasks	278	113	11	139	531
	52.4	21.3	2.1	26.2	100.0

Tasks	Tasks Performed By				Total Tasks
	Cattle	Female Head	Children	Veterinarian	
Feeding	68	50	0	28	128
	53.1	26.0	0.0	21.9	
Sanitary Care	1	2	66	54	123
	0.8	1.6	53.7	43.9	
Management	31	23	0	17	71
	43.7	32.4	0.0	23.9	
Slaughtering	3	6	0	16	25
	12.0	24.0	0.0	64.0	
Pasturage	22	30	0	17	69
	31.8	43.5	0.0	24.6	
Milking Cows	78	21	0	29	128
	60.9	16.4	0.0	22.7	
Total Tasks	203	114	66	161	544
	37.3	21.0	12.1	29.6	100.0

TABLE III, 23 (cont.)

Tasks	Tasks Performed By				Total Tasks
	Female Head	Children	Veterinarian	Others	
Poultry					
Feeding	255	45	0	48	348
	73.3	12.9	0.0	13.8	
Sanitary Care	26	4	3	14	47
	55.3	8.5	6.4	29.8	
Management	115	28	0	19	162
	71.0	17.3	0.0	6.2	
Slaughtering	265	33	0	41	339
	78.2	9.7	0.0	12.1	
Collecting Eggs	222	56	0	52	330
	67.3	17.0	0.0	15.8	
Total Tasks	883	166	3	174	1,226
	72.0	13.5	0.2	14.2	100.0

c) Division of Labor - The tasks performed by female heads in animal care are given in Table III, 23 and those of women in male-headed units in Table III, 24. Women's levels of participation in animal-care tasks are approximately the same in both household types. With respect to swine care, female heads perform 52.4 o/o of all tasks, compared to 49.7 o/o for wives or consensual partners in male-headed units. For cattle care, the proportions are 37.3 o/o (female heads) and 33.7 o/o (wives or consensual partners). For poultry, the percentages are 72.0 o/o and 83.1 o/o, respectively.

The role of children is much different in female-headed households, particularly in swine and cattle production. Children perform 21.3 o/o of all swine care tasks in female-headed units, compared to 9.1% in male-headed units. Children's role in chicken production is roughly the same in both household types: they did 13.5 o/o and 11.4 o/o, respectively, of all chicken care tasks. Children were a much more important source of labor in female-headed units than in male-headed units, and they perform strenuous tasks, such as the slaughtering of swine and cattle, more frequently.

TABLE III, 24
Animal Care Tasks By Role
(Male Headed Households)

Swine Tasks	Person in Charge					Total Tasks
	Male Head	Wife/Con.P.	Children	Veterinarian	Others	
Feeding	48 2.9	1162 80.9	178 12.4	0 0.0	56 3.9	1437
Sanitary Care	80 20.0	43 10.7	8 2.0	151 37.7	119 29.7	401
Management	46 5.5	637 76.2	117 14.0	0 0.0	36 4.3	836
Slaughtering	924	79	51	0	141	1195
Total Tasks	1091 28.2	1921 49.7	354 9.1	151 3.9	352 9.1	3869 100.0

Cattle Tasks	Person in Charge					Total Tasks
	Male Head	Wife/Con.P.	Children	Veterinarian	Others	
Feeding	382 39.9	460 43.2	174 16.3	0 0.0	49 4.6	1065
Sanitary Care	71 6.9	4 0.4	9 0.9	570 55.1	380 36.8	1034
Management	272 46.7	165 28.3	111 19.0	1 0.2	34 5.8	583
Slaughtering	217 67.6	3 0.9	17 5.3	0 0.0	84 26.2	321
Pasturage	285 51.0	85 15.2	155 27.7	0 0.0	34 6.1	559
Milking Cows	15 1.5	811 83.0	101 10.5	0 0.0	50 5.2	977
Total Tasks	1242 27.4	1528 23.7	567 12.5	571 12.6	631 13.9	4539 100.0

Poultry Tasks	Person in Charge					Total Tasks
	Male Head	Wife/Con.P.	Children	Veterinarian	Others	
Feeding	23 1.2	1549 83.9	209 11.3	0 0.0	66 3.6	1847
Sanitary Care	30 10.6	191 62.5	10 3.5	26 9.2	26 9.2	283
Management	7 0.7	778 81.4	127 13.3	0 0.0	44 4.6	956
Slaughtering	15 0.8	1664 91.5	81 4.5	0 0.0	59 3.2	1819
Collecting Eggs	3 0.2	1387 77.3	333 18.6	0 0.0	70 3.9	1789
Total Tasks	78 1.2	5565 83.1	760 11.4	26 0.4	265 4.0	6694 100.0

TABLE III, 25

Number of tasks Performed in the Care of Swine

Number of Tasks Performed	Number of Households	
	Female Headed Households	Male Headed Households
<u>Swine</u>		
1	32	92
	14.2	6.4
2	88	484
	39.1	33.7
3	87	635
	38.7	44.2
4	18	226
	8.0	15.7
Total Households	225	1,437
	100.0	100.0

TABLE III, 26

Number of Tasks Performed in the Care of Cattle

Number of Tasks Performed	Number of Households	
	Female Headed Households	Male Headed Households
<u>Cattle</u>		
1.	11	50
	7.0	4.2
2	31	110
	19.6	9.3
3	41	326
	25.9	27.4
4	36	336
	22.8	28.3
5	30	265
	19.9	22.3
6	9	101
	5.7	8.5
Total Households	158	1,188
	100.0	100.0

TABLE III, 27
Number of Tasks Performed in the Care of Chickens

Number of Tasks Performed	Number of Households	
	Female Headed Households	Male Headed Households
<u>Chickens</u>		
1	2	7
	0.6	0.4
2	15	44
	4.3	2.4
3	160	752
	46.0	40.8
4	141	872
	40.5	47.3
5	30	170
	8.6	9.2
Total Households	348	1,845
	100.0	100.0

Conclusion

Women-headed households constitute a special subgroup among rural families in terms of income, occupation, demographic characteristics and standard of living. Female-headed households flourish in the more impoverished zones, in the crescent of poverty extending north-south from Concepción through the Central zone to the minifundia area of Misiones.

Female heads are distinctive in their demographic characteristics, as well as in their work activities and decision-making roles. They ordinarily perform a wider range of activities, engage in distasteful, heavy labor and bear the primary socio-economic responsibility for the household, especially with respect to animal production.

Women-headed households constitute about 16 o/o of all households in Eastern Paraguay, or roughly 3,600 households in which some 16,000 persons reside. These families represent an obvious target group for economic assistance. Rural assistance programs must bear in mind the demographic characteristics of these households. The fact that they are more heavily concentrated in certain communities may make for more easy project implementation.

DETERMINANTS AND CONSEQUENCES OF FERTILITY

Introduction

Fertility rates in Paraguay are moderately high. In 1976 the Total Fertility Rate (TFR) for all Paraguayan women aged fifteen to forty-nine, was estimated at 5.2. The TFR for all urban women was 3.5, and for rural women, 6.4. The rate in Asunción was 2.9, and for all other urban areas, 4.2.^{1/} Another 1976 estimate of the TFR for women aged 15-49 in Eastern Paraguay was 6.82.^{2/} The urban and rural fertility differential for Paraguay is 0.55, obtained by dividing the Urban TFR by the Rural TFR. This places Paraguay just below Chile and just above Panamá among Latin American countries recently studied.^{3/}

The EDENPAR survey reports the TFR for all women "in union," i.e., married or living in consensual union, as 8.6. This rate is also lower in urban areas (7.2), but the Rural TFR for women in union is 9.5--a rate very close to the one found by FEMRURAL.

Using the same tertile age classification as EDENPAR, FEMRURAL reports a total fertility rate of 9.1. (Table IV, 1) This estimate of recent fertility trends compares the observed number of children born in the period June 1977 to May 1978, to the number expected if these estimated age-specific birth rates, as adjusted, were to remain constant.

FEMRURAL however, includes all respondents between the ages of 15 and 49, irrespective of their marital status, who had a live birth in the yearly period specified. The slight difference, 0.5, between the Total Fertility Rates supplied by EDENPAR and FEMRURAL, can be attributed to the fact that FEMRURAL's sample includes 12 o/o single women. Their inclusion would tend to reduce the fertility levels of the surveyed population.

FEMRURAL, then, substantiates the finding of EDENPAR that the TFR among rural women, especially among women in union, is very high. Rural women in union have, on the average, two more children than do rural women as a whole, and about five more than urban women.

The majority of all FEMRURAL respondents, 53.7 o/o, have less than seven live births; 39.7 o/o have seven or more; and 6.6 o/o have none. Of these women with at least one live birth, 57.5 o/o have less than seven and 42.5 o/o have seven or more.^{4/}

- 1/

Brizuela de Ramirez, Fulvia, *Fecundidad Diferencial* (Asunción, Paraguay: Dirección General de Estadística y Censos, Marzo, 1979). This study is based upon the Encuesta Demográfica Retrospectiva Nacional, Paraguay, 1977 (EDENPAR), a retrospective fertility/mortality survey of approximately ten percent of the national population (May 1976) which was conducted jointly by the D.G.E.C. and CELADE (Centro Latino-Americano de Demografía).

2/

John E. Anderson, Leo Morris and Richard Monteith, "Contraceptive Prevalence in Paraguay," Analytical Report" (Atlanta, Ga.: H.E.W. Public Health Service, Center for Disease Control, May 1978), Table 6. This report suggested that a fertility decline has occurred in recent years in Asunción. This report is hitherto referred to as EPOP, Encuesta de Prevalencia de Uso de Anticonceptivos en el Paraguay.

3/

See Sally E. Findley and Ann C. Orr, "Patterns of Urban-Rural Fertility Differentials in Developing Countries: A Suggested Framework" (Santa Barbara, Ca.: Center for Advanced Studies, July 1978), Table 2. The smaller the differential, the lower the urban rate. Paraguay ranks among countries with smaller differentials such as Chile.

4/

Frequency, LIVEBABY (No. of Live Births).

TABLE IV, 1
Estimation of Present Fertility Levels of All Respondents, Aged 15-49

Number of Children Ever Born						
Number of Women	Observed June 1977 May 1978	Cumulative Total	Age i	a/ Est. Fertility Age Groups (Fi)	b/ Adjusted Est. Fertility (Fi)	
80	23	69	15 - 49 1	0.288	0.321	
226	91	445	20 - 24 2	0.403	0.449	
269	85	904	25 - 29 3	0.316	0.352	
289	74	1,379	30 - 34 4	0.256	0.285	
278	65	1,740	35 - 39 5	0.234	0.261	
262	30	1,912	40 - 44 6	0.115	0.128	
254	5	1,989	45 - 49 7	0.020	0.022	
1,658	373					

a/ Obtained by dividing the cumulative total by the number of interviewees in each age group.

b/ An Adjustment factor ($PI/F_i = 1.114$), obtained at the national level from the EDENPAR survey, was used to adjust the F_i s.

Total Fertility Rate = 9.1 The TFR is calculated as the weighted sum of each age-specific rate times five (for five-year cohorts), among rural women aged 15-19 in the FEMRURAL survey.

Fertility Differentials

The major determinants of fertility appear to be the age, marital status and educational level of the respondents and the income level of their families. These factors are conditioned by cultural norms, i.e., acceptable standards of behavior, ideal family size and expectations, as well as by diffusion of knowledge about contraception and availability of services.

The desire for children, in itself, exerts a powerful influence, especially in an environment which, until the last ten years, was virtually bereft of modern birth control technology. Large families are still the norm, and since infant mortality rates in rural Paraguay are high (92.87/per 1,000 live births), it is probable that infant mortality in itself promotes greater fertility, as families attempt to assure a certain survival rate among their offspring. 5/

Another factor which influences fertility is the woman's inability to control her own reproductive process, as a result of the societal or familial balance of power or lack of resources, i.e., access to contraceptive knowledge or methods.

5/

A brief summary of the literature on infant mortality and fertility differentials is found in Findley and Orr, "Patterns of Urban-Rural Fertility Differentials," pp. 47-51. The Paraguayan Ministry of Health began family planning services in 1969, and in 1972 established a family planning unit (DEPROFA) within the MOH.

Marital Status, Age and Education

Fertility is closely associated with a woman's availability for reproduction, so that a larger proportion of single women have had no children. 15.2 o/o of single women, compared to 6.6 o/o of consensual partners, 5.4 o/o of wives and 3.9 o/o of widows have no live births. All divorced or separated women had at least one live birth. (Table IV, 2) This pattern is observed for all age groups, especially among younger women, aged 15-29. Of the single women, 42.4 o/o of those aged 15-29 had no live births, compared to 12.3 o/o of women in the 30-49 age group and 10.9 o/o in the fifty and over group. (Tables IV, 3, IV, 4 and IV, 5)

TABLE IV, 2

Marital Status of Respondents by Number of Live Births

Number of Live Births	Marital Status					Total
	Single	Consensual Union	Married	Widow	Divorced, Separated	
Low Fertility (1-2 Live Births)	59 13.2 21.3	70 15.7 20.9	299 67.0 18.8	13 2.9 10.2	5 1.1 20.0	440 19.0
Medium Fertility (3-6 Live Births)	113 13.8 40.8	139 17.0 41.5	533 65.2 33.6	25 3.1 19.5	8 1.0 32.0	818 34.8
High Fertility (7-21 Live Births)	63 6.8 22.7	104 11.1 31.0	609 71.7 42.2	85 9.1 66.4	12 1.3 48.2	933 39.7
None	42 27.1 15.2	22 14.2 6.6	86 55.5 5.4	5 3.2 3.9	0 0.0 0.0	155 6.6
Total	277 11.8	335 14.2	1,587 67.5	128 5.4	25 1.1	2,352

TABLE IV, 3
Marital Status of Respondents by Number of Live Births
(15-29 Year Olds)

Number of Live Births	Marital Status					Total
	Single	Consensual Union	Married	Widow	Divorced, Separated	
Low Fertility (1-2 Live Births)	13 5.4 39.4	44 18.3 32.6	182 75.8 44.9	0 0.0 0.0	1 0.4 100.0	240 41.7
Medium Fertility (3-6 Live Births)	6 2.4 18.2	76 30.4 56.3	168 67.2 41.5	0 0.0 0.0	0 0.0 0.0	250 43.5
High Fertility (7-21 Live Births)	0 0.0 0.0	2 16.7 1.5	10 83.3 2.5	0 0.0 0.0	0 0.0 0.0	12 2.1
None	14 19.2 42.4	13 17.8 9.6	45 61.6 11.1	1 1.4 100.0	0 0.0 0.0	73 12.7
Total	33	135	405	1	1	575

TABLE IV, 4
Marital Status of Respondents by Number of Live Births
(30-49 Year Olds)

Number of Live Births	Marital Status					Total
	Single	Consensual Union	Married	Widow	Divorced, Separated	
Low Fertility (1-2 Live Births)	24 20.9 22.6	19 16.5 12.5	67 58.3 8.5	2 1.7 7.1	3 2.6 27.3	115 10.6
Medium Fertility (3-6 Live Births)	43 10.8 40.6	55 13.8 36.2	292 73.2 37.2	4 1.0 14.3	5 1.3 45.5	399 36.8
High Fertility (7-21 Live Births)	26 5.0 24.5	70 13.4 46.1	400 76.8 50.9	22 4.2 78.6	3 5.8 27.3	521 48.1
None	13 27.1 12.3	8 16.7 5.3	27 56.3 3.4	0 0.0 0.0	0 0.0 0.0	48 4.4
Total	106 9.8	152 14.1	786 72.6	28 2.8	11 1.0	1,083

TABLE IV, 5

**Marital Status of Respondents by Number of Live Births
(50 Years of Age and Older)**

Number of Live Births	Marital Status					Total
	Single	Consensual Union	Married	Widow	Divorced, Separated	
Low Fertility (1-2 Live Births)	22 24.2 15.9	7 7.7 14.6	50 54.9 12.6	11 12.1 11.1	1 1.1 7.7	91 13.1
Medium Fertility (3-6 Live Births)	64 37.9 46.4	8 4.7 16.7	73 43.2 18.4	21 12.4 21.2	3 1.8 23.1	169 24.4
High Fertility (7-21 Live Births)	37 9.3 26.8	32 8.0 66.7	259 64.8 65.4	63 15.8 63.6	9 2.3 69.2	400 57.6
None	15 44.1 10.9	1 2.9 2.1	14 41.2 3.5	4 11.8 4.0	0 0.0 0.0	34 4.9
Total	138 19.9	46 6.9	396 57.1	99 14.3	13 1.9	694

Age is the variable most closely associated with fertility. Two percent of wives and consensual partners in the younger age group, 15 to 29 year olds, report more than six live births. But about half of those in the next age group, 30 to 49 year olds, have more than six children; and 65.5 o/o of those fifty and above belong to the high fertility group.

Married women, widows and separated women, irrespective of age groups, tend to have a larger number of live births than consensual partners and single women. For instance, only 22.7 o/o of single women, 31.0 o/o of consensual partners, compared to 42.2 o/o of wives, 66.4 o/o of widows and 48.0 o/o of separated women have seven or more live births. (Table IV, 2)

Education and Fertility Differentials

Education is inversely related to high fertility, and is directly associated with low fertility as Table IV, 6 shows. As the educational level rises, the proportion of high parity (seven or more live births) women drops. Forty percent of women with some primary education, 14.6 o/o of those who had completed primary, 13.5 o/o of those with some secondary, and 8.7 o/o of those who completed secondary school, belong to the high fertility group. As education level rises, the proportion of women with one to two live births increases, except for a slight decrease among women with some secondary education. Only 17.4% of women with some primary schooling belong to the low fertility group, for instance, as compared to 43.5 o/o of women with completed secondary. The proportion of women with three to six live births in all educational categories, however, is fairly constant.

TABLE IV, 6
Number of Live Births by Educational Level of Respondents

Number of Live Births	Educational Level					Total
	Some Primary	Completed Primary	Some Secondary	Completed Secondary	None	
Low Fertility (1-2 Live Births)	261 58.5 17.4	88 19.7 38.9	25 5.6 33.8	10 2.2 43.5	61 13.7 11.6	445 18.9
Medium Fertility (3-6 Live Births)	553 67.6 36.8	80 9.8 35.4	27 3.3 36.5	9 1.1 39.1	149 18.2 28.3	818 34.8
High Fertility (7-21 Live Births)	697 64.0 39.7	33 3.5 14.6	10 1.1 13.5	2 0.2 8.7	291 31.2 55.3	933 39.7
None	91 59.7 6.1	25 16.1 11.1	12 7.7 16.2	2 1.3 8.7	25 16.1 4.8	155 6.6
Total	1,502 63.9	226 9.6	74 3.1	23 1.0	526 22.4	2,351*

* One University Level Respondent with low fertility is not shown here.

Education in itself does not reduce fertility, but it is closely associated with low or high fertility. Education is thought to work through intervening variables such as consumerism, later marriage age, better information sources, aspirations for upward social mobility, etc. In an attempt to measure the "modernity" of the respondents in the survey, fertility was compared with their place of childhood socialization and controlled by age group. There was no association between the variables, however, indicating that early socialization may not be as important in explaining fertility behavior as are other factors, such as income, education or social status. 6/

An examination of the association between age, education and fertility reveals that age and education together are important indicators of high and low fertility for women under fifty. Education is inversely related to high fertility and directly related to low fertility in this group. There is no association, however, between education and fertility for women of fifty years of age and older. 7/

There is some evidence that women in the age fifty and over group with high fertility constitute a special case. The same pattern is observed for this age parity group when income and age are compared to fertility.

Income Level and Socio-Economic Status

There is an inverse relation between family income level and high fertility, i.e., seven or more live births. The proportion of high-parity women drops as family income rises. About 45 o/o of respondents from families in the low-income group (less than \$20,000), 38.5 o/o from the middle-income group (\$20,000 to 39,999) and 23.9 o/o from the high-income group (\$40,000 and more) report more than six live births. And low fertility (1-2 live births) is directly related to income. As the income level rises the proportion of women with low fertility increases. (Table IV, 7)

Income level is clearly associated with the fertility behavior for women aged 15-49. Among the youngest women, aged 15-29, with medium-level fertility (3-6 live births) fertility declined with every increment in income. Thus, about 58 o/o of women from low-income families, 34.1 o/o from middle income families and 28.9 o/o from high income families had medium level fertility rates. A similar pattern was observed for high-parity women. (Table IV, 7)

Among women in the 30-49 year old group fertility and income level are also inversely related. 55.8% 45.2 o/o, and 26.5 o/o of respondents from low, middle, and high-income families, respectively, report high fertility. The proportion of women in low and medium fertility groups also falls with every increment in income. But income level does not account for fertility patterns among respondents fifty years of age and older. Fertility patterns among that group were nearly identical for women from low and middle income families. 8/

6/ Unpublished tables, LIVBTHP BY SOCIALIZ BY AGERESP.

7/ Unpublished tables, LIVBTHP BY EDUCAT BY GRANAGE. Among women aged fifty and over, no inverse relationship exists between educational level and high fertility, and the Chi Square level of significance is $>.05$, indicating that the variables are not closely associated. A regression analysis of live births with income gives a correlation coefficient of -0.01295 , significant at 0.001 , indicating there is a weak inverse relation between the variables. See the correlation matrix in Appendix 2.

8/ These data are calculated from three tables, LIVBTHP BY GRANINC BY GRANAGE, on file. Space does not permit inclusion of all control tables. The table for women 50 and over indicates that income and age analysis do not adequately explain the fertility behavior of these older women, i.e., income and fertility are not associated with age for this age group.

TABLE IV, 7
Number of Live Births of Respondents by Per Capita Family Income (1977)

Number of Live Births	Per Capita Family Income				Total
	Less than \$20 000	G 20 000 39 999	G 40 000 & More	None	
Low Fertility (1-2 Live Births)	118 36.0 12.8	121 27.6 22.7	148 33.7 30.3	12 2.7 19.0	439 19.0
Medium Fertility (3-6 Live Births)	445 55.1 36.1	181 22.4 34.0	163 20.2 33.3	19 2.4 30.2	808 34.9
High Fertility (7-21 Live Births)	570 62.4 46.3	205 22.4 38.5	117 12.8 23.9	22 2.4 34.9	914 39.5
None	58 37.7 4.7	25 16.2 4.7	61 39.6 12.5	10 6.5 15.9	154 6.7
Total	1,231 53.2	532 23.0	409 21.1	63 2.7	2,315*

* 37 Missing Observations.

A possible explanation for the different fertility behavior among women fifty and over is that they are, in some way or other, distinctive. Fertility behavior is thought to be related to a woman's "modernity," in short, her worldview, including her aspirations for the future, openness to change and self-efficacy. Education is one channel of communication for new ideas, and rural women born before 1929 had few other informational sources, unlike those born even a decade later, who had other opportunities, especially in the form of modern means of communication such as transistor radios. Also, in all probability the majority of FEMRURAL respondents aged 50 and over had no access to modern birth control technology during their peak reproductive years.

The majority of women aged 50 and over, or 55.9 o/o, have no formal education. Viewed regionally, nearly 63 o/o of women aged 50 and over interviewed in Concepción and San Pedro (the Eje Norte), have no formal education, compared to 59 o/o each in the Minifundia and Ganadero zones; 53% in Itapúa, and 41.1% in the New Colonization area. 9/ If education were a constant, then age, income and fertility would be correlated for all age groups.

9/

Calculations based on 5 unpublished tables, EDUCAT BY AGERESP BY REGIONAL.

Contraceptive Use

Contraceptive use was examined only for those interviewees "at risk," i.e., those of fertile age (15-49) living in consensual unions or married. 10/ There is no significant difference in contraceptive use between consensual partners, 19.5 o/o, and married women, 22.9 o/o. Likewise, there were no significant differences in the type of contraceptive used. Both consensual partners and wives used the same method with equal frequency. 11/

15.1 o/o use the "pill" and other modern methods such as the IUD, sterilization, condoms, foam, jelly, tablets, and diaphragms; 1.2 o/o rely upon withdrawal and rhythm; 4.9 o/o on yuyos, native herbal contraceptives; and 1.2 o/o use lactation as means of preventing another pregnancy. (Table IV, 8)

About 78 o/o of all women "at risk" use no contraceptive method. The majority of contraceptive users rely upon effective methods. 48.6 o/o use the "pill;" 6.4 o/o have IUDs; 3.0 o/o use foams, jelly, condoms, diaphragms or tablets; and 9.4 o/o have been sterilized by tubal ligations, hysterectomies or other surgical procedures; and about 5 o/o use rhythm and withdrawal. Those using methods with little or no recognized efficacy rely principally upon yuyos (21.9 o/o) and to some extent upon lactation (5.5 o/o). (Table IV, 8)

TABLE IV, 8
Current Use of Contraception by Method and Place Obtained (Women "At Risk")

Contraceptive Status	Cases	Percent of Total	Percent of Users	Place Obtained					Total
				Health Center	IPS	Pvt.Clinic	Drug Store	Other, Not Applicable.	
<u>Modern Methods</u>	<u>222</u>	<u>15.0 o/o</u>	<u>67.5 o/o</u>	<u>151</u> 68.0	<u>5</u> 2.3	<u>28</u> 12.6	<u>26</u> 11.7	<u>12</u> 5.4	100.0 o/o
Pills	160	10.8	48.6	74.3	1.9	8.8	13.8	1.3	100.0 o/o
IUDs	21	1.4	6.4	66.7	4.8	14.3	0.0	14.3	100.0 o/o
Gell, Foam, Sterilization, etc.	10	0.7	3.0	0.0	0.0	30.0	40.0	30.0	100.0 o/o
Sterilization, etc.	31	2.1	9.4	58.1	3.2	25.8	0.0	12.9	100.0 o/o
<u>Traditional</u>	<u>17</u>	<u>2.1</u>	<u>5.2</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>17</u>	100.0 o/o
Rhythm & Withdrawal	17	2.1	5.2	0.0	0.0	0.0	0.0	100.0	100.0 o/o
<u>Folk</u>	<u>72</u>	<u>4.9</u>	<u>21.9</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>72</u>	100.0 o/o
<u>Yuyos</u>	72	4.9	21.9	0.0	0.0	0.0	0.0	100.0	100.0 o/o
<u>Lactation & Other Methods</u>	<u>13</u>	<u>1.2</u>	<u>5.5</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>13</u>	100.0 o/o
Lactation & Other Methods	13	1.2	5.5	0.0	0.0	0.0	0.0	100.0	100.0 o/o
<u>Non-Users</u>	<u>1149</u>	<u>77.7 o/o</u>	<u>0.0 o/o</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	0.0 o/o
<u>Total</u>	<u>1478</u>		<u>329</u>						

ROW PCT is given for Place Obtained, while COL PCT is given for Percent of Total and Percent of users.

10/

Only 0.6 o/o of women not in the "at risk" group, presumably singles, used contraceptives.

11/

Unpublished tables. See CONTRACP BY MARSTATU, controlling for MARSTATU EQ 2 or 3 AND ACERESP LE 7. The Chi Square level of significance was 0.8029, indicating that the type of union did not influence the choice of method.

The Contraceptive Prevalence Survey (EPOP), conducted in 1977, reported a similar incidence of contraceptive use as did FEMRURAL. In EPOP, 17.1 o/o of "ever married" rural women (ages 15-44) used methods classified by FEMRURAL as "modern" and "traditional", compared to 16.1 o/o of "at risk" women in the FEMRURAL survey. EPOP found that 5.9 o/o of the women used yuyos, compared to 4.9 o/o in FEMRURAL. But the surveys differ greatly over the use of lactation as a birth control method. FEMRURAL found that only 1.2 o/o of the respondents use lactation as a birth control method, although 29.8 o/o of the "at risk" respondents were breastfeeding at the time of the interview. Apparently EPOP classified all women who were breastfeeding at the time of the interview, and were not using any other method, as users of prolonged lactation for birth control.

The difference in data can be attributed to methodological differences. In the EPOP survey interviewers read a list of methods and the respondent indicated whether or not she used the method. FEMRURAL made no assumption that breastfeeding was a conscious contraceptive method. FEMRURAL respondents were asked if they used a method and, if so, which. Lactation was recorded only if the respondent specifically mentioned it.

Due to the high incidence of users of lactation reported in EPOP, that survey reported non-users represented only 53.9 o/o of rural women. FEMRURAL does not consider lactation a reliable method since ovulation can occur during lactation. Consequently, the percentage of non-users reported by FEMRURAL is 77.7 o/o, substantially higher than reported by EPOP.

Notwithstanding the discrepancy introduced by the issue of lactation, and other methodological considerations, i.e., the definition of women "at risk," EPOP and FEMRURAL appear to be comparable in the overall assessment of contraceptive use in rural Paraguay. In FEMRURAL single, separated and widowed women in the fertile age group (15-49), constituted only 6.8 o/o of all interviewees. Therefore, one would not expect to find large differences in the data as a result of the different definitions of "at risk" women.

Source of Contraception

FEMRURAL provides estimates of the percentage of contraceptive users obtaining "modern" contraceptives from various sources, including the public, private and commercial sectors. This data supports the findings of EPOP, that in rural areas the most effective distribution of modern contraceptives is through organized government programs, which operate out of local health centers.

67.5 o/o of all contraceptive users in FEMRURAL rely upon modern "medical" methods, including orals, IUDs, injections, foam, jelly, tablets, diaphragms, condoms, as Table IV, 8 shows. Of these, 68.0 o/o obtain their supplies, usually orals, from family protection clinics run by DEPROFA, a branch of the Ministry of Public Health and Social Welfare. Another 2.3 o/o get supplies from clinics run by the Social Security Institute (IPS). Thus, the public health sector provides contraceptive supplies for 70.3 o/o of the women. Private clinics, hospitals and doctors supply 12.6 o/o of contraceptive and drugstores supply 11.7 o/o.^{12/} An additional 5.4 o/o obtain supplies via intermediaries, so that the respondent did not know the source. Thus, the commercial sector supplies 24.3 o/o of modern medical contraceptives.^{13/}

12/

Private clinics run by CEPEP, an IPPF affiliate, appear to have been reported as public clinics due to either interviewer error or inaccurate data supplied by the respondents.

13/

EPOP reported that the commercial sector supplied 26.5 o/o, and the organized health sector, 67.6 o/o, of all contraceptives used.

Location Factors

There are regional variations in contraceptive use and in contraceptive use by type. The highest proportion of users of modern contraceptives are in the ganadero, Itapúa and New Colonization zones, 13.2 o/o, 11.3%, and 13.3 o/o respectively. The largest proportion of non users was in Eje Norte (90.0%) perhaps the most isolated area, followed by the Minifundia zone (85.4 o/o). The proportion of non users was approximately the same in the other three zones, about 83.7 o/o. (Table IV, 9)

Regional differences in contraceptive use may be related to the availability of family planning services in the five zones. Government operated family planning clinics which distribute the majority of modern contraceptives used by rural women are not uniformly effective in their outreach. 13

Contraceptive use in the five zones may also reflect differences in the population composition. The lower rates in the Minifundia and Eje Norte zones may result from high female out migration. The more traditional, less ambitious women left behind are probably less inclined to use contraceptive methods. The higher use in colonization areas may result from modernizing influences in those zones.

TABLE IV, 9
Regional Distribution of Contraceptive Use

	Modern	Others	None	Total
Minifundia	96 8.5 41.1	70 6.2 62.5	968 85.4 48.5	1134
Ganadero	20 13.2 8.7	5 3.3 4.5	127 83.6 6.4	152
Itapúa	27 11.3 11.8	12 5.0 10.7	200 83.7 10.0	239
Eje norte	22 6.9 9.6	10 3.1 8.9	288 90.0 14.4	320
New Colonization	64 13.1 27.9	15 3.1 13.4	411 83.9 20.6	490
Total	229 9.8	112 4.8	1994 85.4	2335

14/

Data from the World Fertility Survey indicate that contraceptive use is clearly affected by the "availability and accessibility of family planning services." See Germán Rodríguez, "Family Planning Availability and Contraceptive Practice," *International Family Planning Perspectives and Digest*, Vol. 4, No. 4 (Winter 1978), pp. 100-115.

Decision-Making

Perhaps the most critical indicator of women's power in decision-making involves that of control over their own bodies, i.e., their role in family planning. Women may be prevented from taking an active role in decision making by the sexual balance of power in their households or by socio-cultural constraints, or both. The latter is typified by responses such as "Lo que Dios manda" (Whatever God sends) or "No se habla sobre el asunto" (This subject isn't discussed). When asked about family planning decisions, the same proportion of wives and consensual partners, 14.7 o/o, responded in this manner. This attitude results in fertility by default. In male-headed households approximately 13.0 o/o of the men make decisions concerning family planning. Combining these categories, 27.5 o/o of consensual partners have no control over their own reproductive functions, 28.4 o/o of wives, and 10.2 o/o of female heads. Table IV, 10 shows the pattern of decision-making in the area of family planning by role.

TABLE IV, 10
Family Planning By Role

	Decision-Making				Total
	Interviewee	Jointly	Man	Not Discussed, What God Sends	
Female Head	71.4 o/o	18.4 o/o	4.1 o/o	6.1 o/o	49
Consensual Partner	32.5 o/o	40.0 o/o	12.8 o/o	14.7 o/o	265
Wife	27.0 o/o	44.6 o/o	13.7 o/o	14.7 o/o	1102
					1416

In fertility-related decision-making, the majority of female heads, 71.4 o/o, exercised control over their own reproductive process, and consensual partners acted with slightly more independence from their sexual partners than did wives, 32.5 o/o of consensual partners, compared to 27.0 o/o of wives, controlled their own fertility. Joint decision-making was more prevalent in legalized unions, 44.6 o/o; although 40.0 o/o of consensual partners also decided jointly. Among female heads, also, 18.4 o/o participated jointly with their sexual partners in decisions concerning their fertility.^{15/}

Some respondents may have been intimidated by the presence of their mates or other adult family members. When others were present, some respondents apparently did not answer with complete candor when asked about family planning decisions. The interviewers tend to downplay their own role (five percentage points) when another adult was present, and the proportion of respondents who answered that joint decision making occurred also declined. All declines in the role women attributed to themselves were offset by an increased role for the male, thus indicating that some deference was shown to the man when he or other adults were present, as Table IV, 11 shows.

^{15/}

Only 13.6 o/o of female heads still maintain sexual relations, although 35.8 o/o of the group are less than 50 years old.

TABLE IV, 11
Roles in Family Planning By Control Groups

Interview Situation	Decision-Making Responsibility					Total
	Interviewee	Man Alone	Joint	Not Answered	What God Sends	
Respondent Alone	31.8	10.8	43.6	9.7	4.1	831
Others Present	27.0	16.2	41.1	9.2	6.4	610
						1,441

There is some evidence that contraception data also may have been distorted somewhat by the presence of the respondent's husband or consensual partner during the interview. (Table IV, 12) Respondents were interviewed alone in 63.9 o/o of all cases. Male sexual partners were present in 28.7% and other persons in 7.5 o/o of all cases. The proportion of non-users increases and the percentage of users of all types of contraceptive methods (modern, traditional and folk) declines when male sexual partners are present.

TABLE IV, 12
Contraception By Control Groups

Interview Situation	Method Used					Total
	None	Modern	Rhythm/ Withdrawal	Yuyos	Lactation	
Respondent Alone	74.2	17.2	1.2	6.3	1.1	214 63.9 o/o
Husband or Consensual Partner also Present	80.7	13.5	0.8	4.2	0.8	96 28.7 o/o
Others Present	76.8	15.2	1.0	4.0	3.0	25 7.5 o/o
						335

DETERMINANTS OF FERTILITY

Attitudes Towards Contraceptives

One of the primary determinants of contraceptive use is the desire on the part of the woman to limit her family. That decision is primarily that of the woman, acting alone or with her partner. Of those women who do not anticipate additional births, 42.1 o/o make the decision jointly with their partners, and 37.8 o/o act alone, and in 9.8 o/o of all cases men make the decision. In families desiring more children, the man's role appears to be more influential. Men decide in 15.3 o/o of those cases, although joint decision making is most common (42.1 o/o), followed by the respondent alone, in 24.5 o/o of all cases. (Table IV, 13)

TABLE IV, 13
Family Planning Attitudes of the Interviewee Compared to Family Planning Decision-Making Roles

Attitude	Decision Maker				Total
	Interviewee Alone	Male Alone	Joint	Not discussed, What God Sends	
Women Who Plan More Births	213	133	366	157	869
	24.5	15.3	42.1	18.1	
	53.8	70.4	59.8	74.8	60.3
Women Who Do Not Plan More Births	216	56	146	53	571
	37.6	9.8	43.1	9.3	
	50.3	29.6	40.2	25.2	39.7
Total	429	189	612	210	1,440
	29.8	13.1	42.5	14.6	

Of all women "at risk" interviewed, 58.7 o/o think they will have more children and 41.3 o/o do not. As would be expected, contraceptive use is more common among women who wish to limit their families. Of these, 32.1 o/o use contraceptives, compared to about 16 o/o who wish to have children. Or, 67.8 o/o of the women who do not expect to have more children were not using contraceptives, contrasted with 84.9 o/o who believe they will have another child. Use of modern contraceptive devices also is more common among women who do not plan to have more children (59.7 o/o). But 40.3 o/o of the respondents using modern contraceptive methods apparently are trying to space their children, rather than limit family size, since the respondents indicate they will have a/another child. Rhythm and withdrawal are used in equal proportions among both groups of women although yuyos are used more (63.0 o/o) by those who do not want more children. (Table IV, 14)

About two thirds of all women who thought they would have no more children are unprotected, and an additional 9.2 o/o are using methods such as yuyos and lactation which are unreliable.

TABLE IV,14
Contraceptive Use by Respondent's Family Planning Attitude
(Women "At Risk")

Attitudes	Non-Users	Contraceptive Status				Total
		Modern Methods	Rhythm & Withdrawal	Yuyos	Lactation & Others	
Women who Plan More Births	735 84.8 64.0	89 10.3 40.3	8 0.9 50.0	27 3.1 37.0	8 0.9 44.4	867 58.7
Women Who Do Not Plan More Births	413 67.8 36.0	132 21.7 59.7	8 1.3 50.0	46 7.6 63.0	10 1.6 55.6	609 41.7
Total	1,148 77.8	221 15.0	16 1.1	73 4.9	18 1.2	1,476

The desire to limit family size is a direct reflection of the number of live births a woman has had. (Table IV, 15) Women were asked, "Piensa tener otro(s) hijo(s)? " ("Do you think you will have another child/other children? ") instead of "Do you want to have more children? "

Women with more than seven live births are more prone to consider limitation of family size than low-parity women. 57.1 o/o of high-parity women think they will have no more children, compared to 42.9 o/o of women who desire children. There is some indication that rural norms with respect to ideal family size may be changing, as seen in the incidence of women with no live births (21.5 o/o), and less than three live births (21.5 o/o), and between three and six live births (41.9 o/o) who think they will have no more children. With every increase in the number of live births a woman has had there is a corresponding increase in the percentage of women who want to end their reproductive function.

Attitudes may be misleading. The woman may not be able to actualize her plans or may later change her mind. The above data are more suggestive of changing rural norms than they are descriptive of actual contraceptive behavior. When contraceptive behavior is examined per parity group, as shown in Table IV, 16, there is no pattern of increased contraceptive activity per increment in the number of live births. The proportion of non-users is actually somewhat higher in the high parity group (7 or more live births), and is lower among women with three to six live births, indicating this group is more actively involved in contraceptive behavior than any other.

TABLE IV, 15

Number of Live Births by Respondent's Attitude Toward Family Planning
(Women "At Risk")

Attitude	Number of Live Births				Total
	None	1 - 2	3 - 6	7 & More	
Women Who Plan More Births	73 8.4 78.5	244 28.1 78.5	343 39.6 58.1	207 23.8 42.5	867 58.7
Women Who Do Not Plan More Births	20 3.3 21.5	67 11.0 21.5	247 40.6 41.9	275 45.2 57.1	609 41.3
TOTAL	93 6.3	311 21.1	590 40.0	482 32.7	1,476

TABLE IV, 16
Contraceptive Behavior by Number of Live Births
(Women "At Risk")

Contraceptive Status	Number of Live Births				Total
	None	1-2	3-6	7 & More	
Non-Users	85	233	437	394	1,149
	7.4	20.3	38.0	34.3	
	91.4	74.7	73.9	81.7	77.7
Modern Methods	5	53	100	64	222
	2.3	23.9	45.0	28.9	
	5.4	17.0	16.9	13.3	15.0
Rhythm & Withdrawal	0	5	11	0	16
	0.0	31.3	68.8	0.0	
	0.0	1.6	1.9	0.0	1.1
Yuyos	0	16	37	20	73
	0.0	21.9	50.7	27.4	
	0.0	5.1	6.3	41.5	4.9
Lactation & Other Methods	3	5	6	4	18
	16.7	27.8	33.3	22.2	
	3.2	1.6	1.0	8.3	1.2
Total	93	312	691	482	1,478
	6.3	21.1	40.0	32.6	

$\chi^2 = 0.0030$ Chi Square Level of Significance = 0.0030

Income and Contraception

Contraceptive behavior is directly related to the per capita income of the family. Table IV, 17 shows that the proportion of contraceptive users increases with every increment in income level. Non-users constitute 89.5 o/o of families with no income; 83.4 o/o of families in the low-income group (less than \$20,000); 71.9 o/o of those in the middle-income group (\$20,000 to 39,999); and only 69.9 o/o of those in the high-income bracket (\$40,000 and more).

The type of contraceptive used is also related to the family's economic position. 5.3 o/o of interviewees whose families reported no income use modern contraceptives, compared to 10.0 o/o of low-income families and about 21 o/o for middle and high-income families. However, the use of non-modern methods does not show a clear pattern in relation to income.

**Contraceptive Status by Per Capita Family Income Level
(Women "At Risk")**

Contraceptive Status	Family Per Capita Income				Total
	No Income	Less than ₱ 20,000	₱ 20,000 to 39,999	₱ 40,000 & More	
Non Users	17 1.5 89.5	633 55.7 83.4	248 21.9 71.9	237 20.9 69.9	1,135 77.6
Modern Methods	1 0.5 5.3	76 34.4 10.0	73 33.0 21.2	71 32.1 20.9	221 15.1
Rhythm & Withdrawal	0 0.0 0.0	9 56.3 1.2	2 12.5 0.6	5 31.3 1.5	16 1.1
Yuyos	1 1.4 5.3	36 49.3 4.7	19 26.0 5.5	17 23.3 5.0	73 5.0
Lactation & Other Methods	0 0.0 0.0	5 20.1 0.7	3 17.6 0.9	9 52.9 2.7	17 1.2
Total	19 1.3	759 51.9	345 23.6	339 23.2	1,462

Educational Level

Contraceptive use is also directly related to the educational level obtained by respondents in the "at risk" group, as Table IV, 18 shows. Women with no formal education were more heavily clustered (84.8%) in the non-user ranks. With every increase in educational level the percentage of non-users dropped, so that only 50.0% of those women who had completed secondary schooling were non-users. But the method of contraception used was not necessarily different among lesser and better educated women. Reliance upon orals and other "modern" or "medical" methods, for instance, was relatively uniform across all educational levels, ranging from 64.3% among women with no education to a high of 69.6% among women with some secondary education, as Table IV, 19 shows.

TABLE IV, 18
Contraceptive Use by Educational Level
(Women "At Risk")

Contraceptive Status	Educational Level					Total
	Some Primary	Completed Primary	Some Secondary	Completed Secondary	None	
Non-Users	820 71.4	132 11.5	32 2.8	9 0.8	156 13.6	1,149 77.7
Modern Methods	143 64.4	39 17.6	16 7.2	6 2.7	18 8.1	222 15.0
Rhythm & Withdrawal	10 62.5	3 18.8	2 12.5	1 6.3	0 0.0	16 1.1
Yuyos	49 67.1	11 15.1	4 5.5	1 1.4	8 11.0	73 4.9
Lactation & Other Methods	9 50.0	5 27.8	1 5.6	1 5.6	2 11.1	18 1.2
Total	1,031 69.8	190 12.9	55 3.7	18 1.2	184 12.4	1,478

TABLE IV, 19
Educational Level of Contraceptive Users

Contraceptives	Educational Level					Total
	None	Some Primary	Completed Primary	Some Secondary	Completed Secondary	
Modern	64.3	67.8	67.2	69.6	66.7	222 67.5
Yuyos (herbs)	28.6	23.2	19.0	17.4	11.1	73 22.2
Rhythm & Withdrawal	0.0	4.7	5.2	8.7	11.1	16 4.9
Lactation	7.1	4.3	8.6	4.3	11.1	18 5.4
Total	28	211	58	23	9	329

The "pill" and other modern methods have gained acceptance among women at all educational levels. The "pill" is the most frequently used method among rural women, as well as the most popular "modern" method.

Although acceptance of orals is uniform, irrespective of educational level, formal education may be an important factor in determining which alternative method of contraception a woman will use. Lesser educated women, especially those with no formal education, rely more upon yuyos (medical herbs), than do other women. The use of yuyos is inversely related to education. The percentage of yuyo users decreases as the educational level rises. Methods requiring calculations and precautions, such as rhythm and withdrawal, are more common among better educated women and absent among women with no education.

An analysis of the interaction of education, age and contraceptive behavior produced interesting results. There was no association in the younger age group (15-29) between those variables, although education and age were closely associated with contraceptive behavior for women in the 30-49 age group, who were less well educated than the younger women. It appears that contraception knowledge is more diffused among the younger generations of rural dwellers, irrespective of their educational level, than in the past. Previously, such knowledge was more localized among better educated groups. See Table IV, 20 and Table IV, 21.

TABLE IV, 20

**Contraceptive Use by Educational Level
(15-29 Year Olds "At Risk")**

Contraceptive Status	Educational Level					Total
	Some Primary	Completed Primary	Some Secondary	Completed Secondary	None	
Non-Users	266	73	20	5	43	407
	65.4	17.9	4.9	1.2	10.6	
	77.6	67.6	62.5	62.5	87.8	75.4
Modern Methods	50	22	10	3	4	89
	56.2	24.7	11.2	3.4	4.5	
	14.6	20.4	31.3	37.5	8.2	16.5
Rhythm & Withdrawal	5	1	1	0	0	7
	71.4	14.3	14.3	0.0	0.0	
	1.5	0.9	3.1	0.0	0.0	1.3
Yuyos	17	8	1	0	2	28
	60.7	28.6	3.6	0.0	7.1	
	5.0	7.4	3.1	0.0	4.1	5.2
Lactation & Others Methods	5	4	0	0	0	9
	55.6	44.4	0.0	0.0	0.0	
	1.5	3.7	0.0	0.0	0.0	1.7
Total	343	108	32	8	49	540
	63.5	20.8	5.9	1.5	9.1	

$$X^2 = 0.1783 \dots$$

Chi Square Level Of Significance = 0.1783

TABLE IV, 21
Contraceptive Use by Educational Level
(30-49 Year Olds "At Risk")

Contraceptive Status	Educational Level					Total
	Some Primary	Completed Primary	Some Secondary	Completed Secondary	None	
Non-Users	554	59	12	4	113	742
	74.7	8.0	1.6	0.5	15.2	
	80.5	72.0	52.2	40.0	83.7	79.1
Modern Methods	93	17	6	3	14	133
	69.9	12.8	4.5	2.3	10.5	
	13.5	20.7	26.1	30.0	10.4	14.2
Rhythm & Withdrawal	5	2	1	1	0	9
	55.6	22.2	11.1	11.1	0.0	
	0.7	2.4	4.3	10.0	0.0	1.0
Yuyos	32	3	3	1	6	45
	71.1	6.7	6.7	2.2	13.3	
	4.7	3.7	13.0	10.0	4.4	4.8
Lactation & Others Methods	4	1	1	1	2	9
	44.4	11.1	11.1	11.1	22.2	
	0.7	1.2	4.3	10.0	1.5	1.0
Total	688	82	23	10	135	928
	73.3	8.7	2.5	1.1	14.4	

$\chi^2 = 0.0001$

Chi Square Level of Significance = 0.0001

Consequences of Fertility

The primary consequences of high fertility are high infant and maternal mortality. Both infant and maternal mortality rates are higher in rural areas than urban areas. FEMRURAL was not designed to provide estimates on infant mortality rates. Estimates for rural Paraguay are necessarily imprecise due to the difficulty of acquiring accurate data.

Infant mortality rates in the interior for 1974 were 92.87 per 1,000 live births, compared to 61.06 for Asunción and 86.32 for the country as a whole. In 1970 the infant mortality rate in the interior was 121.97, the highest rate recorded since 1960. In that year the national rate was 101.85. In 1974 infant mortality (infants less than one year old) in the interior of Paraguay decreased by 13.0 o/o, in comparison with overall mortality rates, although Asunción registered a decline of 37.0 o/o. The primary

causes of death are, in order, diarrhea, pneumonia and bronchial pneumonia, birth injuries and tetanus. In 1974 birth injuries, diarrhea and malnutrition increased by 77 o/o, 82 o/o and 80 o/o, respectively. 16/

Maternal mortality rates in the interior increased by 34.9 o/o over the period 1960-1974. The rate varied from one part of the country to another in 1974, from 3.65 per 1,000 live births in areas adjacent to the Central Department, to 7.48 in more remote minifundia areas, to 9.87 in Colonization Zones. Hemorrhaging was the primary cause of death, especially among women over thirty years of age.

Infant and maternal mortality can be considered consequences of fertility in the sense that families without sufficient self-efficacy to plan family size probably are equally unable to provide adequate dietary, hygiene and routine health care for themselves and their offspring. Rural families presently have few health resources, apart from folk healers, herbalists (*curanderos*) and midwives (*parteras*). Existing health centers cannot reach the bulk of the rural population with health programs aimed at reducing infant and maternal mortality. Among women interviewed, for instance, only one percent had ever participated in pre-natal clinics and only 1.4 o/o had participated in well baby clinics. These programs are usually not conducted at the *compañía* level. Women living in *compañías* close to towns occasionally participate in such clinics. An additional 0.2 o/o of FEMRURAL respondents had taken home nursing and first aid courses. 17/

Fertility and Income Differentials

Large disorganized families are more heavily represented among the lowest-income group than are smaller, organized families. About 66 o/o of all families with six or more members, earned less than \$20,000 per capita in 1977, compared to only 41 o/o of smaller families. (Table IV, 22) Disorganized extended families were larger and poorer than any other family type. 18/ (Table IV, 23) About 70 o/o of disorganized extended families earned less than \$20,000 compared to between 50 and 55 o/o of the other types.

These data indicate that high fertility, especially among unmarried women, may unduly handicap the family in its struggle to maintain itself. The dependency ratio, defined as the proportion of dependent to productive family members, is larger in those units.

16/

Facultad de Ciencias Médicas, ^{16/} *Integración de la Enseñanza en Salud Materno Infantil y Reproducción Humana* (Asunción, Paraguay: Facultad de Ciencias Médicas, 1977), pp. 189-190. Cuadro No. 18. The lack of potable water is often cited as the primary cause of most infant deaths. No rural *compañías* have modern water systems.

17/

See FEMRURAL frequency run for variables WELLBABY, PRENATAL, and TRAINING EG 5, 15, and 16.

18/

See unpublished table, ESTRUCT BY NOMEMFAM, on file, for family size per family type.

TABLE IV, 22
Per Capita Family Income Level by Family Size

Income Level	Number of Family Members		Total
	Less than 6 Members	6 Or More Members	
Less than \$20,000	487	778	1,251
	34.6	61.4	
	41.0	66.3	63.6
\$20,000 to \$39,999	304	228	632
	57.1	42.9	
	25.8	19.7	22.8
\$40,000 & More	312	157	489
	67.9	32.1	
	28.2	13.6	20.9
No Income	84	6	63
	92.1	7.9	
	4.9	4.3	2.7
Total	1,177	1,158	2,335

TABLE IV, 23
Per Capita Family Income by Family Type

Family Type	Income Level				Total
	Less than \$20,000	\$20,000 to \$39,999	\$40,000 & More	None	
Nuclear Organized	777	362	382	20	1,541
	50.4	23.5	24.9	1.3	
	62.1	68.0	78.1	31.7	66.0
Nuclear Dis-organized	115	55	42	8	220
	52.3	25.0	19.1	3.0	
	9.2	10.3	8.5	12.7	9.4
Extended Organized	80	42	32	0	164
	64.0	25.6	19.5	0.0	
	7.2	7.0	6.5	0.0	7.0
Extended Dis-organized	244	63	24	18	347
	70.3	18.2	6.9	4.6	
	18.6	11.8	4.9	25.4	14.9
Other Types	25	10	9	19	63
	39.7	15.9	14.3	30.2	
	2.0	1.9	1.8	30.2	2.7
Total	1,251	632	489	63	2,335
	63.6	22.8	20.9	2.7	

Activity Patterns

It has been well documented that labor force participation among urban women has an inverse impact upon fertility. In rural areas labor force participation generally has no such negative impact upon fertility levels. The reason often given is that there is no sharp distinction in rural areas between work performed "at home" and "away from home," i.e., there are no sharp role conflicts because women may carry their children with them to work in the fields or to market or leave them in the care of an older child or relative who lives nearby.

The relationship between women's participation and fertility was examined in three dimensions in FEMRURAL: field work, income-generating activities performed in any combination of at home/away from home, and socio-educational participation. These types of participation are examined in detail in Chapter V. This discussion will be limited to a consideration only of fertility-related participation patterns.

Social Participation

There was no association between the number of live births reported by interviewees for each age cohort and their participation in socio-educational activities. But, among women who participated in socio-educational activities, the number of live births a respondent had influenced the ways in which she participated, i.e., her choice of activities, as Table IV, 24 shows.

T ABLE IV, 24
Fertility Levels of Participants in Socio-Educational Activities

Types of Participation	Low-Fertility (1-2)	Medium Fertility (3-6)	High Fertility (7-21)
Educational Activity	28 35.4	93 44.5	113 49.3
Service Charity Activities	41 51.9	106 50.7	96 41.9
Recreational Activities	10 12.7	10 4.9	20 8.7
Total Acts of Participation	79	209	229

The majority of respondents who have no live births engage in service work or charity, whereas women who have at least one live birth divide their efforts in varying degrees between educational activities and service/charity and combinations of the two types of activities. There is a direct relation between fertility and educational participation. 35.4 o/o of women with low fertility (1-2 live births), 44.5 o/o with medium fertility (3-6 live births) and 49.3 o/o in the high parity group (7 or more live births) participated in educational activities. This pattern indicates that women probably participate in educational activities in proportion to the number of children they have in school. But the proportion of women engaged in service or charity work falls off after six live births: 51.9 o/o, 50.7 o/o, and 41.9 o/o, respectively, per low, medium, and high fertility group. When fertility and social participation are compared with age, education and income, there was no association among the variables.

Crop Cycle Participation

FEMRURAL confirms that there is no inverse relation between fertility and agricultural field work, even when controlled by age and crop specialization. An examination of crop cycle participants by fertility cohorts shows there is a weak association between fertility and field work, as Table IV, 25 shows. The proportion of women who performed between one and three tasks is fairly constant per fertility group: 70.2 o/o (low), 68.8 o/o (medium), and 71.5 o/o (high). There was no association of variables when crop cycle participation was controlled by age or crop specialization.

Crop cycle participation, then, is not closely associated with a woman's cumulative fertility, possibly because there is no role conflict, or because a woman's participation in field work is determined by other factors such as the available familial labor supply, the family's economic position, hectares cultivated, etc. These factors are explored in Chapter V.

TABLE IV, 25
Fertility By Tasks Performed During the Crop Cycle

Fertility Level	1 - 3 Tasks *	4 or more Tasks	Total
Low Fertility (1-2 births)	120 70.2 16.7	51 29.8 16.7	171 16.7
Medium Fertility (3-6 births)	264 68.8 36.7	120 31.3 39.3	384 37.5
High Fertility (7-21 births)	336 71.5 46.7	134 28.5 43.9	470 45.9
Total	720 70.2	305 29.8	1025

$$\chi^2 = < .01.$$

* The average number of tasks performed per participant was there.

Economic Participation

FEMRURAL also demonstrates that there is no association between fertility and employment "away from home." Nor is there an association between a woman's total weekly earnings (for those who worked away from home) and fertility.^{19/} Distinctions between work performed at home and away from home are often blurred in rural areas. Work performed away from home, often used to measure "modernity," may in fact be quite traditional. Cigar makers and candle makers are amongst the poorest, most traditional women. They work in both locales, making cigars and candles at home and marketing their products in nearby towns. Nearly 72 o/o of all women who worked away from home during the reference week also worked at home.

FEMRURAL in its questionnaire design, coding and analytical procedures took into consideration the lack of sharp distinctions between work locales in rural areas. Consequently, fertility may be examined by work locale (at home, away from home and mixed), as well as by type of work, for there are major status differences between types of work performed by rural women.

The different types of economic participation were disaggregated: unremunerated family labor, income-generating activities and combinations of paid and unpaid labor. The combinations of work types per locale, comprise eight analytical categories which are shown in Table IV, 26.^{20/}

Women who work only at home, but in different types of work, do not share common fertility patterns. Remunerated workers who do no farm chores or animal care tasks are clustered more in the lower and medium fertility groups than are the others. Remunerated workers who also do farm chores/animal care tasks (category 2), tend to have medium-level fertility. But unremunerated family workers, those in category 3, who did not engage in income-producing activities, were disproportionately represented in the high-parity group. If the three types of work are considered from 1 to 3 as high, medium and low-status work groups, then fertility is directly related to work status among low-parity women, i.e., the proportion of low-parity women increases (from 17.2 to 18.0 to 21.5) with every increment in status.

There is no consistent pattern for the medium-level or high-parity groups, although the proportion of medium-parity and high-parity women is almost identical for the two higher status groups. The proportion of childless women is fairly constant per status group. See Table IV, 27, a simplified version of Table IV, 26, showing only "at home" workers.

Roughly equal proportions of women who worked only outside the home belong to the low and high-fertility groups, and about 41 o/o have medium-level fertility. There are also no consistent relations between fertility and work status, measured downward from Category 4 to 7, among women who worked away from home. (Table IV, 26)

19/

The Chi Square level of significance was $>.1$ for a crosstabulation between work away from home and fertility (number of children ever born), based on TASAPART BY LIVTIMEHP. The significance was $>.1$ for a crosstabulation based upon TASAPART BY TOTWEEK (economic participation compared to weekly earnings).

20/

Definitions of Value Labels used for the Variable TASAPART. Categories 1-3, are "At Home Only": (1) Remunerated, (2) Both remunerated and unremunerated, (3) Non-remunerated family workers. Category 4 is "Employed Away from Home Only." Categories 5-9 are "Employed Both At Home and Away from Home." (5) Remunerated Only, (6) Remunerated both at home and away, and was also an unremunerated family worker, (7) Unremunerated family worker who also worked away from home. Category 8 is "Not Economically Active."

21/

The Chi Square level of significance for these crosstables was $>.005$. Regrouping the data by income-generating, non-remunerated and inactive women, by fertility groups, gave a significance of $>.3$.

TABLE IV,26
Type of Economic Participation by Fertility Level

Fertility Level	At Home Only			Away	Mixed			Economically Inactive	Total
	Remunerated Work Only	Remunerated & Unrem.	Unremunerated Family Worker	Employed Away Only	Remunerated At Home & Away	Rem. & Unrem. At Home & Employed Away	Unrem. Family Worker & Employed Away		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)		
Low Fertility (1-2)	76 17.1 21.5	106 23.8 18.0	124 28.9 17.2	25 5.6 24.8	13 2.9 21.7	12 2.7 12.8	15 3.4 14.4	74 16.6 22.9	445 19.0
Medium Fertility (3-6)	131 16.1 37.0	228 27.9 38.7	222 27.2 30.8	41 5.0 40.6	18 2.2 30.0	36 4.4 38.3	36 4.4 38.3	104 12.7 32.2	816 34.8
High Fertility (7-21)	124 13.3 35.0	217 23.3 36.8	327 35.2 45.4	26 2.8 25.7	27 2.9 45.0	38 4.1 40.4	49 5.3 47.1	22 13.1 37.8	930 39.6
None	23 14.8 6.5	38 24.5 6.5	48 31.0 6.7	9 5.8 8.9	2 1.3 3.3	8 5.2 8.5	4 2.6 3.8	23 14.8 7.1	155 6.6
Total	354 15.1	589 25.1	721 30.7	101 4.3	60 2.6	94 4.0	104 4.4	323 13.8	2,346

TABLE IV, 27
Women Status Groups By Fertility Level
(Women Who Worker Only at Home)

Fertility Level	Low Status	Medium Status	High Status	Total
Low Fertility (1-2)	124 40.5 17.2	106 34.6 18.0	76 24.9 21.5	306
Medium Fertility (3-6)	222 38.2 30.8	228 37.2 38.7	131 22.5 37.0	581
High Fertility (7. and more)	327 50.0 45.4	217 32.4 36.8	124 18.6 35.0	668
None	48 44.0 6.7	38 24.9 6.5	23 21.1 6.5	109
Total	721	589	354	1,664

There was no association between fertility and economic participation, controlled by age, except among women aged fifty and over. 58 o/o of these women belonged to the high-fertility group, compared to 32.1 o/o of all women less than fifty. Among women aged fifty and over, there is a direct relation between fertility and work status for women with less than seven live births, and an inverse relation between fertility and work status among those with seven or more live births. (Table IV, 28)

If leisure or lack of economic activity, not income-generating ability, is considered higher status, there is no direct relation between fertility and inactivity for women as a whole. For women aged 50 and more, however, there is a direct relation between fertility and inactivity. The proportion of inactive women increases as fertility rises, from 13.1 (low-fertility group), to 24.4 (medium-fertility group), to 57.6 (high-fertility group). The proportion of childless women per work type does not show a consistent pattern, although the proportion of all childless women among those who work only at home is 19.7%, compared to 24.5% among those who work away from home, and 7.1 o/o among the economically inactive. Calculations are based on Table IV, 26.

Crosstabulations between fertility and economic participation by social role (female heads, consensual partners and wives) revealed that social roles do not account for variances in fertility-related participation patterns. 21/

TABLE IV, 28
Type of Economic Participation by Fertility Level
(Women Aged 50 and More)

Fertility Level	At Home Only			Away Employed Away Only	Mixed			Economically Inactive	Total
	Remuner- ated Work Only	Remuner- ated & Unrem.	Unremun- erated Family Worker		Remuner- ated At Home & Away	Rem. & Unrem. At Home & Employed Away	Unrem. Family Worker & Employ- ed Away		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
1-6 Live Births	58 22.3 50.4	64 24.6 37.9	53 20.4 25.0	10 3.8 50.0	7 2.7 41.2	8 3.1 38.1	11 4.2 35.5	48 18.5 45.7	260 37.5
7-21 Live Births	55 13.9 47.8	94 23.7 55.6	149 37.5 70.3	9 2.3 45.0	10 2.5 58.8	9 2.3 42.9	19 4.8 61.3	52 13.1 49.1	397 57.5
None	2 5.9 1.7	11 32.4 6.5	10 29.4 4.7	1 2.9 5.0	0 0.0 0.0	4 11.8 19.0	0 0.0 0.0	6 17.6 5.7	49 4.9
Total	115 18.6	169 24.5	212 30.7	20 2.9	17 2.5	21 3.0	31 4.5	106 15.3	691

Conclusion

Fertility rates of rural women in Paraguay are much higher than for urban women, especially those living in Asunción. FEMRURAL demonstrates that education, status and income, as well as age, influence rural fertility patterns. High fertility is associated with low income and little or no formal education, and low fertility, with higher income families and higher levels of education. These patterns hold true for all women except those 50 and over. High-parity women aged 50 and over constitute a special case, perhaps because they are less well educated, are more traditional in their world view and probably because they had no access to modern birth control technology during their peak fertility years.

Fertility is also associated with a woman's desire for children, and concomitantly with her inability to exercise control over her own reproductive processes. The lack of control can be the result of lack of knowledge, resources, services and permission. About 78 o/o of rural women "at risk" are not using contraceptives. Some women apparently refused to admit that they used contraceptives if interviewed in the presence of other adults. About 28 o/o of wives/consensual partners had no role whatsoever in the family-planning decision-making process.

Use of modern contraceptive devices is directly related to family income and to the educational level of the respondent. Use of contraceptives is somewhat more common among fifteen to twenty-nine year olds in the "at risk" group, than among women aged thirty and over. Most women obtain modern contraceptives through organized government programs, and the proportion of contraceptive users in any particular region may reflect the efficiency of family planning services available in that zone.

The primary consequence of fertility is a high rural fertility rate in an environment in which hygiene and nutritional practices, coupled with a lack of sufficient health services, contribute to high infant and maternal mortality rates. It appears, also, that large families may unduly strain family finances. Nuclear organized families with less than six members were less represented among low-income families than any other type of family. Large, disorganized extended families were the poorest.

Fertility, per se, does not appear to affect whether or not a woman participates in commercial or social activities, except among women aged 50 and over. But fertility is associated with the way in which a woman participates, i.e., what work or social activity she undertakes. Work status, for instance, is associated with fertility, as are educational activities.

Fertility patterns of rural women in Paraguay appear to fall into two major groups, corresponding to those born before 1928-30, and those born after. Those years mark a watershed in Paraguayan demographic history.

CHAPTER V

SOCIO-ECONOMIC PARTICIPATION PATTERNS

This chapter describes the socio-economic participation of rural Paraguayan women and identifies status and behavioral sub-groups. The areas of activity explored are agricultural participation, non-domestic work activities performed by respondents in the week prior to the interview, and the social and educational participation of respondents.

This chapter is divided into four sections. Section A describes the role of women in the production of the family's principal cash crop and compares these women with women from subsistence-level agricultural enterprises, as well as with other women whose families did not market crops. Section B presents several calculations of economic activity rates of rural women, illustrating that differences in the definition of what constitutes the "economically active" population produce widely-divergent rates of economic participation. This section also includes a discussion of economic activity patterns of the respondents during the week prior to the interview. Section C examines the earnings of the respondent, as well as other female family members, and presents a mean wage index for the activities performed. Finally, the interrelationships between the various types of women's economic contributions are explored in Section D, and women's social participation is examined in light of their economic profiles.

A. Crop Cycle Participation

Women's participation in agricultural tasks during the crop cycle is measured only vis-à-vis the principal cash crop of families who engaged in commercial agriculture, i.e., marketed a crop in the 1977-78 agricultural year. In addition to these tasks, the respondent may also have performed tasks in connection with subsistence crops, but no attempt has been made to measure her role vis-à-vis those other crops. ^{1/}

Given the fact that measurement of women's contribution to agricultural production is difficult, it is felt that the most reliable index of women's current and future status is their role in market-oriented agricultural production. It should be noted that these data on women's role in commercial agricultural production were ascertained only for the respondent.

Since agricultural work is highly seasonal, the reference period used to study the respondents' role in agricultural production is the agricultural year, June, 1977-July, 1978. As a measure of women's participation in activities associated with their principal cash crop, FEMRURAL ascertained the number of tasks performed, the intensity of the work effort (non-strenuous, semi-strenuous and strenuous) and crop specialization.

1/

The author decided not to attempt measurement of subsistence and domestic work activities because no satisfactory methodology exists for this purpose. Time-use studies of an anthropological nature such as participant-observer research are more appropriate instruments for measuring the extent of women's total economic participation. This author eliminated a time-use calendar from the questionnaire after the field test because we found that rural women could not adequately reconstruct their time use pattern. Subsistence, domestic and commercial activities are complementary and are carried out simultaneously. Furthermore, time pieces are not common and measurement of time use is necessarily inaccurate.

Crop Cycle Participants

70.5 o/o of all families surveyed marketed a crop during the 1977-78 agricultural year, and 54.4 o/o depended upon farming for their principal source of income. The latter are henceforth referred to as "farmers." 16.0 o/o also marketed a crop, but did not depend upon farming as their principal income source. For purposes of this report they are referred to as "part-time farmers." 13.0 o/o of FEMRURAL families had only subsistence crops and 16.6 o/o reported no agricultural activities. (See Tables V, 1 and V, 2.) 42.0 o/o of all subsistence operations depend upon agricultural wage labor for their chief income source. Of the "part-time farmers," only 22.9 o/o receive their primary income from agricultural wage labor. ^{2/}

TABLE V, 1
Agricultural Activities of FEMRURAL Families
(1977-1978 Agricultural Year)

Commercial Agricultural Enterprises		Subsistence Agriculture	No Crop	Total
Farmers*	Part-Time Farmers*			
1230	378	304	390	2352
54.4 o/o	16.0 o/o	13.0 o/o	16.6 o/o	100.0 o/o

* Definitions: "Farmers" includes only those families who listed farming as their primary income source. "Part-time Farmers" are those families who marketed crops, but who depended upon other activities for their primary income.

TABLE V, 2
Agricultural Typologies of Families With Crops

Families with Commercial Crops	Families with Subsistence Crops	Total
1658	304	1962
84.5	15.5	100.0 o/o

^{2/}

Unpublished table, *SUBSIST BY PERCAPSC*, and see *FEMRURAL* frequency run for *PRINCROP*.

The respondents' agricultural participation patterns are associated with the primary income-generating activity of the family. There are divergent behavior patterns between respondents whose families depend upon agriculture as their principal source of income and those respondents whose families listed some other activity as their primary income-generating activity.

66.3 o/o of respondents whose families engaged in commercial agriculture participated in field work during the 1977-78 agricultural year. (Table V, 3) The proportion of participants was higher among farm families than among the "part-time farmers." 69.1 o/o of the former participated in the production of the family's principal cash crop, compared to 56.8 o/o of the respondents from "part-time farm" families.^{3/} The difference between these levels of participation is significant, and points to the validity of the FEMRURAL classification system whereby families were classified by the primary income-generating activity of the family, instead of the occupation of the head. There is some difference, also, between the average number of tasks performed by participants from the two groups. Farm families participants average 2.9 tasks each, and those from "part-time" farm families, 2.7. (Table V, 4) One would expect that such differences would occur since families would order their priorities to assure a rational and efficient use of time and labor of family members.

TABLE V, 3
Crop Cycle Participation by Respondents Whose Families Marketed A Crop

Respondents	Farm Families	Part-time Farm Families	Total
Participants	884 80.9 69.1	209 19.1 56.8	1093 66.3
Non-Participants	396 71.4 30.9	159 28.6 43.2	555 33.7
Total	1280	368	1648

* 10 Missing Observations

N.B. The Chi Square test of significance is automatically calculated by the SPSS program for all crosstabulations. All tables presented here are significant at $\leq .001$, which means that systematic relationships exist between the variables and that a table with as large a deviation from expected frequencies would occur by chance in only one sample out of 1,000.

3/

There is no comparable data base with which to compare these percentages, but survey methodology usually leads to an undercount of women who participate in agricultural production. A recent study by Carmen Diana Deere found that only 38 o/o of all households in two Peruvian villages surveyed reported that women participated in agricultural production. When a participation schematic of agricultural labor was utilized, the proportion was found to be 86 o/o. See Carmen Diana Deere, "The Agricultural Division of Labor by Sex: Myths, Facts and Contradictions in the Northern Peruvian Sierra," paper presented to the panel on "Women: The New Marginals in the Development Process," Joint National Meeting of the Latin American Studies Association and the African Studies Association, Houston, Texas, November 2-5, 1977.

TABLE V, 4

Average Number of tasks Performed in the Crop Cycle by Respondents
from Farm and Part-time Farm Households

	Total Tasks	Total Participants	Average Number of Tasks
Farm Households	2602	884	2.9
Part-time Farm Households	558	209	2.7
Total	3151	1093	2.8

Agricultural Tasks Performed

Respondents' roles in the production of cash crops were examined for the following twelve tasks: clearing of forest land (*desmonte*), land clearing (*corpida*), slash and burn (*quema-limpieza*), plowing, sowing, hoeing, pruning, spraying, worm eradication, harvesting, threshing and sacking/stacking. The majority of these tasks were performed in the production of cotton which is the principal cash crop of 62.1 o/o of all farming families surveyed in FEMRURAL. Soybeans are the principal crop of 9.5 o/o of farming families; sugar cane, 5.6 o/o; and tobacco, 5.4 o/o. All other families cultivated crops which represented less than 3.0 o/o each of all cash crops reported. These crops were beans, peas, manioc, corn, tung, bitter orange, coffee, coconut and other fruits and vegetables. ^{4/}

The most frequently performed tasks are those which do not require great physical exertion. 90.9 o/o of the respondents who participated during the agricultural cycle worked in harvesting; 56.7 o/o in sowing; 50.9 o/o in hoeing; and 45.0 o/o in sacking. These tasks can be classified as non-strenuous or semi-strenuous. Women's participation in strenuous tasks was very low. Only 0.4 o/o cleared forest lands; 3.1 o/o plowed; and 1.6 o/o fumigated. However, 18.1 o/o did *corpida* (land clearing), apparently in newly-opened cotton and soybean lands. ^{5/} Most of the strenuous tasks were performed in association with cotton, soybeans, sugar cane and tobacco. Non-strenuous and semi-strenuous activities were performed for a variety of crops. Table V, 5)

^{4/} See FEMRURAL frequency run for PRINCROP.

^{5/} See 12 unpublished tables (CLEARFOR THRU SACKING, controlling by PCROP).

TABLE V, 5
Selected Principal Cash Crops By Difficulty of Tasks Performed

Principal Crops	Non & Semi-Strenuous	Strenuous*	Non & Semi-Strenuous & Strenuous	Total
Cotton	539	9	161	709
	76.0	1.3	22.7	
	68.9	56.3	82.1	
Tobacco	55	1	9	65
	84.6	1.5	13.8	
	7.0	6.3	4.6	
Soybeans	75	2	13	90
	83.3	2.2	14.4	
	9.6	12.5	6.6	
Beans, Peas	21	0	2	23
	91.3	0.0	8.7	
	2.7	0.0	1.0	
Manioc	22	0	3	25
	88.0	0.0	12.0	
	2.8	0.0	1.0	
Corn	14	0	2	16
	87.5	0.0	12.5	
	1.8	0.0	1.0	
Tung	20	0	1	21
	95.2	0.0	4.8	
	2.6	0.0	0.5	
Bitter Orange	7	1	1	9
	77.8	11.1	4.8	
	0.9	6.3	0.5	
Sugar Cane	29	3	4	36
	80.6	8.3	11.1	
	3.7	18.8	2.0	
Total	782	16	196	994
	78.7	1.6	19.7	

* Definitions: Non and Semi-Strenuous Tasks: Slash and burn (rosado), sowing, pruning, de-worming, harvesting, threshing, hoeing, sacking; Strenuous Tasks: Forest clearing (desmonte), land clearing (corpida), plowing and fumigation.

Regional Variations

Respondents' participation in agricultural production is higher in poorer zones, notably in the Ganadero and Eje Norte zones. (Table V, 6) In the Ganadero Zone, 77.9 o/o of respondents participated during the crop cycle, followed by 72.0 o/o of respondents in the Eje Norte. The lowest participation levels are registered in the New Colonization area, along with the Brazilian-Paraguayan border, 60.2 o/o. The proportion of participants is approximately the same in Itapúa, 65.5 o/o, and the Central Zone, 66.2 o/o.

TABLE V, 6
Regional Distribution of Crop Cycle Participants
(All Commercial Agricultural Operations)

	Minifundia Zone	Ganadero	Itapua	Eje Norte	New Coloniza- tion	Total
Participated	459	95	131	177	231	1093
	42.0	8.7	12.0	16.2	21.1	
	66.2	77.9	64.5	72.0	60.2	
Did Not Participate	234	26	72	69	153	555
	42.2	4.7	13.0	12.4	27.6	
	33.8	21.3	35.5	28.0	39.8	
Total	693	122	203	246	384	1648
	42.0	7.4	12.3	14.9	23.3	

Mechanization

Only 7.0 o/o of commercial farmers surveyed in FEMRURAL use agricultural machinery such as tractors, threshers or harvesters. Agricultural mechanization is employed most extensively in soybeans, 54.3 o/o; followed by cotton, 23.3 o/o; tung, 12.9 o/o; and other crops, 9.5 o/o, including beans, peas, manioc and sugar cane. Only 5.2 o/o of the respondents in these families participate in the operation and maintenance of farm machinery, although 15.5 o/o help to sack soybeans and cotton and crate tung. The vast majority of respondents, 79.3 o/o, have no participation whatsoever in the operation or maintenance of agricultural machinery. ^{6/}

^{6/} Unpublished table (MACHUSE BY PCROP).

Factors Influencing Intensity of the Work Effort

a. Crop Specialization: The number of tasks performed by the respondents is closely associated with the family's cash crop, particularly in the case of cotton and other labor-intensive crops. Only 26.0 o/o to 31.2 o/o of all respondents from families specializing in the production of cotton, tobacco and beans are inactive, compared to between 42.0 o/o and 64.0 o/o of women whose cash crop is soybeans, manioc, corn, tung, bitter orange and sugar cane. (Table V, 7)

TABLE V, 7
Participation Patterns
(Selected Principal Cash Crops)*

Crops	No Participation	Participants	Total
Cotton	321 31.2	700 68.8	1030
Tobacco	24 27.0	65 73.0	89
Soybeans	67 42.7	90 57.3	157
Beans, Peas	8 25.8	23 74.2	31
Manioc	18 41.9	25 58.1	43
Corn	12 42.9	16 57.1	28
Tung	16 43.2	21 56.8	37
Bitter Orange	16 64.0	9 36.0	25
Sugar Cane	46 50.0	46 50.0	92
Total	528 34.5	1004 65.5	1532

* The crop specializations of 92 o/o of all FEMRURAL families are represented here.

Among the principal crops, cotton, tobacco, soybeans and corn are the most labor intensive. (Table V, 8) Between 31.3 o/o and 35.4 o/o of respondents with the above mentioned crop specialization perform four or more tasks. Beans, peas and manioc are slightly less labor intensive, with 20.0 o/o to 21.7 o/o of the respondents performing more than the average number of tasks. All other crops in which respondents participate are less labor intensive, i.e., require less labor input from the respondents.

These tables show that the type of cultivation (intensive or extensive) influences women's participation in the production of the family's chief crop. Furthermore, it is seen that the intensity of a woman's work effort is also associated with the crop specialization.

b. Family Income Level: Examination of the per capita income for all families with marketed crops reveals that a respondent's propensity to participate in field work is clearly associated with income. Moreover, there were significant differences between the participation patterns of women from farm households, compared to part-time farm households.

TABLE V, 8
Number of Tasks Performed
(Selected Principal Cash Crops)*

Crop	Tasks		
	1 - 3 Tasks	4 & More Tasks	Total
Cotton	467 65.9	242 34.1	709
Tobacco	42 64.6	23 35.4	65
Soybeans	61 67.8	29 32.2	90
Beans, Peas	18 78.3	5 21.7	23
Manioc	20 80.0	5 20.0	25
Corn	11 68.8	5 31.3	16
Tung	19 90.5	2 9.5	21
Bitter Orange	8 88.9	1 11.1	9
Sugar Cane	42 91.3	4 8.7	46
Total	688 68.5	316 31.5	1004

* The crop specializations of 92 o/o of all FEMRURAL families are represented here.

Among women from farm families, there is a direct relation between income and inactivity, i.e., the proportion of women who perform no tasks during the crop cycle increases with every increment in income. But there is an inverse relation between income and participation. (Table V, 9) The proportion of active women falls, irrespective of the number of tasks performed, with every increment in income. This data suggests that women do field work only out of necessity, and that as family incomes rise, the participation of women in commercial agriculture declines. Crop cycle participation is an indication of low income, and probably low status, although there are exceptions. Some women from higher level income families participate, but even so, they tend to perform fewer tasks.

TABLE V, 9
Crop Cycle Participation by Per Capita Family Income
(Farm Households)

Level of Participation	Loss than \$20,000	\$20,000 -39,999	\$40,000 & More	Total
None	187	99	109	395
	47.3	25.1	27.6	
	23.8	37.5	48.2	30.9
1 - 3 Tasks	406	110	83	599
	67.8	18.4	13.9	
	51.6	41.7	36.7	46.9
4 & More Tasks	194	55	34	283
	68.6	19.4	12.0	
	24.7	20.8	15.0	12.0
Total	787	264	226	1277
	61.6	20.7	17.7	

Among cotton farmers, similar patterns exist. There is an inverse relation between income and activity, and a direct relation between income and inactivity. The proportion of all participants, irrespective of the number of tasks performed, falls from 75.9 o/o to 59.4 o/o with every increment in income, whereas the proportion of inactive women rises from 24.1 o/o to 40.6 o/o to 50.0 o/o with every increment in income. When the data is disaggregated by level of activity, the inverse relation between income and activity exists for all participants performing less than six tasks- 5.7 o/o of the total. (Table V, 10)

A dual pattern exists between income and activity levels for women from "part-time" farm households. (See Table V, 11.) There is an inverse relation between income and low activity rates (one to three tasks), but a direct relation between income and high activity (four or more tasks). As income levels rise, the proportion of respondents performing one to three tasks falls, whereas the proportion of respondents performing four or more tasks rises.

These data demonstrate that a respondent's propensity to do field work in the production of the family's principal cash crop is closely associated with family per capita income. Respondents from low-income families participate more and tend to perform a larger number of tasks than do those from middle and upper income levels. Women from "part-time" farming families constitute a special case.

TABLE V, 10
Crop Cycle Participation by Income Level
(Cotton Farmers)

105

Participation Level	Per Capita Family Income			Total
	Less than ₱ 20,000	₱ 20,000 -- 39,999.-	₱ 40,000 & More	
Inactives (No Tasks)	161	91	69	321
	50.2	28.3	21.5	
	24.1	40.6	50.0	31.2
1-3 Tasks	331	90	44	465
	71.2	19.4	9.5	
	49.7	40.2	31.9	45.2
4-5 Tasks	135	33	17	185
	73.0	17.8	9.2	
	20.3	14.7	12.3	18.0
6-9 Tasks	39	10	8	57
	68.4	17.5	14.0	
	5.9	4.5	5.8	5.5
Total	666	224	133	1028
	64.8	21.8	13.4	

TABLE V, 11
Participants by Per Capita Family Income
(Part-time Farming Households)

Participation Level	Per Capita Family Income			Total
	Less than ₱ 20,000	₱ 20,000 -- 39,999.-	₱ 40,000 & More	
1-3 Tasks	92	45	3	140
	56.7	32.1	2.1	
	80.7	77.6	30.0	76.9
4 & More Tasks	22	13	7	42
	52.4	31.0	16.7	
	19.3	22.4	70.0	23.1
Total	114	58	10	182
	62.6	31.9	5.5	

c. Size of the Unit of Production: The propensity of respondents from farm families to eschew field work entirely is directly related to the size of the production unit. With every increment in the number of hectares cultivated, the proportion of non-participants, or inactive women, increases. The proportion of inactives rise from 22.5 o/o to 33.7 o/o to 37.1 o/o per increment in the number of hectares cultivated. But in all cases, the proportions of participants per strata of land-size cultivated is greater than that of non-participants. (Table V, 12) Participation, however, is inversely related to the size of the production unit. As the number of hectares increases the proportion of participant declines. The proportion of participants falls from 77.5 o/o to 66.3 o/o to 62.9 o/o with each increment in the number of hectares cultivated. Therefore, women's role in agricultural production declines as the size of the production unit increases.

TABLE V, 12
Crop Cycle Participation by Hectares Cultivated
(Farm Families Only)

Participation Level	Less than 3 Has.	3 - 4.99 Has.	5 or More Has.	Total
Non-Participants	102	129	164	395
	25.8	32.7	41.5	
	22.5	33.7	37.1	30.9
Participants	352	254	278	884
	39.8	28.7	31.4	
	77.5	60.3	62.9	69.1
Total	454	383	442	1279
	35.5	29.9	34.6	

The number of tasks performed is also influenced by the number of hectares cultivated. There is a direct relation between low to average participation (one to three tasks) and hectares cultivated, and an inverse relation between high participation (four or more tasks) and hectares cultivated. These data show that women from larger farms are less active, i.e., tend to perform fewer tasks, than respondents whose families cultivate less than five hectares. 73.7 o/o of women from families who cultivate five or more hectares have low participation levels (one to three tasks), compared to about 65 o/o of respondents whose families cultivate less than 5 hectares. (Table V, 13)

Crop cycle participants from part-time farm families appear to have a different pattern of crop cycle participation than do participants from farm households. The number of tasks performed is inversely related to number of hectares cultivated among women who perform one to three tasks, but directly related among those who perform four or more tasks--a reversal of the activity pattern of farm women. But the Chi Square Level of Significance does not warrant disaggregation of these data. 7/ These data suggest that the amount of land cultivated is not closely associated with tasks performed among this group. This finding reinforces the argument that the activity patterns among women from "farm" households are distinctive.

7/

The Chi Square Significance level was ≤ 3 for the crosstabulation of a combined version of TOTCYCLE BY GRPWRKD, controlling by BRANCH EQ 1 and GRPWRKD BY PERCAPSC, controlling by TOTCYCLE.

TABLE V, 13
Crop Cycle Participants by Hectares Cultivated
(Farm Families Only)

Participation Level	Less than Has.	3.0-4.99 Has.	5 & More Has.	Total
1 - 3 Tasks	228	168	205	601
	37.9	28.0	34.1	
	64.8	66.1	73.7	68.0
4 - 9 Tasks	124	86	73	283
	43.8	30.4	25.8	
	35.2	33.9	26.3	32.0
Total	352	254	278	884
	39.8	28.7	31.4	

d. Family Type: An examination of crop cycle participation by family type shows that respondents from disorganized families (nuclear and extended) tend to perform a larger number of tasks than do women from other family types. 44.4% of respondents from Disorganized Nuclear Families and 35.9% of those from disorganized extended families performed four or more tasks, i.e., a higher than average performance level. Organized families apparently have sufficient alternate labor sources so that these women work less than women from disorganized families. Only 24.7 o/o of women from organized extended families and 27.3 o/o of women from organized nuclear families performed over three tasks. (Table V, 14) It appears that organized families are more efficient economic units for agricultural exploitation. Because there are two adults in every organized family, the work load is more evenly spread, and as a result, the woman does not have to work as hard.

Educational Level: An examination of the educational levels of respondents whose families with crops in the 1977-78 agricultural year reveals that there is no apparent relationship between the amount of land cultivated and the educational level of the respondent. Educational levels of respondents vary little per cultivation strata.^{8/} A respondent's educational level apparently is relatively unimportant in determining whether or not she participates in field work and to what extent. There is a very weak association between the number of tasks performed and educational levels.^{9/}

^{8/} Unpublished table (EDUCAT BY GRPIWRKD, $X = < .001$)

^{9/} The Chi Square level of significance for the crosstabulation of tasks by educational level (EDUCAT BY TOTCYCLE) was 0.0640, indicating that the variables are weakly associated. Therefore, these data are not presented.

TABLE V, 14
Crop Cycle Participants by Family Type

Family Type	Number of Tasks Performed		
	1 - 3 Tasks	4 & More Tasks	Total
Nuclear	555	208	763
	72.7	27.3	
	73.5	65.4	71.1
Disorganized Nuclear	45	36	81
	55.6	44.4	
	6.0	11.3	7.5
Extended	55	18	73
	75.3	24.7	
	7.3	5.7	6.8
Disorganized Extended	100	56	156
	64.1	35.9	
	13.2	17.6	14.5
Total	755	318	1073
	70.4	29.6	

There is a tendency for better-educated women to eschew field work. 33.6 o/o of respondents from commercial agricultural families did not participate in field work. These women are somewhat better educated than participants. A larger proportion had completed primary school and gone on to secondary school than had participants. The percentage of non-participants with no formal school was lower than among participants. (Table V, 15)

TABLE V, 15
Educational Level by Agricultural Type

Educational Level	Commercial Farmers		Subsistence Farmers	Total
	Participants	Non-Participants		
Some Primary	746	353	180	1279
	58.3	27.6	14.1	
	68.3	63.8	59.2	65.6
Completed Primary	85	61	26	172
	49.4	35.5	15.1	
	7.8	11.0	8.6	8.8
Some Secondary	22	23	11	56
	39.3	41.1	19.6	
	2.0	4.2	3.6	2.9
Completed Secondary	2	11	7	20
	10.0	55.0	35.0	
	0.2	2.0	2.3	1.0
None	238	105	80	423
	56.3	24.8	18.9	
	21.8	19.0	26.3	21.7
Total	1093	553	304	1950
	56.1	28.4	15.6	

Women from commercial farming enterprises tend to be better educated than women with only subsistence crops. 26.3 o/o of the latter have no formal education, compared to 21.8 o/o of participants and 19.0 o/o of non-participants from commercial farming operations. (Table V, 15)

74 o/o of families who had subsistence crops were drawn from agricultural laborers and families engaged in business, manufacturing or home industry. (Table V, 16) The mixed composition of families with subsistence crops is reflected in the educational levels of women from these families, for the percentage of women with completed primary and or some secondary education was not greatly different from that of women from the commercial type operation.

f. Women-Headed Farm Households: Women-headed farm households generally have smaller plots of land than do male-headed units. 59 o/o cultivated less than three hectares in the 1977-78 agricultural year, compared to 32.6 o/o of male-headed units. (Table V, 17)

TABLE V. 16
Branch of Economic Activity by Economic Zones
(Families with Subsistence Crops Only)

Branch of Economic Activity	Economic Zone					Total
	Minifundia	Ganadero	Itapúa	Eje norte	New Colonization	
Household Industries	26 14.0	0 0.0	0 0.0	3 12.0	5 8.3	34 11.2
Manufacturing	55 29.6	0 0.0	5 27.8	5 20.0	9 15.0	74 24.4
Service	13 7.0	0 0.0	1 5.6	3 12.0	6 10.0	23 7.6
Business	31 16.7	3 21.4	1 5.6	4 16.0	14 23.3	53 17.5
Agricultural Laborer	27 14.5	7 50.0	10 55.6	8 32.0	11 18.3	63 20.8
Livestock	16 8.6	1 7.1	0 0.0	1 4.0	7 16.7	25 8.3
Transferences	6 3.2	0 0.0	1 5.6	0 0.0	1 1.7	8 2.6
Retirement	1 0.5	1 7.1	0 0.0	0 0.0	1 1.7	3 1.0
Other	11 5.9	2 14.3	0 0.0	1 4.0	6 10.0	20 6.6
Total	186 61.4	14 4.6	18 5.9	25 8.3	60 19.8	303

TABLE V, 17
Hectares Cultivated
(Male and Female-Headed Farm Families only)

Number of Hectares	Male Headed Units	Female Headed Units
0.5 - .99	30 2.6	11 7.9
1.0 - 1.49	93 8.2	22 15.8
1.5 - 2.99	249 21.8	49 35.3
3.0 - 4.99	349 30.6	34 24.5
5.0 - 9.99	301 26.4	17 12.2
10 & More	118 10.4	6 4.3
Total	1140 89.1	139 10.9

These differences in the size of the production unit are also reflected in the participation patterns of the respondents. In female-headed households the majority of respondents, or 52.9 o/o, who cultivate less than three hectares perform four or more tasks. (Table V, 18) Although there is no linear relationship between tasks performed and hectares cultivated, there is a sharp division between respondents who cultivate less than three hectares and the others.

TABLE V, 18
Number of Tasks per Hectares Cultivated
(Participants from Female-headed Farm Families)

Number of Tasks	Less than 3 Has.	3 - 4.99 Has.	5 & More Has.	Total
1 - 3 Tasks	32 47.1	12 63.2	8 61.5	52 52.0
4 & More Tasks	36 52.9	7 36.8	5 38.5	48 45.0
Total	68	19	13	100

The majority (70.0 o/o) of respondents in male-headed units perform less than four tasks, regardless of the amount of land cultivated, compared to 52.0 o/o in female-headed units. Respondents whose families cultivate five hectares or more are even more heavily concentrated among the ranks of women who perform less than three tasks, 74.3 o/o. (Table V, 19) Among male-headed farm families, the sharp break in participation patterns occurs at the five-hectare level. This comparison of activity patterns of women from male and female-headed households shows that activity patterns vary with respect to the number of hectares cultivated, and that the critical number of hectares which influences activity patterns is different in these households. These data also show that female heads work harder, i.e., tend to perform more tasks, irrespective of the number of hectares under cultivation.

TABLE V, 19
Number of Tasks per Hectares Cultivated
(Participants from Male-headed Farm Families)

Number of Tasks	Less than 3 Has.	3 - 4.99 Has.	5 & More Has.	Total
1 - 3 Tasks	196 69.0	156 66.4	197 74.3	549 70.0
4 & More Tasks	88 31.0	77 33.6	68 25.7	233 30.0
Total	284	235	265	784

Not only do female heads perform more tasks, they also are more inclined to perform strenuous tasks than are women from male-headed households. (Table V, 20) Thus, in the intensity of their work effort, as well as in the number of tasks performed, female heads work harder than other respondents. A larger proportion of them engage in more distasteful, strenuous tasks. It should also be noted that female-headed farm households are more heavily represented in the low income group (73.2 o/o) than are male-headed farm units (60.2 o/o). (Table V, 21)

TABLE V, 20
Difficulty of Tasks Performed in Field Work by Female Heads,
Consensual Partners and Wives (Participants only from Commercial
Agricultural Operations)

Difficulty of Tasks	Female Heads	Consensual Partner	Wives	Total
Non-and Semi-Strenuous	76 82.8	115 83.3	657 82.7	848 80.5
Strenuous	3 2.5	1 0.7	12 0.2	16 1.5
All three (Non-Strenuous, Semi-and, Strenuous)	42 34.7	22 15.8	125 15.7	189 17.9
Total	121	138	794	1053

COI. PCT only.

TABLE V, 21
Per Capita Income Levels
(Male and Female-Headed Farm Families)

Income Levels	Male-Headed Farm Units	Female-Headed Farm Units
Less than \$20,000.	686 60.2	101 73.2
\$20,000 - 39,999.	241 21.2	23 16.7
\$40,000 & More	212 18.6	14 10.1
Total	1139 100.0 o/o	138 100.0 o/o

There are important variations in participation patterns between female heads and other respondents. Only 48.2 o/o of female headed households marketed a crop during the 1977-78 crop cycle, compared to 57.7 o/o of households headed by consensual partners and 79.0 o/o of those headed by married couples. (Table V, 22) Female heads performed an average of 3.5 tasks each during the crop cycle, compared to 2.8 for both wives and consensual partners. (Table V, 23) Roughly half of the female heads who farm are single, 49.6 o/o; 40.5 o/o were widows, 3.3 o/o were divorced or separated women; and 4.6 o/o were consensual partners and wives. ^{10/}

TABLE V, 22
Social Role of Respondent by the Agricultural Status of the Family

Status Agricultural of Family	Female Heads	Consensual Partners	Wives
Families Without Marketed Crops	184 51.8	137 42.3	327 21.0
Families With Marketed Crops	171 48.2	187 57.7	1231 79.0
Total	355 100.0%	324 100.0%	1558 100.0%

^{10/}

Unpublished table, MARSTATU BY TOTCYCLE, controlling by ROLHOGAR EQ 1.

TABLE V, 23
Average Number of Tasks Performed in the Crop Cycle

Participants	Female Heads	Consensual Partners	Wives
Total Number of Tasks	427	378	2207
Participants	121	136	794
Average Number of tasks	3.5	2.8	2.8

The crop specializations of female and male-headed households are also significantly different. Female heads are more concentrated among cotton farmers than are respondents from male-headed units. Cotton is the principal crop of 76.3 o/o of female heads, compared to 66.3 o/o of consensual partners and 65.6 o/o of wives. (Table V, 24)

TABLE V, 24
Social Roles by Crop Specializations
(Selected Crops)

Selected Crops	Female Head	Consensual Partners	Wife
Cotton	76.3 o/o	66.3 o/o	65.6 o/o
Tobacco	2.6 o/o	8.7 o/o	5.8 o/o
Soybeans	4.5 o/o	9.9 o/o	11.3 o/o
Beans, Peas	3.2 o/o	1.7 o/o	2.0 o/o
Manioc	4.5 o/o	1.7 o/o	2.9 o/o
Corn	3.8 o/o	3.5 o/o	1.3 o/o
Sugar Cane	3.2 o/o	5.8 o/o	6.4 o/o
Tung	0.6 o/o	1.2 o/o	3.0 o/o
Bitter Orange	1.3 o/o	1.2 o/o	6.4 o/o
Total	156 100.0 o/o	172 100.0 o/o	1149 100.0 o/o

Non - Participants

Respondents who do not participate in the production of their family's chief commercial crop constitute a rural elite. Their families cultivate more land and their incomes are higher than other farm families. 68.4 o/o of these families cultivate three hectares or more, compared to 56.1 o/o of participants' families. (Table V, 25) 56.0 o/o of non-participants families earned \$20,000 or more in 1977, compared to only 38.4 o/o of all farm families surveyed. (Table V, 26)

TABLE V, 25
Comparison of Commercial Production Units
(Participants and Non-Participants)

	Non-Participants	Participants	Total
Less than 3 Has.	175 31.6	479 43.9	654
3 - 4.99 Has	164 29.7	297 27.2	461
5 & More Has.	214 38.7	315 28.9	529
Total	553	1091	1644

TABLE V, 26
Comparison of Income Levels
(Non-Participants to All Farm Families)

	Non-Participants	Farm Families
Less than \$20,000.-	243 44.0	787 61.6
\$20,000 - 39,999.-	148 26.8	264 20.7
\$40,000 & More	161 29.2	226 17.7
Total	552	1277

Respondents who do not participate in field work are better educated than other farm women. (Table V, 15) Their higher status is also reflected in the fact that a smaller proportion of these women are female heads of household or consensual partners. Wives constitute 78.7 o/o of all non-participants, but only 66.8 o/o of all respondents. Female heads constitute 9.0 o/o, and consensual partners, 9.6 o/o of all non-participants. ^{11/}

^{11/} See FEMRURAL frequency run for ROLHOGAR, controlling by SACKING EQ 5.

This analysis of the characteristics of non-participants indicates that women who do not engage in field work comprise a group apart from other rural women. The existence of this high-status group confirms the FEMRURAL assumption that women engage in field work (physical labor) out of necessity and that non-participation is a status plus.

The programming implication is that projects which seek to increase women's participation in field work may run counter to the aspirations of rural women who seek to lighten their work load and escape from heavy physical labor. Female agricultural extension agents claim that women welcome agricultural mechanization and other labor-saving devices which lighten their load and free them to pursue other activities such as home improvements, child care, etc. It is unlikely, therefore, that rural women would willingly embrace projects which increase their field work participation.

Members of the high status group may serve as role models for other rural women, a status group towards which to aspire. This elite constitutes 28.4 o/o of all respondents whose families had crops (commercial and subsistence).

Subsistence-Level Agriculture

Many of the families who raised crops for their own consumption belong to the rural poor. Also included in this group are some non-poor families who maintained huertas, or gardens. 86 o/o of these subsistence level families worked less than 3 hectares, and, of these, 35.5 o/o cultivated less than one hectare. ^{12/} Families with subsistence crops received the bulk of their income from the following sources: home industries, 11.2 o/o; manufacturing, 24.4 o/o; agricultural labor, 20.8 o/o; commerce, 17.5 o/o; livestock raising, 8.3 o/o; services, 7.6 o/o; and others, 10.2 o/o, including transferences (Table V, 16)

The poorest families, i.e., those with less than \$20,000 per capita income in 1977, are those which depend upon agricultural wage labor, 65.1 o/o; livestock raising, 62.5 o/o; home crafts, 83.3 o/o; and commerce, 60.4 o/o. There are fewer low-income families among those engaged in food processing, 50.0 o/o; services, 45.5 o/o; and manufacturing, 27.4 o/o. ^{13/}

Conclusion

Rural women's contribution to commercial agricultural production can be seen in the fact that 69 o/o of farm women performed field work associated with the family's principal cash crop during the 1977-78 crop cycle. The average number of tasks for women from farm families is 2.9. Thus, the labor contribution of these women workers in the production of commercial crops is significant and is a factor which should be taken into consideration in assessing production costs and labor resources for planning purposes.

Women's propensity to participate in field work is conditioned by a variety of factors such as the type of agricultural operation, crop specialization, per capita family income, available family labor supply, size of the production unit, family type and the sex of the head of the household. There are differences in the participation patterns of women from full-time farming households, as compared to part-time farming operations, as well as between women from male and female headed households. Female heads are more active and work harder. They perform a larger number of tasks than other respondents and engage more frequently in strenuous, distasteful work. Women whose families raise

^{12/} See frequency run, PRINACT EQ 80, GRPWRKD.

^{13/} PRINACT EQ 80, PERCAPSC BY BRANCH.

labor-intensive crops are more prone to perform field work than others and interviewees from disorganized families work harder, i.e., perform more tasks.

Women who eschew field work completely tend to belong to an economically privileged group with high status, as reflected in the income level and size of the production units of these families, as well as in the educational levels of the respondents. Women from commercial agricultural families tend to share a higher status than those women who have only subsistence crops and work as agricultural laborers, peddlers and weavers, candlemakers, etc.

Among crop cycle participants, moreover, there are also important status differences which influence participation patterns. A woman's propensity to engage in field work is inversely related to land size. This means that the larger the unit of production, the lesser the participation of women. Crop cycle participation is also inversely related to per capita family income. With every increment in income, the proportion of inactive women increases. Poorer respondents are more active in field work than are women from higher income groups. Poorer women also work harder, i.e., perform more tasks, than higher status women. Women from the two poorest economic zones have higher participation rates than women in the other three zones.

As the commercialization of Paraguayan agriculture continues, bringing with it the elimination of smaller producers, women's role in field work will probably decline. The continuing inroads of mechanization will also tend to reduce women's participation in physical labor. Some Paraguayan women drive tractors and perform tasks associated with agricultural machinery (cleaning, sacking, crating, etc.), but the overwhelming majority of women living on farms which utilize agricultural machinery have no involvement whatsoever with the operation or maintenance of agricultural machinery.

This evidence demonstrates that rural women, even rural farm women, do not comprise a homogeneous group, but are stratified by status and income. Socio-economic and status differences result in different work patterns among rural women. Development programs should be aware of the existence of these differences in designing effective delivery systems. Rural development programs which seek to increase agricultural production among the families with the smallest production units may be putting an additional work burden upon the woman of the household, for these women are already the hardest working segment among agricultural families. It is at this level that intermediate technology, i.e., the introduction of household labor-saving devices, could be most beneficial in lightening the work load of the rural farm woman and freeing her to give more attention to other responsibilities. 14/

B. Socio-Economic Participation

Detailed data on the market-oriented work of rural women was collected only for respondents. The FEMRURAL questionnaire provided a list of possible work activities the respondents could have engaged in during the reference week. This list served as a guide for the interviewer, who also probed for other activities the respondent performed. "Work" is defined as activities which contribute to the national product.

The respondent also supplied information about the primary work activities and weekly earnings of other female family members. This information was used in calculating the economic participation rate of all women fifteen years of age and older in households sampled, and in estimating the monetary contribution of female family members. This data is used primarily for comparative purposes and is not considered to be a definitive analysis of the employment patterns of other female family members.

14/

The most typical labor saving household device utilized by FEMRURAL families was a mechanical grinder (molinito) used to grind meat and/or corn. 41.8 o/o of all families possessed a grinder, although 67 o/o also had a mortero, or pounding mortar, used principally for pulverizing corn and manioc. 28.2% possessed a treadle sewing machine, a sure sign of rural affluence.

The list of market-oriented activities used in eliciting information from the respondents was divided into sections corresponding to work performed "at home" and "away from home," thereby permitting separate analysis of a respondent's participation in both work locales. In no case were purely domestic chores, such as water portage, carrying firewood, caring for one's own children, manufacture for home use, cooking and cleaning, etc., considered as market-oriented activities, although those activities obviously have great economic value to the families. Respondents who engaged only in domestic activities were classified as "Not Economically Active."

Non-remunerative work included two principal activities: farm chores and animal-care tasks. Except for these two activities, all other activities studied during the reference week are potentially income-generating. Weekly earnings were recorded for each income-generating activity the respondent performed in both work locales, thereby permitting analysis of the actual earnings patterns of the interviewer as well as the income-generating potential of the activity.

Part B contains a discussion of economic participation rates of women of economically-active age in the households surveyed and describes the participation patterns of respondents. Since rural women often work in more than one branch of economic activity, in different work locales and at different types of work during a week, the interrelationships between branches, work types and work locales are also examined. Moreover, respondents' work patterns are examined in relation to the socio-economic characteristics of the respondents, as well as their families.

Economic Participation Rates

Census data show that the proportion of female agricultural wage laborers has declined drastically since 1950--from 23.4 o/o in 1950, to 21.5 o/o in 1962, to 13.1 o/o in 1972.^{15/} This decline has been attributed to the displacement of rural women from subsistence agriculture to the industrial and service sectors, but changing census definitions of "economically active population," as well as the different censal sampling period used in the 1972 census, may help explain the pronounced reduction in the ranks of women engaged in agriculture.

The definition of "economically-active population" used in the 1972 census was much more limited than that utilized in prior censuses. The 1962 census instructions specified that housewives were to be classified as "not economically active" only if they devoted themselves exclusively to housework. Housewives who performed any remunerated work were to be classified as "economically active." Moreover, the 1962 census defined unremunerated family workers as "economically active" if they worked for three hours daily or an equivalent of two days of eight hours per week. The 1950 census imposed no minimum hours and classified women who performed remunerated work in their homes as "economically active." The 1972 census used "housewife" as a major occupational classification and did not encourage exploration of possible remunerative or unremunerative work. As a result, housewives were rather automatically relegated to ranks of the economically inactive. 80.2 o/o of the economically inactive female population were listed as housewives in the 1972 census.^{16/}

15/

Juan Andres Silva, *et al.*, "Participación de la Mujer en la Fuerza de Trabajo," *Revista Paraguaya de Sociología*, Año 13, No. 35 (Mayo-Agosto, 1976), pp. 143-171, Cuadro 3.

16/

See República del Paraguay, *Censo Nacional de Población y Viviendas de 1950, Manual Para el Empadronamiento* (Asunción, Paraguay: Dirección General de Estadística y Censos, 1950); República del Paraguay, *Ministerio de Hacienda, Dirección General de Estadística y Censos, Manual del Empadronador* (Asunción, Paraguay: D.G.E.C., 1962); and República del Paraguay, *Censo Nacional de Población y Viviendas, 1972, Manual del Empadronador* (Asunción, Paraguay: D.G.E.C., 1972).

Researchers and statisticians also point out that the decrease in the number of women employed in agriculture between 1962 and 1972 can be attributed in part to the fact that the 1950 and 1962 censuses were conducted in October, a period of high demand for agricultural employment, whereas the 1972 census was taken in July, the period of lowest annual demand for agricultural labor in Paraguay. 17/

Considering the declines registered in the rural female work force, one might expect to see a sharp decline in the overall economic activity rate of Paraguayan women. Losses in the agricultural sector, however, were apparently offset by the shift of women into the secondary and tertiary sectors as a result of rural to urban migration. The economic activity rates of all females twelve years of age and older fall only slightly in the 1950-72 period--from 22.9 in 1950, to 22.7 in 1962, to 21.5 in 1972. The economic participation rate for all females fifteen years of age and older increased slightly over the period--from 24.3 in 1950, to 24.8 in 1962, to 25.0 in 1972. 18/

Survey data cannot explain past economic behavior of rural women, nor suggest the parameters of that participation. The data collected by FEMRURAL, however, provides a yardstick by which to measure the changes among rural women in the future. FEMRURAL was designed to permit various calculations of the rate of economic participation of rural women, depending upon the definition of "economically active" which one wishes to utilize. Five different calculations are presented here in order to underline the variability of such rates and the ambiguities inherent in standard labor force measurement, and to delimit with more precision the parameters of rural women's economic participation.

It should be noted that FEMRURAL defined "economically active age" as fifteen years of age and older. The period of reference was the week prior to the interview. 19/ FEMRURAL was conducted during a period described in the PREALC study as one of relatively low agricultural labor demand--the six-week period from late April to early June. The majority of the interviews, 59.9 o/o, were conducted in May; 25.6 o/o, in April; and 14.6 o/o, in June. 20/ Therefore, FEMRURAL findings do not reflect an artificially high peak agricultural employment period.

17/

PREALC, *Situación y Perspectivas del Empleo en Paraguay* (Santiago, Chile: Oficina Internacional del Trabajo, 1975). Gráfica 10, indicates periods of agricultural labor demand. For a discussion of the effects of the period in which the two censuses were taken, see Luis A. Galeano, "Las Mujeres como Fuente de Fuerza de Trabajo en el Paraguay 1972," Tómo III, "La Participación de las Mujeres en la Actividad Económica en el Paraguay" (Asunción, Paraguay: Centro Paraguayo de Estudios Sociológicos, 1977); and Fulvia Briçuela de Ramírez y Juan Schoemaker, "Tendencia de la Población económicamente Activa Femenina Desde 1950 Hasta 1972," Tómo II, "Participación de las Mujeres en la Actividad Económica en el Paraguay" (Asunción, Paraguay: Centro Paraguayo de Estudios Sociológicos, 1978), pp. 46-90.

18/

Silva, et al., "Participación de la Mujer," Cuadro 1; and Organización de Estados Americanos, "La Mujer en la Fuerza de Trabajo en la América Latina," OEA/SER. k/XII. 5, Doc. 10 (Washington, D.C.: Secretaría General de la Organización de los Estados Americanos, 12 de Setiembre de 1975).

19/

Fifteen is felt to be a realistic minimum age for measures of economic participation. It marks the coming of age of rural females and the real beginning of their economic and social responsibilities. Moreover, the monetary contributions of twelve to fifteen-year-olds of both sexes is minimal. A recent study shows they contribute less than one percent of total annual family income. See Judith Fincher Laird, "A Study of Income Structure in Two Paraguayan Towns" (Asunción, Paraguay: USAID/Market Town Survey, January 12, 1978).

20/

See FEMRURAL Frequency.run for DATEINT.

The rate of economic participation of rural women twelve years of age and older calculated from the 1972 census is 13.3. ^{21/} Using the definition of the rate of economic participation as economically active women divided by the total number of females of economically active age in the survey households, the rate is 65.4. ^{22/} This rate includes all unremunerated family workers, as well as all remunerated women. This rate is felt to be inflated somewhat by the inclusion of respondents whose participation in agricultural or animal care tasks was minimal, i.e., those who do routine tasks such as caring for chickens, gathering manioc and tending small vegetable plots (huertas), but who do not engage in field work.

A slight modification in the definition of unremunerated family workers results in a lower rate of participation. If only those respondents who also perform field work during the production of the family's principal cash crop are considered as unremunerated family workers, the rate is 57.7. ^{23/} If still a further modification is made and those other female family members who work only as unremunerated family laborers are also eliminated, the rate is 54.5. ^{24/}

Looking at the other extreme, i.e., considering only those women who worked away from home during the reference week, the rate of economic participation falls to 15.7. ^{25/} This rate more nearly approximates that calculated from 1972 census data, 13.3.

It appears that the 1972 census classifies as "economically active" only those women who worked away from home, had their own business or engaged regularly in wage labor. If the census measures "employment," rather than economic activity, the difference between the rates can be attributed perhaps to the greater diligence with which FEMRURAL data was collected. The practice of interviewing the woman, herself, and including a list of activities she could have engaged in, rather than inquiring whether or not she worked, apparently produced more accurate information about economic activities. It should be noted that the census was not designed to measure economic participation, although census data is often used for that purpose in the absence of specialized labor-force studies.

21/

Galeano, *et al.*, "Las Mujeres como Provedoras," Tomo III, Table I.4. This rate is derived by dividing the number of economically active women of economically active age by the total number of women of economically active age, defined as twelve years of age or older.

22/

In all calculations presented here the first figure in the numerator is the number of respondents and the second, the number of other female family members who worked during the reference week. The figure in the denominator is the number of females in the population surveyed, fifteen years of age and older. Thus, the calculation is:

$$\left[\frac{2023 + 459}{3794} \times 100 = 65.4. \right]$$

$$23/ \left[\frac{1731 + 459}{3794} \times 100 = 57.7. \right]$$

Data source for these calculations is TOTCYCLE GT 0, TASAPART BY PARTVAR, and Frequencies, ACTFIRST, ACTSECON and ACTHIRD. 1731 is the sum of respondents engaged in income-generating activities (1302), plus those unremunerated family workers who also worked during the crop cycle (429)

$$24/ \left[\frac{1731 + 338}{3794} \times 100 = 54.4. \right]$$

$$25/ \left[\frac{359 + 236}{3794} \times 100 = 15.7. \right]$$

Another partial measure of women's economic participation rate is the number of women who performed only income generating activities. If all unremunerated family workers are excluded the rate is 43.3. 26/

This presentation demonstrates that census seriously underestimates rural women's economic participation, and, inherently, their economic worth. All of the above calculations are of potential use in estimating the number of women performing certain kinds of work, but the most reliable rate of economic participation of those discussed above for our purposes is 54.5. This calculation includes as unremunerated family workers only those respondents who also helped produce the family's principal cash crop and eliminates completely other unremunerated females in the family. Since one of the primary objectives of the study is to measure women's penetration into the commercial sector, this rate is felt to be the most accurate indicator of that participation. (Another more conservative calculation based upon women with earnings is presented in Section C.)

Another standard measure of economic activity is the crude economic participation rate, defined as the proportion of active women compared to the total female population. The crude rate for all Paraguayan women (rural and urban) in 1950, 1962, and 1972 was 14.5, 14.4, and 12.0, respectively.

The crude rate for rural women based upon census data is not available. Table V, 27 presents the crude rates for the five definitions of economic activity defined above. The crude economic activity rate of rural women (ELMRURAL) is greater than the crude rate calculated for all women (urban and rural) from the 1972 census, 12.0 o/o, for all definitions of economically active population explored except for women employed away from home only, or Definition No. 4.

These data dramatize the serious undercount of economically active rural women in the census. Using Definition No. 3, it can be seen that 29.6 o/o of all rural females surveyed are economically active, as opposed to 54.5 o/o of those fifteen years of age and older.

However, despite what appears to be a decline in the rural female activity rate over the past twenty years, the level of economic participation is very high. There is no comparable data from other countries with which to compare these activity rates of rural women. 28/

26/

$$\frac{1308 + 338}{3794} \times 100 = 43.3$$

27/

OAS, "La Mujer en la Fuerza de Trabajo," Cuadro 3.

28/

A pilot study of three Mexican towns demonstrates the underenumeration of economically active females. Mercedes Pedrero, "La Participación Femenina y su Presupuesto de Tiempo: Notas Sobre Problemas Relativos a Conceptos y Captación" (Mexico: Centro Nacional de Información y Estadísticas del Trabajo, Secretaría del Trabajo y Previsión Social, 1976). Studies on women's agricultural participation in Colombia and Peru demonstrate also that female agricultural workers have been greatly under estimated. See Carmen Diana Deere, "The Agricultural Division of Labor by Sex: Myths, Facts and Contradictions in the Northern Peruvian Sierra," paper presented to the panel on "Women: The New Marginals in the Development Process," Joint National Meeting of the Latin American Studies Association and the African Studies Association, Houston, Texas, November 2-5, 1977; and Magdalena León de Leal y Carmen Diana Deere, "La Proletarización y el Trabajo Agrícola en la Economía Parcelaria: Estudio de la División de Trabajo por Sexo en dos Regiones Colombianas," paper presented to the Seminario a Mulher na Força de Trabalho na América Latina, 23-26 de Novembro de 1978, Rio de Janeiro.

TABLE V, 27
Age Specific and Crude Rates of Economic Participation
(FEMRURAL)

Definitions of Economically Active Women (15 years of age and older) used in the text	Definition	Age Specific Rate (15 years & Older)	Crude Rate
All Women who Worked	1	65.4	35.5
Excludes Unremunerated Respondents Who Did Not Participate During the Crop Cycle	2	57.7	31.3
Limited Definition of Unremunerated Workers (Respondents & Other Women)	3	54.5	29.6
Women who Worked Away from Home	4	15.7	8.5
Women who Performed Income-generating Tasks	5	43.3	23.6

Female Workers in FEMRURAL Families

The "principal woman" selection criteria utilized in the survey proved to be a valid methodological approach to the study of women's socio-economic roles and contributions. In 72.6 o/o of all families surveyed only the respondent worked, and in 13.4 o/o of the households the respondent and at least one other woman worked. Only in 1.8 o/o of all households did a woman other than the respondent work when the interviewee, herself, was economically inactive. In 12.2 o/o of all households no female family member was economically active during the week of reference (Table V, 28). In the majority of cases, therefore, the respondent was the key economic woman in the family.

The economic participation patterns can be accounted for primarily by the demographic composition of rural households. Since most rural family units are of the organized nuclear type, there are simply not many female family members over the age of fifteen who can be enlisted in the work force. The average

number of females (fifteen years of age and older) per households was 1.5, and the average number of males, 1.4. 29/

There are significant differences between the labor utilization of women in women-headed households, compared to male-headed units. In women-headed units there are more likely to be females other than the respondent who engage in economic activities, than in male-headed units. In 21.1 o/o of women-headed units, other female family members also worked, compared to 6.9 o/o of units with consensual partners and 12.5 o/o with wives. (Table V, 28)

TABLE V, 28
Social Roles of Respondents in Each Household Compared to Female Family Members (Fifteen Years of Age and Older) Who Worked During the Reference Week.

Composition of the Female Work Force Per Households	Social Role of Respondent				
	Female Head	Consensual Partner	Wife	Others	Total
No Economically Active Females	38	54	183	13	288
	13.2	18.8	63.5	4.5	
	10.6	16.3	11.6	14.6	12.2
Respondent Only, Economically Active	232	251	1169	56	1708
	13.6	14.7	68.4	3.3	
	64.4	75.8	74.4	62.9	72.6
1-3 Female Family Members excluding the Respondent Active	14	3	24	0	41
	34.1	7.3	58.5	0.0	
	3.9	0.9	1.5	0.0	1.7
Respondent and 1-3 Other Females Econ Active	76	23	196	20	315
	24.1	7.3	62.2	6.3	
	21.1	6.9	12.5	22.5	13.8
Total	360	331	1572	89	2352*
	15.3	14.1	66.9	3.8	

* Not included here are 3 women who lived in households containing more than three additional.

The economic position of the family has some influence on the utilization of female labor. There is an inverse relation between income and participation in those households where the respondent and at least one other female family member worked. That is to say, among families with low income, i.e., less than \$20,000 (per capita), it is more probable that another female family member will participate when the respondent does. Undoubtedly, demographic factors such as family size and age composition are involved here. (Table V, 29)

29/

1.5 = total number of females (3595), divided by the number of households (2352). 1.4 = total number of males (3330), divided by 2352.

TABLE V. 29
Women Family Members Who Worked During the Reference Week By the
Per Capita Family Income

	No Income	Less than \$20.000	\$20.000 - 39.999	\$40.000 & More	Total
Only Respondent Worked	37 2.2 38.7	905 53.3 72.3	387 22.8 72.7	368 21.7 75.3	1697 72.7
Respondent & At Least One Other Woman	1 0.3 1.6	190 60.5 15.2	71 22.6 13.3	52 16.6 10.6	314 13.4
Only Other Woman (Inter- viewer Is Inactive)	1 2.4 1.6	21 51.2 1.7	11 26.8 2.1	8 19.5 1.6	41 1.8
No Active Women	24 8.5 38.1	135 47.7 10.8	63 22.3 11.8	61 21.6 12.5	283 12.1
Total	63 2.7	1251 53.6	532 22.8	489 20.9	2335

86.2% of FEMRURAL respondents were economically active during the reference week. 70.9% worked only at home, 4.3 o/o worked only away from home, and 11.0 o/o worked in both locales (Table V, 30). Of these 1664 women who worked only at home, 21.3 o/o worked for remuneration only and 35.4 o/o combined remunerative and unremunerative work and 43.3 o/o were unremunerated family workers. Of those 284 women who worked in both locales, 23.3 o/o also worked for remuneration at home, 36.4 o/o performed paid and unpaid labor at home, and 40.3 o/o worked at home as unremunerated laborers. (These calculations above are based upon Table V, 30.) A slight majority of the respondents, 55.5% , performed at least one type of remunerative work, whereas 30.7% o/o worked only as unremunerated family laborers. 13.8 o/o were economically inactive. (Table V, 31)

TABLE V. 30
Economic Participation of FEMRURAL Respondents

Place of Work								
At Home Only			Away Only	Both At Home & Away			Not Econo- mically Active	Total
Remu- erated Only	Rem. & Unrem. Work	Unrem. Family Worker	Works Away From Home Only	Remun. At Home and Away	Rem. & Unrem. At Home & Works Away	Unrem. At Home Works Away		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
354	589	721	101	60	94	104	323	2346
15.1	25.1	30.7	4.3	2.6	4.0	4.4	13.8	100.0

* 6 Missing Observations.

TABLE V, 31
Work Status of FEMRURAL Respondents

Economic Activity Pattern	Number of Respondents
Some Remunerated Work	1302 55.5
Unremunerated Work Only	721 30.7
Not Economically Active	323 13.2
Total	2346 100.0 o/o

Respondents Who Worked At Home

1922 respondents (82 o/o) engaged in market-oriented work on their own premises or lands. These activities were grouped into the following branches of economic activity: agriculture, livestock, commerce, industry, and services. Agriculture and livestock were synonymous with unremunerated family labor. "Agriculture" was defined as agricultural labor and "livestock" as animal care chores. "Commerce" included sales of farm produce, as well as other business activities engaged in on the premises such as operating grocery stores, butcher shops, restaurants, and small hostals, or pensiones. "Industry" embraced artisan production, especially the production of spider-web lace (fiandutí), woven and embroidered cloth (ahó-pof), and other woven goods (poyví), as well as home processing of candles, cigars, breads (notably a cheese-manioc bread, chipa), manioc, flour, cheese, yerba mate, juices and oils, especially from sugar cane and petit grain. It also included small manufacturing enterprises, principally garment construction. "Services" included midwives, folk healers, practical nurses, beauticians, laundresses and caterers.

The activity patterns of respondents point to the importance of considering complementary activities performed in more than one branch of economic activity in determining whether or not a woman is economically active. Women tend to work in more than one branch of economic activity. 57.0 o/o of all economically-active respondents worked in more than one branch of economic activity. 39.2 o/o of economically-active women worked in two branches, usually agriculture and livestock. 16.2 o/o worked in three and 1.4 o/o worked in four or more branches. The remaining 43.0 o/o worked in only one branch, usually either livestock, commerce, industry or agriculture. (Table V, 32) The most commonly performed tasks were animal care and farm chores. Together these constituted 61.0 o/o of all tasks performed at home. The average number of tasks per respondent who worked at home was 1.8. (Table V, 33)

TABLE V, 32
Branches of Economic Activity
(Work Performed At Home)

Branch of Economic Activity	Number of Respondents Per Number of Branches	Number of Respondents by Branch
One Branch	826 43.0%	
Agriculture		111 4.7
Livestock		368 15.7
Commerce		207 8.8
Industry		123 5.5
Services		12 0.5
Two Branches	753 39.2%	
Agriculture & Livestock		36 1.4
Other Two Branches		407 17.3
Three Branches	311 16.2%	
More than Three Branches	32 1.4	311 13.3
Not Economically Active	424 18.1	32 1.4
		424 18.1
Total	2346	2346

TABLE V, 33
Activities Performed At Home

	Number of Tasks Performed	Percentage of Total
Sale of Farm Produce	495	14.2
Food Preparation for Sale	151	4.3
Weaving	74	2.1
Spider-Web Lace (Ñanduti)	16	
Embroidered Cloth (Ahó Pof)	28	
Poyví	14	
Other weaving	16	
Clothing Construction	128	3.7
Home Processing	226	6.5
Manioc Starch, flour	26	
Cheese, butter	131	
Cigars	63	
Candles	14	
Others (oils, extracts, juices, by-products)	12	
Leatherwork	1	0.0
Merchants	231	6.6
Butcher	11	
Grocers	200	
Others	20	
Farm Chores (agricultural)	792	22.7
Animal Care Chores	1335	38.3
Services (midwives, nurses, herbalists, laundresses)	29	0.8
Other Manufacturing (straw products)	28	0.8
Total	3490	100.0 o/o

N.B. The number of respondents who worked at home was 1922. Therefore, the average number of tasks performed was 1.8.

The fact that the majority of respondents who were economically active worked in more than one branch of economic activity during a weekly period is of critical importance in the area of measurement of rural women's economic participation. Labor force definitions which stipulate that a person must have worked a minimum number of hours at one activity are clearly discriminatory, since rural women's work activities are often complementary and without well-defined boundaries. 41.4 o/o of all economically active respondents performed only one task; 38.7% did two; 16.5% did three; and, 3.4 % did more than three tasks. (Table V, 34) Therefore, 58.6 o/o of the respondents performed more than one task.

Minimum time requirements obscure differences between types of work rural women perform in the non-domestic sector. Selling a pig, for instance, might require only half an hour's work, whereas creating a spider-lace doily might require 10 hours of work spread over several weeks, yet produce less profit. A minimum time requirement would list the pork producer as not economically active, while reporting the lace-worker as economically active. The concept of time in the rural environment can easily be misused.

For that reason FEMRURAL gathered data on activities and earnings per activity as the most valid indicator of economic activity. It was assumed that rural women are rational economic beings who would seek to maximize time use and profits, and that they would not work without some probability of receiving remuneration. These assumptions have been substantiated by survey findings. (See Section C.)

TABLE V, 34
Number of Respondents Who Worked At Home By Number of
Tasks Performed

Number of Tasks	Number of Respondents	Total Number of Tasks
1	796 41.4	796
2	743 38.7	1486
3	318 16.5	954
4	53 2.8	212
5	10 0.5	50
6	2 0.1	12
Total	1922	3510

N.B The average number of tasks performed at home by economically active women was 1.8
($\frac{3510}{1922} = 1.8$ tasks each)

Respondents Who Worked Away From Home

Women who left the premises or farm to engage in market-oriented activities were classified as having worked "away from home." A total of 359 respondents, or 15.3 o/o, worked away from home. Most of these women, 71.9 o/o, also had some participation "at home" as remunerated or unremunerated workers. (See Table V, 30) Work performed away from home, often used to measure "modernity," is of little value in the rural environment, especially in the case of women who market home-grown or processed goods. Cigar makers, broom makers, and candle makers, for instance, work in both locales in the production and marketing of their goods, yet are among the poorest, most traditional women surveyed.

About 94 o/o of respondents who worked away from home engaged in only one branch of economic activity and performed only one task. 5.6 o/o worked in two branches. Women working away from home engaged primarily in commerce, i.e., as peddlers, market vendors, or street vendors; and as laundresses and agricultural laborers. (Table V, 35)

"Agricultural laborer" includes wage laborers and those performing *minga*, exchange labor. Only factory laborers are included in "Industry." The most frequently performed tasks were washing clothes and agricultural wage labor, apart from the variety of commercial activities (vendors, peddlers, marketing, etc.). The average number of tasks performed was 1.1. (Table V, 36)

TABLE V, 35
Branches of Economic Activity of Respondents Who Worked Away
from Home

Branch of Economic Activity	Number of Respondents	Respondents Per Branches
One Branch	<u>339</u>	
	94.4	
Agriculture		70
Commerce		19.5
Industry		153
Service		42.6
		9
		2.5
		107
		29.8
Two Branches	<u>20</u>	
	5.6	
Agriculture & Commerce		1
Agriculture & Service		0.3
Commerce & Service		13
Industry & Service		3.6
		5
		13.9
		1
		0.3
Total	359	359

TABLE V, 38

Number of Activities Performed Away From Home

Activity	Total Tasks
Laundress	83
Agricultural Laborer	21.7
Minga (exchange labor)	82
Domestic Servant	21.1
Factory Laborer	2
Merchants (Butcher, grocer)	0.5
School teacher	6
Midwife	1.6
Clerks	10
Market vendor (retail)	2.6
Peddler	4
Services	1.0
Sale of Own Farm Products	13
Sale of Own Processed Goods	3.4
	13
	3.4
	2
	0.5
	47
	12.3
	33
	8.6
	10
	2.6
	27
	7.0
	51
	13.3
Total	383

N.B. The total number of respondents who worked away from home was 359.

Factors Influencing Economic Participation

1. Regional Variation: There are significant regional variations in women's economic participation patterns. The mixed minifundia-latifundia ganadero zone of Misiones and Ñeembucú registered the highest percentage of economically inactive women, 23.4 o/o. Itapúa and the Neo-Colonization Zone followed with 15.1 o/o and 16.6 o/o, respectively. The most densely populated zone (Minifundia) and the Eje Norte registered the lowest economically inactive population, 11.8 o/o and 10.8 o/o, respectively. (Table V, 37)

61.5 o/o of all respondents in the Minifundia zone, an area with a more developed marketing and employment infrastructure, are remunerated workers. The proportion of remunerated workers was about the same in the Eje Norte (54.2 o/o), and Neo-Colonization Zone (52.7 o/o). The area which afforded the least opportunity for remunerative work was Itapúa, (40.8 o/o), a zone which contains large agricultural holdings, and colonization areas. The low level of remunerative work can be accounted for by the large percentage of unremunerated family workers in the zone. Itapúa contains the highest percentage of unremunerated workers of all the zones, 44.1 o/o, followed by the Eje Norte, 35.0 o/o. The lowest proportion of women who worked only as unremunerated family laborers was found in the Minifundia Zone, 26.7 o/o. (Table V, 37)

TABLE V, 37
Regional Distribution of Economic Activity Patterns

Economic Zone	Economic Activity Patterns			Total
	Remunerated Work	Unremunerated Family Workers	Not Economically Active	
Minifundia	699	303	134	1136
	61.5	26.7	11.8	
	53.7	42.0	41.5	48.4
Ganadero	70	48	36	154
	45.5	31.2	23.4	
	5.4	6.7	11.1	6.6
Itapúa	97	105	36	238
	40.8	44.1	15.1	
	7.5	14.6	11.1	10.1
Eje Norte	175	113	35	323
	54.2	35.0	10.8	
	13.4	15.7	10.8	13.8
New Colonization	261	152	82	495
	52.7	30.7	16.6	
	20.0	21.1	25.4	21.1
Total	1302	721	323	2346
	55.5	30.7	13.8	

2. Family's Primary Income-Generating Activities: The regional variations observed above are closely related to the principal economic activities of families in the five zones. In areas where the proportion of non-farmers is high, the proportion of remunerated workers is also high. Table V, 38 illustrates that activity patterns are closely associated with the family's principal income source. Respondents from farm and manufacturing families have the lowest participation in remunerative work of all economic activities except for those families dependent upon retirement funds and transferences. Respondents from non-farm families are most likely to be remunerated workers, especially those from families engaged in food processing, home crafts and commerce. Over 80% of respondents from these three family types engage in remunerated work. Farming families are under-represented among remunerated workers and over-represented among unremunerated family workers. The highest percentages of inactive women are found among those families dependent upon manufacturing, transferences and retirement.

TABLE V, 38
Respondent's Economic Activity Pattern by Family's
Principal Economic Activity

Family's Principal Economic Activity	Remun. Worker	Unremun. Family Workers	Not Economically Active	Total
Farming	627 49.1 49.4	501 39.4 70.6	148 11.6 46.4	1278 64.9
Ranching	44 68.8 3.4	14 21.9 7.0	6 9.4 1.0	64 2.8
Home Crafts	37 92.5 2.8	1 2.5 0.1	2 5.0 0.6	40 1.7
Food Processing	64 80.0 4.9	14 17.5 2.0	2 2.5 0.6	80 3.4
Manufacture	118 50.0 8.1	62 26.3 8.7	56 23.7 17.6	236 10.1
Service	55 65.5 4.2	17 20.2 2.4	12 14.3 3.8	84 3.6
Commerce	188 86.2 14.5	17 7.8 2.4	13 6.0 4.1	218 9.4
Agr. Laborer	107 54.8 8.3	57 29.2 8.0	31 15.9 8.7	195 8.4
Transference	10 21.7 0.8	18 34.8 2.2	20 43.5 6.3	46 2.0
Retirement	4 44.4 0.3	2 22.2 2.8	3 33.3 0.9	9 0.4
Other Activity	41 53.9 3.2	9 11.8 1.3	26 34.2 8.2	76 3.3
Total	1295 65.7	712 30.8	310 13.7	2320

3 Social Role of Respondents: Differences between participation patterns cannot be attributed to the social role of the respondent. There is very little variation proportionately among economically active female heads, consensual partners and wives, 85.8 o/o, 83.2 o/o, and 87.0 o/o, respectively. (Table V, 39) A larger proportion of female heads than consensual partners and a larger percentage of consensual partners than wives, however, work away from home, 25.6 o/o, 16.9 o/o, and 12.5 o/o, respectively. Female heads and consensual partners constitute 41.2 o/o of all respondents who work away from home, although only 29.4 o/o of all respondents are female heads or consensual partners. These two groups of women are disproportionately represented among women who work away from home. (Table V, 40) Age affects the economic participation patterns of female heads. 88 o/o of inactive female heads are fifty years of age and older, but only 14.2 o/o of female heads are economically inactive. 24.0 o/o perform only farm and animal care tasks, whereas the rest, 61.8 o/o, perform remunerated work. (Table V, 41)

TABLE V, 39
Economically Active Respondents by Social Role
(Reference Week)

Social Role	Economically Active	Not Economically Active	Total
Female Heads	308	51	359
	35.8	14.2	
	15.2	15.8	15.3
Consensual Partners	273	55	328
	83.2	16.8	
	13.5	17.0	14.0
Wives	1365	204	1569
	87.0	13.0	
	67.5	63.2	66.9
Others	76	13	89
	85.4	14.6	
	3.8	4.0	3.8
Total	2022	323	2345
	86.2	13.8	

TABLE V, 40
Respondents Who Worked Away From Home By Social Role in the Family
(Reference Week)

Social Role	Did Not Work Away	Worked Away	Total
Female Head	268	92	360
	74.4	25.6	
	13.4	25.6	15.3
Consensual Partner	275	56	331
	83.1	16.9	
	13.8	15.6	14.1
Wives	1375	197	1572
	87.5	12.5	
	69.0	54.9	66.8
Others	75	14	89
	84.3	15.7	
	3.8	3.9	3.8
Total	1993	359	2352
	84.7	15.3	

TABLE V, 41
Economic Activity Patterns of Female Heads by Age Group

Age Groups	At Home Only			Away Only	Mixed Home and Away			Not Econo- mically Ac- tive	Total
	Remun- erated Work	Remun. & Unre. Work	Unre. mun. Family Worker	Employed Away Only	Remunerated At Home & Away	Rem.& Unrem. At Home & Empl.Away	Unrem. Fam.wkr & works Away		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
15-20	2	3	3	1	2	3	1	0	15
	13.3	20.0	20.0	6.7	13.3	20.0	6.7	0.0	
	3.3	4.3	3.5	4.0	10.0	12.0	4.5	0.0	4.2
30-40	21	21	19	14	8	15	10	6	114
	18.4	18.4	16.7	12.3	7.0	13.2	6.0	5.3	
	35.0	30.0	22.1	56.0	40.0	60.0	45.5	11.8	31.8
50-59	10	20	34	5	5	0	7	9	90
	11.1	22.2	37.8	5.6	5.6	0.0	7.8	10.0	
	16.7	26.6	39.5	20.0	25.0	0.0	31.8	17.6	25.1
60 & More	27	26	30	5	5	7	4	39	140
	19.3	18.6	21.4	3.6	3.6	5.0	2.9	25.7	
	45.0	37.1	34.9	20.0	25.0	28.0	18.2	70.6	39.0
Total	60	70	86	25	20	25	22	51	359
	16.7	19.5	24.0	7.0	5.6	7.0	6.1	14.2	

4. Economic Indicators: Economic activity patterns are closely associated with per capita family income. Table V, 42 shows there is a direct relation between the family income level and remunerated work, and an inverse relation between family income level and unpaid work. As incomes rise, the proportion of paid workers increases and the proportion of unpaid workers falls. The proportion of inactive respondents is about the same for all income levels, except among families reporting no earned income in 1977. About 38 o/o of respondents from those families were inactive. Thus, women from the low-income group are somewhat more likely to engage in work which contributes to the family economy, and to work as unpaid family laborers than are other women.

TABLE V, 42
Economic Activity Pattern of Respondents By Per Capita Family Income

Economic Activity Pattern of Respondent	Per Capita Family Income				Total
	None	Less than ₱ 20,000.-	₱ 20,000 -- 39,999.-	₱ 40,000 & More	
Some Remunerative Work	16 1.2 26.2	677 52.2 54.2	294 22.7 55.3	309 23.8 63.4	1296 55.6
Only Unremunerative Work	22 3.1 36.1	418 58.5 33.5	164 22.9 30.8	111 15.5 22.8	715 30.7
Not Economically Active	23 7.2 37.7	154 48.4 12.3	74 23.3 13.9	67 21.1 13.8	318 13.7
Total	61 2.6	1249 53.6	532 22.8	487 20.9	2329

There are no linear relationships between type of work (remunerated or unremunerated) and the size of the family's production unit. The proportion of unremunerated family workers varies little per increment in the number of hectares cultivated. (Table V, 43) Work locale, however, is closely associated with the number of hectares cultivated. The proportion of those working only at home rises per increment in the number of hectares cultivated. Likewise, the proportion of women working only away from home falls per increment in hectares cultivated. The proportion of economically inactive women falls as the size of the production unit increases. (Table V, 44) The more land these families cultivate, the more likely is the respondent to work at home or to be inactive.

TABLE V, 43
Work Performed At Home by Number of Hectares Cultivated in the 1977-78
Agricultural Year

Economic Activity Pattern	Number of Hectares Cultivated			Total
	0.01 - 2.99 Has.	3 - 4.99 Has.	5 & More Has.	
Some Remunerated Work	360	220	246	826
	43.6	26.6	30.0	
	56.4	57.0	53.5	
Only Unremunerated Work	278	166	214	658
	42.2	25.2	32.5	
	43.6	43.0	46.5	
Total	638	386	460	1484
	43.0	26.0	31.0	

TABLE V, 44
Economic Activity Patterns of Respondents By the Number of
Hectares Cultivated in the 1977-78 Agricultural Year

Economic Activity Pattern	Number of Hectares Cultivated			Total
	0.01 - 2.99 Has.	3 - 4.99 Has.	5 & More Has.	
At Home Only	638	386	460	1484
	43.0	26.0	31.0	
	69.8	78.6	83.8	
Away Only	32	10	6	48
	66.7	20.8	12.5	
	3.5	2.0	1.1	
At Home & Away	131	40	33	204
	64.2	19.6	16.2	
	14.3	8.1	6.0	
Not Economically Active	113	55	50	218
	51.8	25.2	22.9	
	12.4	11.2	9.1	
Total	914	491	549	1954
	46.8	25.1	28.1	

5. Education: Table V, 45 suggests that the respondents' economic activity patterns are closely associated with formal education. About 30 o/o of inactive respondents have no formal education, compared to 19.7 o/o of remunerated workers and 23.6 o/o of unremunerated workers. The proportion of remunerated workers increases as educational level rises, and the proportion of unremunerated family workers falls with every increment in education. The proportion of inactives falls with each increment in educational level until the Secondary Level, where it rises.

TABLE V, 45
Economic Activity Status by Respondent's Educational Level

Pattern Economic Activity	Educational Level				Total
	None	Some Primary	Completed Primary	Secondary Level	
Remunerated Worker	256 19.7 48.9	841 64.6 56.1	141 10.8 62.7	64 4.9 66.0	1302 55.5
Unremunerated Family Worker	170 23.6 32.5	468 64.9 31.2	65 9.0 28.9	18 2.5 18.6	721 30.7
Not Economically Active	97 30.1 18.5	191 59.3 12.7	19 5.9 8.4	15 4.7 15.5	322 13.7
Total	523 22.3	1500 64.0	225 9.6	97 4.1	2345* 100.0

* 7 Missing Observations, including one university level educated respondent who was not Economically Active.

C. Weekly Earnings of Respondents

A total of 1302 women worked in remunerative activities during the reference week. These women represented 64.4 o/o of all economically active women. It was hypothesized that rural women would not engage in unprofitable work, or activities, which did not guarantee a reasonable return for the energy expended. 67.4 o/o earned ₦500 (US\$4.00) or more in that period--roughly equivalent to two eight-hour days' work for adult females. (Table V, 46) Only 6.3 o/o received no income during the reference week, some because they had not yet collected for services provided and others because of the protracted nature of their activities, such as weaving. If one accepts the premise that ₦500 is roughly equivalent to two eight-hour days' work, then, two-thirds of remunerated respondents qualify for inclusion as "economically active" under the most strict criteria currently used in labor force surveys--i.e, two eight-hour days or three hours daily during the reference week.

Actual earnings are a better economic activity indicator for housewives who engage in remunerative work than is a minimum time stipulation, especially in an environment where timepieces are not common and concepts of time tend to be vague. "Un rato," for instance, can mean anything from a few minutes to a day or longer, but it is a typical response to queries of time spent performing a certain task. Perceptual problems of this sort, coupled with the fact that domestic and non-domestic activities are

often carried out simultaneously by rural women, making it difficult even for an observer to calculate the exact number of hours a woman spends at market-oriented activities, led the survey designers to abandon any attempt to measure time spent in agricultural and non-agricultural work activities. Time measurement is best left to micro studies of the participant-observer type, such as that done by Carmen Diana Deere in Peru. ^{30/}

TABLE V, 46
Weekly Earnings of All Respondents Engaged in Remunerative Work

Earnings	Cases
None	82 6.3
Less than ₡ 500.-	343 26.3
₡ 500 - 999.-	263 20.2
₡ 1000 - 1.999.-	216 16.6
₡ 2.000 - 3.999.-	183 14.1
₡ 4.000 & More	215 16.5
Total	1302 100.0 o/o

Other Female Family Members

The majority of other female family members who worked during the reference week, or 73.6 o/o, engaged in remunerative work. 40.7 o/o worked in agriculture, and 35.3 o/o in manufacturing. The majority of manufacturing workers were either weavers or seamstresses. 12.9 o/o worked in services, 5.4 o/o in commercial activities and 5.4 o/o were professionals. (Table V, 47)

84.7 o/o of these women were daughters of the head of household. Their mean age was 23.2, compared to 41.5 for the respondents. Their mean weekly income was ₡870 (US\$7.00). 68.3 o/o of other remunerated female family workers had incomes of at least ₡500, or approximately the same percent as for respondents, 67.4 o/o. ^{31/}

^{30/} Deere, "The Agricultural Division of Labor."

^{31/} Source of calculations is Frequency run, FEMRURAL, Variables ACEFIRST THRU ADDWOMEN.

This data permits yet another refinement to the rate of economic participation calculations. Considering as "economically active" only respondents and other female family members who earned \$500 or more during the reference week and only those unremunerated respondents who also participated in the crop cycle, the rate of economic participation for all rural women fifteen years of age and older would be 40.5.^{32/} This definition is more exacting than any measures currently in use since it is based upon actual earnings per activity, not mean earnings, nor time use. Yet, even so, this rate is three times greater than that calculated from the 1972 census.

TABLE V, 47
Principal Work Activity of Other Female Family Members

Work Activities	Number of Other Women Workers by Work Type	Number of Other Women Workers by Participant Activity
Agriculture	187	
Unremunerated Family Wk.	40.7	121
Agricultural Wage Laborers		66
Manufacture	162	
	35.3	
Weaving		51
Other Home Industries		25
Home Processing		5
Seamstresses		69
Others		12
Services	59	
	12.9	
Domestics		52
Others		7
Commerce	25	
	5.4	
(Sales clerks, butchers etc.)		25
Professionals	26	
	5.7	
School teachers		19
Others		7
Total	459	459

32/

$$\frac{877 + 429 + 231}{3794} \times 100 = 40.5$$

Earnings

The monetary contribution of rural women to the family was calculated as the proportion of respondent and other female family members who earned ₡500 or more during the reference week, compared to the total family income in that period. ^{33/} In 29.1 o/o of all households female family members contributed at least half of the total weekly family earnings. (Table V, 48) The respondent contributed the majority of all women's earnings. In 24.8 o/o of all households the respondent alone contributed half of the total weekly family income. (Table V, 49) In 160 families where both the respondent and other female family members had earnings, respondents contributed as much or more than other females in 55 o/o of all cases. These calculations are based upon Table V, 50.

TABLE V, 48
Ratio of All Women Family Members Earnings to Total Family Income
During the Reference Week

Ratio	Cases
0	1205
0.01 - 0.19	51.4
	273
0.20 - 0.49	11.6
	185
0.50 - 0.99	7.9
	430
1.0 & More	18.3
	253
	10.8
Total	2346

^{33/}

The establishment of a minimum earning of ₡500 resulted from a coding procedure in which family income was coded in thousands and respondents' earning in actual units (guaranies). When comparing the two figures, weekly earnings were rounded off to the nearest thousand. Earnings of ₡500 or more were coded as ₡1000, and those less than ₡500, as zero. Only 2.6 o/o of all respondents were affected by this rounding-off procedure. ₡500 represents approximately two full days' work earnings for adult females in rural Paraguay. Female agricultural workers in the sample earned an average of ₡255 per day during the reference week.

TABLE V, 49

Ratio of Respondents Weekly Earnings to Total Family Income During the Reference Week

Ratio	Cases
0	1290
	55.0
0.01 - 0.19	279
	11.9
0.20 - 0.49	195
	8.3
0.50 - 0.99	371
	15.8
1.0 & More	211
	9.0
Total	2346

TABLE V, 50

Ratio of Respondent's Weekly Earnings to the Total Weekly Earnings of All Female Family Members (Week of Reference)

Ratio	Cases	Cases with Earnings
0	2192	
	93.2	
0.01 - 0.9	72	72
	3.1	45.0
1.0 - 2.9	45	45
	1.9	28.1
3.0 - 9.9	26	26
	1.1	16.3
10.0 & More	17	17
	0.7	10.6
Total	2352	160
		100.0

Earnings Patterns: The earning capacity of respondents did not vary greatly by their social role, although the percentage of female heads earning more than ₱2,000 per week was noticeably lower than for other respondents. (Table V, 51) The age breakdown of all respondents by earnings shows that the youngest women (15-29 years old) and the oldest women (60 years old and more) are more heavily clustered among those earning less than ₱500 than any other age group, with 46.2 o/o and 41.8 o/o, respectively, of women in those age groups earning less than ₱500. (Table V, 52)

TABLE V, 51
Respondents Weekly Earnings by Social Role

	Female Head	Consensual Partner	Wives	Others	Total
Less than ₦ 100.-	62	49	222	10	343
	18.1	14.3	64.7	2.9	
	30.4	29.5	27.4	25.6	28.1
₦ 500 - 999.-	56	35	162	10	263
	21.3	13.3	61.6	3.8	
	27.5	21.1	20.0	25.6	21.6
₦ 1,000-1,999.-	43	28	136	9	216
	19.9	13.0	63.0	4.2	
	21.1	16.9	16.8	23.1	17.7
₦ 2,000 & More	43	54	291	10	398
	10.8	13.6	73.1	2.5	
	21.1	32.5	35.9	25.6	32.6
Total	204	166	811	39	1220
	16.7	13.6	66.5	3.2	

TABLE V, 52
Total Weekly Earnings of Respondents by Age

Total Weekly Earnings -	Age of Respondents						Total
	15 - 19	20 - 29	30 - 39	40 - 49	50 - 59	60 & More	
Less than ₦ 500.-	12	70	77	70	48	66	343
	3.3	19.0	20.9	19.0	13.0	17.9	
	46.2	29.2	24.1	24.1	25.8	41.8	28.1
₦ 500 - 999.-	2	59	68	65	44	25	263
	0.8	22.4	25.9	24.7	16.7	9.5	
	7.7	24.6	21.3	22.4	23.7	15.8	21.6
₦ 1,000 - 1,999.-	5	36	45	61	35	34	216
	2.3	16.7	20.8	28.2	16.2	15.7	
	19.2	15.0	1.3	21.0	18.8	21.5	17.7
₦ 2,000 & More	7	75	130	94	59	33	398
	1.8	18.8	32.7	23.6	14.8	8.3	
	26.9	31.3	40.6	32.4	31.7	20.9	32.6
Total	26	240	320	290	186	158	1220
	2.1	18.7	26.2	23.8	15.2	13.0	

There is no consistent pattern between respondents' educational levels and earnings, although there is an inverse relation for women earning Q1-499 with education and a direct relation for those earning Q2,000 (US\$16.00) or more. (Table V, 53) Women with no earnings are more heavily clustered among the women with no education. A woman's participation in training courses is associated with her earning power. The higher the earnings level, the larger the proportion of women who have participated in a training course, usually a domestic skills course such as sewing, cooking, needlework, etc. (Table V, 54) There is no necessary association, however, between the course taken and the income-generating activity.

TABLE V, 53
Earnings Capacity of Respondents by Their Education Level

	Education Level					Total
	None	Some Primary	Completed Primary	Some Secondary	Completed Secondary	
None	293	706	92	35	5	1131
	25.9	62.4	8.1	3.1	0.4	
	55.7	47.0	40.7	47.3	21.7	48.1
Less than Q500.-	83	277	27	5	1	343
	24.2	66.2	7.9	1.5	0.3	
	15.8	15.1	11.9	6.8	4.3	14.6
Q500 - 999 -	48	172	34	7	2	263
	18.3	65.4	12.9	2.7	0.8	
	9.1	11.5	15.0	9.5	8.7	11.2
Q1,000 - 1,999.-	41	154	16	4	1	216
	19.0	71.3	7.4	1.9	0.5	
	7.8	10.3	7.1	5.4	4.3	9.2
Q2,000 - & More	61	243	57	23	14	398
	15.3	61.1	14.3	5.8	3.5	
	11.6	16.2	25.2	31.1	60.9	16.9
Total	526	1502	226	74	23	2351*
	22.4	63.9	9.6	3.1	1.0	

* One respondent with university level education is not shown.

TABLE V, 54
Respondent's Weekly Earnings Compared to Their Participation in Special Training Courses

	Weekly Earnings			Total
	None	Less than ₱2,000	₱ 2,000 & More	
No Training Courses	1025 49.4 90.5	731 35.3 88.9	317 15.3 79.6	2073 88.1 252
One Domestic Skills Course	97 38.5 8.6	85 33.0 10.3	70 27.8 17.6	252 10.7 10
Two or More Domestic Skills Courses	5 50.0 0.4	0 0.0 0.0	5 50.0 1.3	10 0.4 17
One Non-Domestic Skills Course	5 29.4 0.4	6 15.3 0.7	6 35.3 1.5	17 0.7 2352
Total:	1132 48.1	822 34.9	398 16.9	2352

Crostabulations between earnings generated at home with fertility and between earnings generated away from home with fertility reveal no strong linear relationships between the variables. 34/ A regression of total weekly income (TOTWEEK) with the number of live births (LIVEBABY) of the respondent gave a correlation coefficient of -0.05, at a significance level of 0.009, indicating that there was a very slight inverse relation, significant at $< .05$. 35/

Likewise, there were no linear relations between type of work activity per work locale and earnings, i.e., remunerated only at home, works away only, etc. 36/ Work away from home did not result in higher incomes for the majority of women. The percentage earning ₱1,000 or more was nearly identical for those who worked away, compared to those who worked at home. (Table V, 55) This indicates that work performed at home by rural women represents an effective maximization of their work opportunity and earning power.

34/

See unpublished tables, GUASCAH BY TOTHOME BY LIVBTIP and GUASCAH BY TOTAWAY BY LIVBTIP.

35/

See Appendix 2, Correlation Matrices, LIVEBABY WITH TOTWEEK.

36/

See TASAPART BY TOTWKSC, significant at 0.0000.

TABLE V, 55
Weekly Income Generated Away from Home

Away from Home Weekly Earnings Only	One Activity	Two Activities	Total
None	11 100.0 3.3	0 0.0 0.0	11 3.1
Less than ₦ 500.-	90 96.8 26.9	3 3.2 12.5	93 25.9
₦500 - 999.-	80 88.9 23.9	10 11.1 41.7	90 25.1
₦1,000 - 1,999.-	63 92.6 18.8	5 9.4 20.8	68 18.9
₦2,000 & More	91 93.8 27.2	6 6.2 25.0	97 27.0
Total	335 93.3	24 6.7	359

Earnings and Family Income Differentials: A major finding of the survey is that the earning potential of any respondent (in a given week) is strongly associated with the economic position of her family. There is an inverse relation between per capita family income and respondents earning less than ₦1,000 (US\$8.00) and a direct relation between per capita family income and respondents earning ₦1,000 or more during the reference week. (Table V, 56) As family income level rises, the proportion of those earning less than ₦1,000 falls, and the proportion of those earning ₦1,000 or more increases. ^{37/} Thus, respondents from families with high incomes are predisposed through family assets, resources, attitudes or whatever to engage in work which produces higher monetary returns. The wealthier the family, the more probable it is that respondents who engage in remunerative work will contribute substantially to the family income. The poorer the family, the more limited is the respondents' earning power. The respondent's individual fate is irrevocably tied to that of her family, particularly in the case of female heads of household whose earnings constitute the primary income source.

^{37/}

A regression analysis of respondents' total weekly income (TOTWEEK) with per capita family income (PERCAPIN) gave a correlation coefficient of 0.1348, significant at 0.0001. This means that only .13 o/o of variance is accounted for by the linear regression of earnings and income. Since cases with no income and no earnings were included, this regression analysis is not an accurate reflection on the relationship between earnings and income.

TABLE V, 56
Per Capita Family Income Level Compared to Respondent's
Total Weekly Earnings

Per Capita Family Income	Weekly Income of the Respondent		
	₦ 1 - 999.-	₦ 1,000 & More	Total
₦1,000 - 19,999.-	370	265	635
	58.3	41.7	
	62.8	43.4	52.9
₦20,000 - 39,999.-	122	151	273
	44.7	55.3	
	20.7	24.7	22.8
₦40,000 & More	97	195	292
	33.2	66.8	
	16.5	31.9	24.3
Total	589	611	1200
	49.1	50.9	

Certain activities by their very nature produce higher monetary returns, but these activities often require infusions of capital, technical know-how, access to markets, etc. Tables V, 57 and V, 58 report the mean weekly earning per activity performed at home and away from home, as well as the mean total weekly income of all respondents engaged in any particular activity and the mean annual incomes (per capita) of those respondents' families. Since an individual's earnings may vary from week to week, the mean earning per activity is felt to be the most reliable index of earning potential.

These data show that respondents engaged in a particular activity share a collective fate in terms of their income-generating potential. Regression analysis between mean weekly earnings (at home) and the mean of the per capita family income per activity performed at home gave a correlation coefficient of .89 (Simple R), significant at <.001. This means that nearly 80 o/o ($R^2 = .796$) of the variance is accounted for by the direct linear relationship between mean income earned at home per activity and the mean of per capita family income. Therefore, there is a strong positive correlation between income generated at home per activity and the income levels of families whose women did the activity.

A similar regression analysis between the respondents' mean total weekly earnings and the mean of the per capita family income per activity performed at home gave a correlation coefficient of .87, significant at <.001, which means that 75 o/o of all variance ($R^2 = .75$) can be attributed to the direct linear relationship between respondents' mean earnings and their families' mean annual income. A similar regression analysis based on activities performed away from home was not significant.^{38/} The strong positive relation means that women pursuing a particular activity at home share a group fate and that their families do also.

38/

No significant correlation was found among these variables for activities performed away from home, possibly due to the fact that the number of cases under consideration (nine) is too small to obtain significant correlations in a regression analysis.

TABLE V, 57

Arithmetic Means of Earnings From Activities Performed At Home and Total Weekly Earnings of the Respondent and Family Income (Per Capita) by Activity Performed During the Reference Week

Activities ^{a/}	Mean per Activity			
	Weekly Earnings At Home Only	Total Weekly Earnings (quaranies)	Per Capita Family Income (quaranies)	Number of Cases ^{c/}
Sale of Farm Produce	2,158.9	2,648.2	37.080	495
Food Preparation for Sale	993.0	3,040.2	35.990	151
Spider-Web Lace (<u>Nanduti</u>)	730.3	1,149.7	43.940	16
<u>Ahó Poi</u> (cloth weaving & embroidery)	461.6	1,028.5	21.090	28
<u>Poyvi</u> (weaving)	571.4	1,821.4	48.020	14
Other weaving	769.3	1,464.7	28.502	15
Clothing Construction	353.1	1,647.2	27.170	128
Processing-Manioc Starch	635.8	2,423.5	17.940	26
Processing-Cheese	433.6	1,343.2	32.410	731
Processing-Cigars	506.0	2,150.5	21.830	63
Processing-Candles	187.1	2,192.5	20.420	14
Butchers	9,745.5	10,027.3	92.380	11
Grocers ^{b/}	4,591.7	5,389.7	54.960	200
Manufacturing (straw prod.)	358.4	573.8	16.410	20
Services (<u>curanderas</u> , <u>herbalists</u> , <u>parteras</u> , etc.)	546.0	717.0	26.530	10

a/ Only those activities which include 10 cases or more are included in this table

b/ Earnings are reported on Gross Earnings.

c/ The total number of remunerated activities performed was 1322.

The total number of respondents engaged in any kind of remunerated work at home was 1094, or an average of 1.2 activities per respondent.

TABLE V. 58
Arithmetic Means of Earnings From Activities Performed Away From Home
and Total Weekly Earnings of the Respondent and Family Income (Per Capita)
by Activity Performed During the Reference week ^{c/}

Activities ^{a/}	Means per Activity			
	Weekly Earnings Away from Home Only	Total Weekly Earnings (guaranies)	Per Capita Family Income (guaranies)	Number of Cases
Laundress	364.3	1,071.2	16.830	83
Agricultural Wage Laborer	1,383.4	1,746.2	17.670	82
Factory Laborer	2,177.2	2,282.2	45.080	10
School Teacher	4,084.5	4,084.5	89.810	13
Midwife	1,526.9	2,530.0	23.580	13
Market Vendors ^{b/} (Retailers)	5,575.4	6,139.9	29.770	47
Peddler, Ambulatory Retailor ^{c/}	1,853.9	2,009.4	24.990	33
Sale of Own Farm Produce	846.9	2,009.9	25.830	27
Sale of Home Processed Goods	1,280.9	1,829.6	27.190	51

a/ Only those activities which include 10 cases or more are included in this table.

b/ Earnings are reported as Gross Earnings.

c/ Regression analysis were not significant at $<.001$ for these activities performed away from home.

Thus, the earning power of a woman is directly related via the income generating activity she performs to her family's economic position. High earnings are associated with high family income. Women from more affluent families have greater earning power than do other women. It is highly unlikely that respondents from low-income families will be able to markedly improve their earning power without developing new job skills or obtaining capital to begin other types of businesses. The potential earnings level of the activities poor women engage in appear to be rather limited. Their limited earning power is due to structural conditions, not personal failings, i.e., "lack of initiative" and "laziness" and similar epithets often used to describe the behavior patterns of the poor.

Rural women have few means of transcending their economic parameters within the rural environment. Upward mobility through marriage is a time-honored way in which some women better their position, i.e., by physically removing themselves from the conditions which reinforce the cycle of poverty. Prostitution is another, especially when coupled with migration to an urban area, but it is by no means always a successful venture. In Paraguay migration of women has been directed towards Asunción and the bordering countries, especially Argentina. Young women are disproportionately represented in this migratory flow. ^{39/} These are not usually viable alternatives for rural housewives, since they are

^{39/}

Francis P. Gillespie, "Demographic Change in Paraguay," draft version of Ph.D. dissertation, Chapter V, Table 12; and Centro Paraguayo de Estudios Sociológicos, "Estudio de la Migración Interna al Área de Asunción." Tomo 2. "Resultados" (Asunción, Paraguay: Centro Paraguayo de Estudios Sociológicos, 1973).

locked into their roles as mates and child rearers and have restricted mobility and limited economic possibilities.

The activities available to rural women for income-generating purposes impose internal and external constraints such as the time required to complete the activity, the market value of the product, the availability of raw materials, and existing transportation and marketing infrastructures. The most successful ventures were those with guaranteed local markets whose supply of raw materials was more or less constant. One of the most profitable businesses run by rural women is small grocery stores (almacenes). Grocery stores constituted 15.1 o/o of all money-making ventures among FEMRURAL respondents. Such operations, while they satisfy a status need, are not necessarily sound money-making ventures and often are shortlived. 40/ Women from the poorest strata are very unlikely to acquire sufficient capital to open even a small almacén, although having an almacén is a goal for which many rural families strive.

Another highly remunerative activity performed by respondents who worked at home was the sale of farm and animal products. 37.4 o/o of all money-making activities were of this type. Garment construction and preparation of food stuffs (candies, typical breads and sweets, etc.) represented 9.7 o/o and 11.4 o/o, respectively, of remunerated activities rural women performed on their premises.

These findings have implications for development assistance programs seeking to augment rural incomes and diffuse new skills and technology among rural women. The fact that family income levels (annual) and respondents' earning power (weekly) are so closely related means that the persons most capable of repaying loans are probably the persons least in need of credit. Also, the persons with sufficient leisure time to explore new possibilities by participating in training courses, etc., are also probably those who are already experiencing a higher than average standard of living. The more an assistance program seeks to ensure the success of a project, i.e., by identifying persons who can guarantee a return on the investment, the more it distances itself from the rural poor. Credit programs and technical assistance may even exacerbate the earnings gap and hence not contribute to the redistribution of rural incomes. Furthermore, technical packages which require additional labor inputs may seriously stretch the physical capacity of the participants. The probable result is a high drop-out rate. One is reminded of attempts by agricultural extension agents working with rural women to encourage processing of soybeans for home consumption. Rural women reportedly are unenthusiastic about adding additional responsibilities to their work load and often express a preference for commercially processed goods. This often observed preference for labor-saving processed products such as fideos (noodles) may also have a serious detrimental nutritional impact.

Viewed in terms of mean annual family incomes (per capita) of less than \$25,000, the poorest women were those who worked in home manufacture (ahó póf and straw products) and in home processing of manioc starch, cigars, and candles, and those who worked away from home as agricultural laborers, laundresses, peddlers and midwives. 41/

D. Participation Profiles

Comparison of crop cycle participation, economic activity patterns and social participation of FEMRURAL respondents reveals that activity groups can be identified. This analysis shows that respondents who engage in one type of economic activity are likely to participate in other areas of

40/

An analysis of patente records (business licenses) in two Paraguayan municipalities revealed that many of the small grocery stores were capitalized at less than \$2,000. See Judith Fincher Laird, "A Study of Income Structure in Two Paraguayan Towns" (Asunción, Paraguay: USAID/Paraguay, Market Town Survey, January 12, 1978).

41/

Families whose respondents were inactive, i.e., did not contribute monetarily to the family, tended to be poorer than those families whose respondents worked for remuneration. Therefore, the mean earnings per activity performed in Tables V, 58 and V, 59 are higher than for the sample as a whole.

activity. Conversely, inactivity breeds inactivity. Inactivity in one dimension of activity is replicated in other areas.

Agricultural typologies of the families are closely associated with the economic activity patterns of respondents. Table V, 59 compares four crop cycle participation profiles of respondents with their economic activity pattern during the reference week. The most striking difference is between families who engaged in agricultural cultivation during the 1977-78 agricultural year and those who did not. Women from the latter households were the most economically inactive of all groups studied (26.6 o/o). When they worked, they tended to perform remunerative work (57.5 o/o). These families had the lowest percentage of unremunerated family workers of all the groups. Respondents from families who had crops were divided into crop cycle participants and non-participants, for purposes of comparison with families who had only subsistence-type crops. There were important differences between these three groups also. Fewer crop cycle participants than respondents from any other group were economically inactive during the reference week (8.3 o/o). This group, however, had the largest proportion of unremunerated family laborers of any of the group studied (39.2 o/o) and the lowest percentage of remunerated workers (52.4 o/o).

TABLE V, 59
Crop Cycle Activity Status(Agricultural Year) of Respondents Compared
to their Economic Activity Pattern (Reference Week)

Economic Activity Pattern (Reference Week)	Families Who Cultivated (1977-78)				Total
	Crop Cycle Participants	Non-Participants Crop Cycle	Subsistence Crop Only	Families Do Not Cultivate(1977-78)	
Some Remunerative Work	573	312	187	227	1299
	44.1	24.0	14.4	17.5	
	52.4	56.4	61.7	57.5	55.4
Only Unremunerated Family Labor	429	151	79	63	722
	59.4	20.9	10.9	8.7	
	39.2	27.3	26.1	15.9	30.8
Not Economically Active	91	90	37	105	323
	28.2	27.9	11.5	32.5	
	8.3	16.3	12.2	26.6	13.8
Total	1093	553	303	395	2344
	46.6	23.6	12.9	16.9	

A slightly larger proportion of non-participants than participants in the crop cycle performed some kind of remunerated activity during the reference week, 56.4 o/o; and a smaller proportion did unpaid work. But nearly twice as many non-participants as participants were economically inactive, 16.3 o/o. Respondents whose families had only subsistence crops were most likely to engage in remunerative work, 61.7 o/o, than any other profile group, although respondents whose families did not cultivate also had very high proportion of remunerated workers, 57.5 o/o, as did non-participants from families with crops, 56.4 o/o.

The more active the respondents were during the crop cycle, i.e., the more tasks they performed, the more likely they were to be economically active during the reference week. Women who did more than the average number of tasks (four or more) during the crop cycle were more likely to be remunerated and less likely to be unremunerated or inactive than were women who performed less than four tasks, or about the average work load for crop cycle participants. (Table V, 60/

TABLE V, 60
Field Work by Economic Activity Status During the Reference Week

Economic Activity Pattern	Number of Tasks		
	1 - 3	4 & More	Total
Remunerated Work	394	178	572
	68.9	31.1	
	51.4	54.6	52.4
Unremunerated Family Workers	303	126	429
	70.6	29.4	
	39.6	38.7	39.3
Not Economically Active	69	22	91
	75.8	24.2	
	9.0	6.7	8.3
Total	766	326	1092
	70.1	29.9	

There were also differences between the economic participation patterns of crop cycle participants from male and female-headed households. Female heads were slightly more inclined to engage in remunerative work than were other respondents and were decidedly under-represented among the ranks of the economically inactive. Only 5.1 o/o of female heads who participated in the crop cycle were economically inactive during the reference week, compared to 12.4 o/o of other respondents. (Table V, 61)

TABLE V, 61
Crop Cycle Participants (Agricultural Year) of Respondents By Economic Activity Pattern For Male and Female Headed Households

Economic Activity Pattern (Reference Week)	Male-Headed Households	Female-Headed Households	Total
Only Remunerative Work	553	74	627
	88.2	11.8	
	48.5	53.6	49.1
Unremunerated Family Workers	446	57	503
	88.7	11.8	
	39.1	41.3	39.4
Not Economically Active	141	7	148
	95.3	4.7	
	12.4	5.1	11.6
Total	1140	138	1278
	89.2	10.8	

The majority of unremunerated family workers were from families receiving their principal income from farming, 39.2 o/o, and agricultural labor, 28.6 o/o. 17.1 o/o were from families whose primary income source was manufacturing. 42/ 60.3 o/o of all these families received less than \$20,000 in per capita family income in 1977; 23.7 o/o received \$20,000 to \$39,999; and 16.0 o/o, \$40,000 or more. An analysis of the income source of these families by the per capita family income level shows that the proportion of unremunerated workers from families dependent upon agricultural wage labor did not vary much by income level. Among farming families, the proportion of unremunerated workers fell with every increment in income, i.e., poorer farm women were more likely to work only as unremunerated workers. Among manufacturing families, however, the proportion of unpaid family workers increased per increment in income level. (Table V, 62)

TABLE V, 62
Family's Principal Income-generating Activity By Per Capita Family Income
Of Respondents Who Did Unremunerated Family Work Only

Principal Income-Generating Activity	Less than \$ 20,000	\$20,000 - 39,999.-	\$40,000 & More	Total
Farming	329 65.5 78.7	105 20.9 64.0	68 13.5 61.3	502 72.4
Manufacture	21 34.4 5.0	22 36.1 13.4	18 29.5 16.2	61 8.8
Agricultural Laborer	32 57.1 7.7	15 26.8 9.1	9 16.1 8.1	56 8.1
Others	36 48.6 8.6	22 29.7 13.4	16 21.6 14.4	74 10.7
Total	418 60.3	164 23.7	111 16.0	693

In addition to their economic participation, 18.6 o/o of FEMRURAL respondents also reported they had engaged in social activities. 90.2 o/o of these respondents participated in either educational or service activities; 4.4 o/o, in recreational activities; and, 5.5 o/o in combinations of the educational, service and recreational activities. Educational activities examined consisted of PTA-type clubs, pre-natal and well-baby instruction, and agricultural extension clubs and mini-courses. Participation in a cooperative was also considered an educational activity. Service groups were church-organized service clubs, neighborhood committees, and charity clubs. 43/ .

42/

Calculations based on the unpublished table, BRANCH BY PERCAPSC, controlling by TASAPART EQ 2. 23.9 o/o of all female heads were unremunerated family workers only, compared to 31.3 o/o of consensual partners and 32.1 o/o of wives.

43/

Unpublished table, PARTVAR BY ATAWAY.

A comparison of socio-educational participation with economic participation reveals that respondents who participated in economic activities are more active in non-economic activities than are women who were economically inactive. Table V, 63 shows that crop cycle participants are more prone to participate in socio-educational activities than are non-participants. Respondents who perform a higher than average number of field work tasks, however, are slightly less active in social activities than are women who perform one to three tasks.

TABLE V, 63
Socio-Economic Participation of Respondents By Number of Tasks
Performed During the Crop Cycle

Socio-Educational Activities	Crop Cycle Participants		Crop Cycle Non Participants	
	1 - 3 Tasks	4 & More Tasks	None	Total
Participants	178 40.9 23.3	62 14.3 19.0	195 44.8 15.6	435 18.6
Non-Participants	585 30.7 76.7	264 13.8 81.0	1059 55.5 84.4	1908 81.4
Total	763 32.6	326 13.9	1254 53.5	2343

Likewise, women who performed market-oriented work during the reference week tend to be active in social activities, and women who were not economically active during the reference week reported a lower participation level in social activities than did either remunerated workers or unremunerated workers. As work status rises, from Not Economically Active, to Unremunerated Family Worker to Remunerated Worker, the proportion of women who participated in social activities rises from 12.5 o/o to 16.7 o/o to 21.2 o/o, respectively. Conversely, the proportion of non-participants falls with each improvement in work status, from 87.5 o/o to 83.3 o/o to 78.8 o/o. (Table V, 64)

The period of reference for social participation was "Ever-Participated," since it was assumed that in the rural environment the fact that a woman had ever participated in socio-educational activities was a reliable index of her "modernity." 81.4 o/o of all respondents had no socio-economic participation. The inference here is that women who perform merely domestic work are not utilizing their leisure time for self-improvement purposes, nor for service to the community. Or, perhaps these women are fully occupied in performing domestic work. 44/

44/

Inactive women are not different from other respondents in age composition, i.e., are not older or younger. The proportion of inactive women per age category (15-29) (30-49) (50 & more), is about the same. Likewise, there are no significant differences per age cohort among women doing remunerative work, nor for those who were only unremunerated family workers. See TASAPART BY GRANAGE, unpublished table.

TABLE V, 64
Socio-Educational Participation Compared to Economic Participation
Patterns

Socio-Educational Participation	Remunerated Workers	Unremunerated Workers Only	Not Economically Active	Total
Participants	275	120	40	435
	63.2	27.6	9.2	
	21.2	16.7	12.5	18.6
Non- Participants	1023	599	280	1902
	53.8	31.5	14.7	
	78.8	83.3	87.5	81.4
Total	1298	719	320	2337
	55.5	30.8	13.7	

Conclusion

Rural Paraguayan women's economic participation and contributions to the economy have been greatly underestimated. Rural women contribute both as unpaid family laborers, primarily in agriculture, and as remunerated workers. Using the most rigid definitions of "economically active" possible, standards which are more exacting than any of those currently in use, the economic participation rate of rural women fifteen years of age and older in the survey would be between 40.5 and 54.5.

The discussion of measurement of economic participation rates demonstrates that rates vary tremendously depending upon the definition of "economically active" one utilizes. The rate of 40.5 includes only women who earned wages equivalent to two eight-hour work days during the reference week, as well as unremunerated respondents who also participated in the crop cycle. Moreover, this rate includes only those women engaged in commercial agriculture. Obviously, the rate would be higher if women who performed tasks related to subsistence-level crops were also included. If 40.5 is taken as the lowest rate, the rate of economic participation of rural Paraguayan women is over three times greater than that calculated from 1972 census data.

About 86 o/o of FEMRURAL respondents were economically active during the reference week. A slight majority, 55.5 o/o, performed at least one type of remunerative work, whereas 30.7 o/o worked only as unremunerated family laborers and 13.8 o/o were economically inactive. 70.9 o/o of all respondents worked only at home, 4.3 o/o worked only away from home, and 11.0 o/o worked in both work locales.

Activity patterns varied considerably by region and by the family's principal income-generating activity. Differences between participation patterns cannot be attributed to the social roles women occupy, nor to their ages, except, perhaps, in the case of female heads. Economic activity patterns are closely associated with per capita family income, as are the earnings of each respondent per activity performed. A respondent's educational level is also associated with her activity pattern. The proportion of unremunerated workers falls as the educational level rises.

64.4 o/o of all economically active respondents engaged in remunerated work, and of these 83.7 o/o reported earnings during the reference week. 67.4 o/o earned the equivalent of two eight-hour days' work. Differences between the earnings levels of respondents cannot be accounted for in terms of linear relations by type of work performed, nor by the age or educational level of the respondent.

A major finding of FEMRURAL is that the earning potential of any respondent is strongly associated with the economic position of her family. Respondents from families with higher incomes are predisposed by their family environment to engage in activities which produce higher monetary returns. The respondent's individual fate is closely linked to that of her family. Regression analysis between mean earnings per activity with the mean annual family income (per capita) per corresponding activity gives a very high coefficient correlation (.89), which means that 75 o/o of all variance can be attributed to the positive linear relation between the variables. That is to say, it is improbable that the respondent will be able to improve her earning capacity substantially without changing her activity pattern. Activities have their own internal and external earnings constraints which effectively limit the amount of money a respondent can earn. Working harder at the same activity, therefore, would probably not produce substantially higher earnings.

This evidence shows that it is very hard for a woman to transcend her particular environment. It is another way of saying that to those that have, more will be given, or, the rich get richer and the poor... are always with us.

Above all, these data show that the market economy is firmly entrenched in rural Paraguay, and penetrates deeply into the social fabric of rural society, affecting, and to some degree, dictating the economic behavior of rural families. Quality of life is directly linked to the cash economy, and earning potential, to the family. A vicious cycle encouraging rural income disparity operates in rural Paraguay. Rural women, especially those who must support their families, are at a double disadvantage since they usually lack sufficient labor resources to be able to farm and are forced to seek their livelihood in the underdeveloped services and industrial sectors. If they are unable to pair up with another adult worker, either through consensual unions, marriage or other living arrangements, the possibilities that they will be able to improve their situation are very slim; indeed. Ironically, those women who work hardest receive less remuneration, especially the elderly.

CONCLUSION

The study focuses upon rural women as individuals and as members of family units. The rural female population is composed of interrelated socio-economic, nationality and demographic groups. Members of these sub-groups have different socio-economic characteristics and these in turn affect the ways in which women participate within rural society, as well as within the family. One cannot generalize about the condition of "the rural woman." There are many types of rural women and they do not share a common fate.

Fifty-four percent of the respondents' families can be classified as low income. The poorest of all families are those headed by women--irrespective of the family's principal economic activity. About sixty-two percent of the families whose principal activity was farming belong to the low-income group. Among farm families, the size of the unit of production is closely associated with income level and is a good gauge of the potential earning capacity of the family. The larger the unit of production, the greater the income-generating potential of the family. Income levels vary by region. The two poorest zones are the Eje Norte and the Ganadero zone. Over 60 o/o of all families surveyed in these two zones earn less than \$20,000 (US\$160) per capita per year. The largest proportions of low-income farm families per zone are found in the Minifundia zone and the Eje Norte.

Low-income families share certain characteristics. They tend to be larger and are more frequently found among disorganized families than are middle and high-income families. In terms of material comforts, sanitation and hygiene, they are less likely than other families to possess adequate cooking facilities, wells for potable water, sanitary toilet facilities and adequate housing.

One manner of defining women is by their combined socio-sexual roles. The principal roles examined here are those of female heads, wives and consensual partners (*compañeras*). The major differences are found between women in male and female-headed households.

Female heads of household constitute a special sub-group within the rural environment. They are distinguished by the simultaneity of the sexual, social and economic roles which impinge upon them. Women-headed households constitute 15.9 o/o of the rural sample and 27 o/o of the urban sample. The proportion of women-headed households in Eastern Paraguay (urban and rural) is estimated at 21.4 o/o. Viewed by zone, the poverty belt which extends across Misiones and Ñeembucú contains the largest proportion of women-headed rural households. The lowest proportions are found in newly-settled colonization zones, areas not characterized by the minifundia agricultural system and social system typical of traditional settlement areas.

The majority of these households are disorganized nuclear families, (or unmarried mothers with their children), 41.0 o/o, and disorganized extended families, 38.0 o/o. About 10 o/o of female heads live alone, and the remaining 11 o/o live in other situations. Women-headed units are more heavily represented in the low-income group than are male-headed units. The mean per capita income of male-headed units is \$36,584 (US\$290) and \$20,825 (US\$165) for women-headed units. Women-headed families also share a lower standard of living, as measured in the value of household possessions, type of cooking and sanitary facilities, source of water supply and housing.

Women-headed households are poorer, smaller, more dependent upon wage labor and less likely to engage in farming than all other rural households. When they engage in farming, they farm smaller plots. Moreover, the structure of work and the division of labor are distinctive in female-headed households. Female heads work harder, i.e., perform more tasks and are more likely to engage in strenuous, distasteful work than other respondents. Children in women-headed units are more often pressed into animal care activities than are other children.

Women are the mainstay of the small animal industry in rural Paraguay. Respondents bear the primary responsibility for swine and poultry care, and their input into cattle raising and dairy production is also substantial. In addition they have the decision-making role in areas in which they are most actively engaged, namely education of their children and animal industry. Put in another way, decision-making responsibilities parallel the sex role division of labor in the rural family.

Another way of classifying women is as producers and reproducers—i.e., by their economic contributions and by their role as reproducers of the workforce.

The Total Fertility Rate of 9.1 estimated from the sample indicates that the respondents are very fertile, and that large families are still the norm in rural areas. Data on the attitudes of respondents towards contraception suggest that rural norms may be changing, although in practice women may be unable to limit family size because they cannot control their own fertility.

Fertility is closely associated with a respondent's age and educational level and with her sexual availability, as well as with the income level of the family, although respondents who are fifty years of age or older with high parity represent a special case. Education is inversely related to high fertility (seven or more live births). There is an inverse relation between family income level and high fertility for women under 50 years of age.

The majority of respondents, 77.7 o/o, use no contraceptives. About 68 o/o of all respondents who use contraceptives rely primarily upon "modern" methods such as orals. Nearly 22 o/o rely upon medicinal herbs, 5.2 o/o on rhythm and withdrawal and 5.5 o/o on lactation and other methods. Of all respondents in the "at risk" group, 15.1 o/o use orals and other modern methods; 2.1 o/o withdrawal and rhythm; 4.9 o/o, medicinal herbs; and 1.2 o/o, lactation and other methods. The public health sector provides contraceptive supplies for about 70 o/o of the respondents; private clinics and doctors, 12.6 o/o; commercial establishments, 11.7 o/o; and other sources, 5.4 o/o. The slight regional variations in contraceptive use may be related to the availability of family planning services.

Women have a limited role in family planning decisions concerning their own fertility. Only about a third of the respondents in male-headed households control their own fertility and about 28 o/o have no control whatever over their own reproductive functions. It appears that some women refused to acknowledge their roles in family planning when interviewed in the presence of their male partners.

Fertility per se does not appear to affect the respondent's participation in commercial and social activities except among women aged 50 and over. Fertility is associated with the way in which a woman participated—which kind of work or social activity she engages in. Remunerated work, for instance, is associated with low fertility and unremunerated work with high fertility.

A major hypothesis of the survey is that families order their priorities in accordance with the constraints of their principal economic activity, and that this ordering is reflected in women's work patterns. The research strategy is predicated upon the assumption that the family situation of rural women conditions their behavior and that this behavior can be measured in quantifiable terms: in the number of tasks performed in connection with animal care, the average number of tasks performed in various work locales, the level of earnings of the respondent and other female family members, etc.

Repeatedly, these assumptions have been proven valid, notably with reference to the activity patterns of respondents from "farm" and "part-time farm" households. Nearly 70 o/o of respondents from "farm" families and only about 57 o/o of those from "part-time farm" families participated in field work, performing an average of about 2.8 tasks each. The behavior patterns of women from different-sized production units is also distinctive. The agricultural activity pattern of respondents from women-headed households is also a case in point. In the intensity of their work effort, as well as in the number of tasks performed, female heads work harder. They often engage in distasteful, strenuous work. Likewise, non-participants in production of their family's principal crop constitute a rural elite. Their families tend to have higher incomes and tend to cultivate more land than do other farm families. These respondents tend to be better educated than other farm women.

A major finding is that respondent's participation in field work is inversely related to land size and to family income. This means that as the unit of production increases, and as family income rises, a respondent's participation in field work can be expected to diminish. Women engage in field work out of necessity and abandon it as soon as the family's resources permit the hiring of labor or purchase of labor-saving machinery, it would appear. Field work participation is higher among poor women, especially female heads, and in poorer regions. Women whose families have labor intensive crops are also more prone to participate.

The age-specific economic participation rate, calculated for women fifteen years of age and older in surveyed households, is 54.5. The crude rate (for all women in these households) is 29.6. No comparable data on the crude rate for all rural women is available from the census data, but the age-specific economic activity rate (for women fifteen years of age and older) calculated from 1972 census data is 13.3. The difference in the rates is attributed to the survey methodology which inquires about the economically productive activities the respondent and other female family members may have performed during the week of reference, rather than asking for their primary occupation, or merely, if they "worked." In 73 o/o of households surveyed, only the respondent worked, and only in 1.8 o/o of these units did another female family member work when the respondent was, herself, inactive. These data indicate that in most rural homes social and economic roles converge in the person of the housewife (*ama de casa*), or the person identified by the selection criteria as the household manager.

The majority of respondents, 86 o/o, were economically active, i.e., performed market-oriented work, during the reference week. Most respondents, 71 o/o, worked only at home. Over half, 59 o/o, of all active respondents performed at least two activities. Moreover, 57 o/o also worked in more than one Branch of Economic Activity. The most frequently performed tasks were animal care and agricultural chores.

56 o/o of the respondents engaged in remunerated work. 31 o/o worked as unpaid family laborers, and 14 o/o were not economically active. Fifteen percent of all respondents worked away from home, but the majority of these, 72 o/o, also engaged in work in work activities at home as well. The average number of tasks respondents performed away from home was 1.1.

These statistics demonstrate that the rural women surveyed participate actively in the rural economy, as paid and unpaid workers. Women's work activities often extend across Branches of Economic Activity, for the tasks they perform are often complementary, i.e., raising poultry and selling eggs. There is no sharp separation of work locale, nor of activities, such as exists in a highly stratified society in which there is specialization of tasks and comprehensive classification systems of work responsibilities and boundaries. The construction industry is a case in point. For the latter situation an "occupational" approach is warranted, but applying classification systems designed for use in studying complex urban-industrial societies to rural populations is highly prejudicial. A principal occupation approach obscures much of the work activities carried out in the informal sector. Most rural women work in the informal sector, as unpaid family laborers, vendors and service workers.

There are significant regional variations in women's economic participation patterns. The highest proportion of remunerated workers by zone is found in the more densely populated and economically diversified Central or Minifundia zone. As observed earlier, one would expect women's participation patterns to reflect the internalized work priorities within the family unit. A respondent's participation is conditioned by the primary income-generating activity of the family. Farm women have low participation in remunerative work; and non-farm women are most likely to engage in remunerated work. Women from farm families are over-represented among unpaid family workers. The highest percentages of inactives are found among retired families and among those living on transfers, as among the elderly. Family income level also influences a respondent's participation pattern. The proportion of paid workers increases as incomes rise, and the proportion of unpaid workers falls as incomes rise.

Choice of work locale appears closely related to the size of the production unit. The proportion of women working away from home falls per increment in the number of hectares cultivated, and the proportion of inactive women also falls as the size of the unit of production increases. These relationships imply that working away from home is not a status plus in rural Paraguay and that women on larger farms are not idle. Perhaps their labor input is required, but as we have seen earlier, the intensity of women's efforts in field work diminishes as incomes and number of hectares cultivated increase. Further examination of the roles of women from high income groups might provide an insight into the future behavior of other rural women as rural incomes rise and small, unprofitable plots get squeezed out.

With respect to earnings, the overwhelming majority, 94 o/o, of respondents engaged in remunerative work reported an income during the reference week. About two thirds of these women earned the

equivalent of two eight-hour days' work. Earnings levels do not appear to be strongly associated with choice of work locale or with socio-demographic characteristics of the respondent (age, social role, educational level, fertility, etc.). But the earnings of a respondent are strongly associated with the economic position of the family. It appears that respondents from families with high incomes are predisposed through family assets, resources, attitudes, experiences or whatever to engage in work which produces higher monetary returns. The poorer the family, the more limited is the respondent's earning power.

These findings reinforce the view of the respondents as rational economic beings who work within the context of their family's labor and economic needs to generate goods and services for the family, participate in decision-making, generate income, and in their capacities as mothers, reproduce the labor force.

Finally, in examining the overlap between economic and social participation, it is noted that respondents who perform one type of economic activity (agricultural or other market-oriented work) are more likely to participate in social activities than are inactive respondents. Inactive women tend to be inactive in more than one realm. Only 18.6 o/o of respondents had ever had any type of socio-educational participation of the types examined in the survey.

Recommendations

1. International agencies, national government institutions and private sector groups promoting women in development activities are urged to direct their programs towards specific components of the rural female population, for the behavior patterns of women from different economic, occupational, educational and familial strata are distinctive. Such groups might include women whose families engage in commercial agriculture, subsistence agriculture or non-agricultural pursuits, as well as women from different income levels and different-sized units of production, depending upon the purpose of the project.
2. Development programs directed at the rural sector should consider women-headed households as a special target group among the rural poor and whenever possible should attempt to incorporate representatives from these households in their projects. Given the fact that women-headed households frequently depend upon wage labor in the agricultural and service sectors and upon commercial and industrial activities as the family's chief source of income, the creation of off-farm employment through credit and training programs would seem indicated. This is no necessary assumption that the female head, herself, would be the ideal participant in such programs, for the majority, or 64 o/o, of female heads in surveyed households are fifty years of age or older. Frequently, there are other females in these families who could benefit from participation in such projects.
3. Ironically, the poorest women and presumably those most in need of assistance, are found among the hardest-working segment of the rural female population. This point has been made repeatedly, especially in reference to female heads of household. If development programs are to incorporate members of this low-income strata it is suggested that supplementary income payments be made to permit their participation.
4. Inactivity in one realm of activity appear to be replicated in other areas. It is more probable that a respondent will participate in socio-educational activities if she already participates in economic activities, especially remunerated ones. It is unlikely that an idle woman will be perceived as a "mover and shaker," or accepted as a natural leader by her peers. The highest compliment which can be paid to a rural woman is that she is guapa, meaning hard-working. Project implementers should seek to recruit women with high activity profiles as participants and leaders.

5. Survey data support the case for regionally-focused assistance programs, since some zones contain a higher proportion of low-income families than others. The Ganadero zone and the Eje Norte zone are the two areas which should be singled out for special attention. Moreover, farm families in the Minifundia zone are also heavily concentrated in the low-income group.

6. The important role of women in poultry and swine production as well as in dairy operations, is well documented in the report. Women should be incorporated in the design and implementation of livestock projects and should be given specialized animal husbandry and veterinary training.

7. Agencies and institutions designing projects for the rural population might utilize data from the survey to gain a better understanding of potential target groups and to help define the parameters of their projects and interests. Survey statistics are essential in determining which populations should be selected for special assistance. Often, more specific in-depth, micro-level case studies are required for project design, implementation and evaluation purposes. For instance, home extension agents studying women's domestic roles and responsibilities would do well to identify typology groups from the survey. Perhaps one would wish to select families along the economic continuum or other "representative" families. By selecting identifiable sub-populations whose socio-economic dimensions and incidence are known, project implementers could better explain any differences in women's behavior. Since the survey provides basic data on socio-economic and demographic characteristics of rural families, its potential use in the definition of sub-populations is by no means confined to studies of women.

The original intention of the study was to combine a socio-economic survey with a series of case studies of "representative" women and families identified from the survey. The case study phase was dropped as overly-ambitious, but the questionnaire was designed in such a way as to provide some data on most of the areas of women's experience, and thereby facilitate the implementation of case studies.

8. It has been observed that women's participation in field work falls with every increment in income and also with every increment in the number of hectares cultivated. It appears that women engage in field work only out of necessity. The programming implication is that projects which seek to increase women's participation in field work may run counter to the aspirations of rural women who seek to lighten their work load and escape from heavy physical labor. Increasing the agricultural production among families with the smallest production units may be putting an additional work burden upon the women of the household, since poorer women from families with small plots of land under cultivation are already the hardest-working segment among rural women. Intermediate technology, i.e., the introduction of labor-saving devices, could be most beneficial in lightening the workload of rural women.

Appendix 1
Confidence Intervals at 95 o/o
Selected Variables (FEMRURAL RURAL SAMPLE)

Variable	Percent Error	Mean and Variation
PERCAPSC (Per Capita Income per Family)	5.7	34,034 ± 1,941
TOTWKSC (Total weekly earnings per respondent)	7.2	2,765 ± 198
NOMEMFAM (Number of members in the family unit)	2.0	6.07 ± 0.12
AGERESP (Age of Respondent)	1.4	42.0 ± 0.6
ROLHOGAR (Role of Respondent)	1.5	15.3 ± 1.5
ATAWAY (Type of work performed)	2.1	64.4 ± 2.1
CONTRACP (Use or non-use of contraceptives)	1.5	85.5 ± 1.5
TASAPART (Economic Activity Pattern)	2.4	
MARSTATU (Marital Status of Respondent)	1.9	67 ± 1.9
TENANCY (Type of Tenancy)	2.0	60.7 ± 2.0
GRPWRKD (Number of hectares cultivated)	4.17	3.65 ± 0.15
GRPDISP (Number of hectares available)	4.48	9.2 ± 0.41
ESTRUCT (Family type)	1.78	75.4 ± 1.8
LANGHOME (Language used at home)	1.77	75.8 ± 1.8
LIVBTHP (Number of live births)	2.8	5.97 ± 0.17

Appendix 2

1. Correlation Matrices

Correlation Coefficients of Means for the following Variables, all of which are significant at 0.001 (F Test) (Respondents who performed remunerative work at home during the reference week)

	TOTWEEK	PERCAPIN	GUAHOME
TOTWEEK	1.0000 (R) 1.0000 (R ²)	0.86669 (R) 0.75115 (R ²)	0.96169 (R) 0.92485 (R ²)
PERCAPIN		1.0000 (R)	0.89198 (R) 0.79562 (R ²)
GUAHOME			1.0000 (R) 1.0000 (R ²)

Definitions of Variables:

- TOTWEEK, Mean of total weekly income per activity of respondents engaged in remunerative work at home
- PERCAPIN, Mean of family income (per capita) per activity of respondents engaged in remunerative work at home
- GUAHOME, Mean of weekly income earned at home per activity of respondents engaged in remunerative work at home

Where R = Correlation Coefficient

R² :: Percentage of variance which can be attributed to the linear relationship between the variables.

Appendix 2

2. Pearson Correlation Coefficients

Controlling by Respondents who performed remunerative work at home during the reference week:

	GUAHOME	TOTWEEK	OTHERW	PERCAPIN
GUAHOME	1.0000 (0) S=0.001	0.7601 (1097) S=0.001	-0.0139 (1097) S=0.323	0.1563 (1092) S=0.001
TOTWEEK		1.0000 (0) S=0.001	0.0134 (1097) S=0.329	0.1447 (1092) S=0.001
OTHERW			1.0000 (0) S=0.001	0.0269 (1092) S=0.187
PERCAPIN				1.0000 (0) S=0.001

Definitions of Variables:

GUAHOME, income earned at home per respondent

TOTWEEK, total weekly income of respondents

OTHERW, total weekly income of other female family members

PERCAPIN, per capita income (per family)

Where, (Coefficient/Cases/Significance)

Note that GUAHOME, TOTWEEK, OTHERW, and PERCAPIN include cases with no income.

3. Pearson Correlation Coefficients

Controlling by respondents who performed remunerative work away from home during the reference week:

	GUAWAY	TOTWEEK	OTHERW	PERCAPIN
GUAWAY	1.0000 (0) S=0.001	0.2957 (2352) S=0.001	0.0183 (2352) S=0.187	0.0120 (2335) S=0.282
TOTWEEK		1.0000 (0) S=0.001	-0.0063 (2352) S=0.380	0.1348 (2335) S=0.001
OTHERW			1.0000 (0) S=0.001	0.0235 (2335) S=0.111
PERCAPIN				1.0000 (0) S=0.001

Definitions of Variables:

GUAWAY, income earned away from home per respondent
 TOTWEEK, total weekly income of respondents
 OTHERW, total weekly income of other female family members
 PERCAPIN, per capita income (per family)

Where, (Coefficient/Cases/Significance)

Note that GUAWAY, TOTWEEK, OTHERW, and PERCAPIN include cases with no income.

4. Pearson Correlation Coefficients

	LIVEBABY	TOTWEEK	PERCAPIN	YEARSE	EDADRES
LIVEBABY	1.0000 (0) S=0.001	-0.0487 (2333) S=0.009	-0.1295 (2333) S=0.001	0.0807 (2333) S=0.001	0.4243 (2333) S=0.001
TOTWEEK		1.0000 (0) S=0.001	0.1348 (2333) S=0.001	-0.0355 (2333) S=0.043	-0.0286 (2333) S=0.083
PERCAPIN			1.0000 (0) S=0.001	-0.0015 (2333) S=0.471	-0.0519 (2333) S=0.006
YEARSE				1.0000 (0) S=0.001	0.2246 (2333) S=0.001
EDADRES					1.0000 (0) S=0.001

Definitions of Variables:

LIVEBABY,	Number of Live Births per Interviewee
TOTWEEK,	Total weekly income of interviewees
PERCAPIN,	Per Capita income (per family)
YEARSE,	Number of years of formal education
EDADRES,	Age of Respondent

Where, (Coefficient/Cases/Significance)

Note that TOTWEEK and PERCAPIN include cases with no income, and LIVEBABY and YEARSE also include cases with no live births and no formal education.

Appendix 2

5. Pearson Correlation Coefficients

	FAMSIZE	HASDISP	HASWRKD	PERCAPIN
FAMSIZE	1.0000 (0) S=0.001	0.0264 (2351) S=0.001	0.1365 (2352) S=0.001	-0.1370 (2335) S=0.001
HASDISP		1.0000 (2351) S=0.001	0.3837 (2351) S=0.001	0.1462 (2334) S=0.001
HASWRKD			1.0000 (0) S=0.001	0.3377 (2335) S=0.001
PERCAPIN				1.0000 (0) S=0.001

Definitions of Variables:

FAMSIZE, Number of members in the family
 HASDISP, Hectares Available
 HASWRKD, Hectares Cultivated
 PERCAPIN, Per Capita Income (per family)

Where, (Coefficient/Cases/Significance)

Note that HASDISP and HASWRKD include all cases, not only those with land available or cultivated.
 PERCAPIN includes cases with no income.

The Urban Sample

The size of the small urban sample does not warrant detailed analysis, but the frequency run data is useful in describing the continuum of women's economic participation and in highlighting some of the differences between urban and rural women and their families.

-- A smaller percentage of urban families in the five towns surveyed have per capita annual incomes of less than \$20,000 (US\$160) than among rural families, 32.9 o/o compared to 53.6 o/o. 23.6 o/o of urban families have incomes between \$20,000 and \$39,999, and 34.2 o/o earn \$40,000 or more. 4.6 o/o report no income.

-- Housing is much better for urban families than for the rural families surveyed. 30 o/o of urban dwellings are ranchos, compared to 58.7 o/o of rural dwelling units. Substantial dwellings constitute 69.5 o/o of the urban sample, and only 32.1 o/o of the rural.

-- Female headed households are more common among the urban sample, but the proportion of consensual unions is smaller. 27.0 o/o of urban households are headed by a woman and consensual unions constitute 9.3 o/o of all households. 59.1 o/o of the sample households contain married partners.

-- Urban respondents are more likely to work away from home, 21.9 o/o, compared to 15.3 o/o of the rural respondents.

-- The female economic activity rate, including unremunerated family workers, among the urban sample is 52.5, or in the same range as for rural women.

-- The mean family size for the urban sample is 4.7, compared to 5.8 for the rural sample.

-- Spanish is used more among the urban sample, than among rural households surveyed. 17.7 o/o of the urban families speak only Spanish at home; 38.4 o/o speak a mixture of Spanish and Guaraní; and only 43.9 o/o are mono-lingual speakers of Guaraní.

-- Almost all urban families have some kind of toilet facility. Less than one percent do not. 46.4 o/o have improved outhouses and 46.4 o/o have rustic toilets.

-- Modern cooking facilities are much more common among urban dwellers. 29.5 o/o have modern gas, kerosene or firewood cookers; 35 o/o have fogons.

-- The mean age of the interviewees was approximately the same in both samples. 43.6 in the urban and 41.5 in the rural.

-- The most striking difference between the two samples is that only 11.4 o/o of urban families list farming as their principal income source. 27 o/o of urban families surveyed are engaged in manufacturing; 21.9 o/o, commerce; 13.5 o/o, services; 7.6 o/o, wage labor.

-- Urban respondents are better educated. Only 16.0 o/o have no formal education, compared to 22.3 o/o of the rural respondents.

-- Urban respondents are less likely to work as unremunerated family workers, 13.1 o/o, and are more inactive economically, 27.8 o/o, than rural women. The proportion of remunerated workers, 59.1 o/o, is approximately the same as for the rural sample.

-- The mean weekly earning of all urban respondents is ₦2,796, compared to ₦1,373 for rural sample. In both cases women with no earnings are also included in the calculations.

N.B. Although some crosstabulations for the urban variables were significant at $<.001$, none of these data are presented in this report.

Appendix 4

Guide to the Use of FEMRURAL Archives

A complete set of FEMRURAL data is deposited with the Census Department of the Paraguayan Bureau of the Census. All data are indexed by volume and topic and are organized as follows:

1. Frequency Run, FEMRURAL (rural), with alphabetical and locational indexes for 347 variables.
2. Frequency Run, FEMRURAL (urban), with alphabetical and locational indexes for 347 variables. (Crosstabulations)
3. Master Listing of all variables with definitions of all variables and values.

Crosstabulations

4. Per Capita Income Data
5. Socio-Demographic Characteristics (by region, occupation, crop specialization, tenancy, hectares cultivated, etc.)
6. Differences between Male and Female-Headed Households
7. Decision Making and Animal Care Responsibilities
8. Crop Cycle Participation (2 volumes)
9. Socio-Economic Participation of Respondents and Other Female Family Members
10. Earnings of Female Family Members
11. Means & Regression Analyses of Selected Data

The software package used to process the data (the Statistical Package for the Social Sciences) automatically prints the values of all statistical tests performed by the program, regardless of whether or not they are appropriate for the particular table. The reader is cautioned not to accept uncritically the values printed for statistical tests other than the Chi Square level of Significance (for crosstabulations) and the F Test (for regression analysis).

SELECTED BIBLIOGRAPHY

Government of Paraguay Publications

Brizuela de Ramirez, Fulvia. Fecundidad Diferencial. Asunción, Paraguay: Dirección General de Estadística y Censos, Marzo, 1979.

República del Paraguay, Ministerio de Hacienda, Dirección General de Estadística y Censos. Censo Nacional de Población y Viviendas de 1950. Manual para el Empadronamiento. Asunción, Paraguay: Dirección General de Estadística y Censos, 1950.

-- . Censo de Población y Viviendas 1962. Asunción, Paraguay: Ministerio de Hacienda, Dirección General de Estadística y Censos, 1966.

-- . Censo Nacional de Población y Viviendas 1972. Asunción, Paraguay: Ministerio de Hacienda, Dirección General de Estadística y Censos, Julio, 1975.

-- . Censo Nacional de Población y Viviendas, 1972. Manual del Empadronador. Asunción, Paraguay: Dirección General de Estadística y Censos, 1972.

-- . Encuesta de Hogares por Muestra. Mano de Obra. Asunción, Paraguay: Dirección General de Estadística y Censos, 1977.

-- . Manual del Empadronador. Asunción, Paraguay: Dirección General de Estadística y Censos, 1962.

República del Paraguay, Consejo Nacional de Progreso Social. Congreso Nacional. Familia, Infancia y Juventud. Documento Final. Asunción, Paraguay: Consejo Nacional de Progreso Social. UNICEF. Setiembre, 1971.

República del Paraguay, Facultad de Ciencias Médicas, Universidad Nacional de Asunción. "Integración de la Enseñanza en Salud Materno Infantil y Reproducción Humana". Asunción, Paraguay: Facultad de Ciencias Médicas, 1977. Mimeo.

República del Paraguay, Ministerio de Justicia y Trabajo, Dirección General de Recursos Humanos, Dirección de Promoción Social de la Mujer Trabajadora. "Proyecto de Fortalecimiento de Desarrollo de las Actividades de la Dirección de Promoción Social de la Mujer Trabajadora, 1977-1980." Mimeo.

República del Paraguay, Presidencia de la República, Secretaria Técnica de Planificación. "Aspectos Socio-Demográficos de la Población del Municipio Gral. Bernardino Caballero." Asunción, Paraguay: STP, División de Programación de Población y Recursos Humanos, Agosto, 1977. Mimeo.

Reports and Studies Prepared For and By International Agencies

Anderson, John E.; Morris, Leo; and Monteith, Richard. "Contraceptive Prevalence in Paraguay. Analytical Report." Atlanta, Ga.: Public Health Service, Center for Disease Control, May 1978. Mimeo.

Buvinić, Marya; and Youssef, Nadia H.; with Vol Elm, Barbara. "Women-Headed Households: the Ignored Factor in Development Planning." Report submitted to AID/WID, Grant AID/otr-G-1593, Washington, D. C.: International Center for Research on Women, March, 1978. Mimeo.

Ewart, Ned D. "A Descriptive Ethnography of Paraguay." Asunción, Paraguay: USAID/Paraguay, March, 1977. Mimeo.

Findley, Sally E., and Orr, Ann C. "Patterns of Urban-Rural Fertility Differentials in Developing Countries: A Suggested Framework." Prepared for the Agency for International Development, Santa Barbara, Ca: Center for Advanced Studies, July, 1978. Mimeo.

Laird, Judith Fincher. "A Study of Income Structure in Two Paraguayan Towns." Asunción, Paraguay: USAID/Paraguay, Market Town Survey, January 12, 1978. Mimeo.

Organización de Estados Americanos. "La Mujer en la Fuerza de Trabajo en la América Latina." OEA/SER. k/XII. 5, Doc. 10. Washington, D. C.: Secretaría General de la Organización de los Estados Americanos, 12 de Setiembre de 1975. Mimeo.

Riegelman, Mary Ann, *et al.* "A Seven Country Survey on the Roles of Women in Rural Development." Washington, D. C.: Development Alternatives, December, 1974. Mimeo.

Programa de Desarrollo Integrado Urbano y Rural del IX Departamento de Paraguari. "Encuesta Socio-Económica en la Población Meta de Productores Minifundarios." Informe elaborado por el Grupo Técnico Paraguay/O E A, con asesoría de la Oficina de Programación del Desarrollo de O E A, a través del Centro Interamericano de Enseñanza Estadística (CIENES), Paraguari, Paraguay: Marzo, 1979. Mimeo.

Schoux, Christina Hussey. "Situación y Papel de la Mujer Campesina en el Paraguay. Informe Preliminar." Asunción, Paraguay, 1975. Mimeo.

United States Agency for International Development, Lima, Perú, Rural Development Division. "Situación de la Mujer Campesina." 4 vols. n.d. Mimeo.

van Haeften, Roberta K., and Canton, Douglas D. "A Strategy Paper for Integrating LDC Rural Women into their National Economies." Prepared for the AID Percy Amendment Subcommittee on Agriculture, Nutrition and Rural Development. Department of State, Agency for International Development. Washington, D. C., May 13, 1974. Mimeo.

Papers

Cebotarev, E. A. "La Organización del Tiempo de Actividades Domésticas y no-Domésticas de Mujeres Campesinas en Latinoamérica." Paper presented to the IUPERJ Seminário a Mulher na Força de Trabalho na América Latina, Rio de Janeiro, Brazil, 23-2 November, 1978. Mimeo.

Deere, Carmen Diana. "The Agricultural Division of Labor by Sex: Myths, Facts and Contradictions in the Northern Peruvian Sierra." Paper presented to the panel on "Women: The New Marginals in the Development Process." Joint National Meeting of the Latin American Studies Association and the African Studies Association, Houston, Texas, November 2-5, 1977. Mimeo.

D'Souza, Stanislas. "Sex-Based Stereotypes: Sex Biases and National Data Systems." Paper presented to the IUPERJ Seminário a Mulher na Força de Trabalho na América Latina, Rio de Janeiro, Brazil, 23-26 November, 1978. Mimeo.

León de Leal, Magdalena, y Deere, Carmen Diana. "La Proletarización y el Trabajo Agrícola en la Economía Parcelaria: Estudio de la División del Trabajo por Sexo en dos Regiones Colombianas." Paper presented to the IUPERJ Seminario a Mulher na Força de Trabalho na América Latina, Rio de Janeiro, Brazil, 23-26 November, 1978. Mimeo.

Vera, F. David and Laird, Judith. "Metodología Empleada en la Encuesta del Perfil Socio-Económica de la Mujer Rural en el Paraguay." Paper presented to the IUPERJ Seminario a Mulher na Força de Trabalho na América Latina, Rio de Janeiro, Brazil, 23-26 November, 1978. Mimeo.

Articles

Leon de Leal, Magdalena, y Deere, Carmen Diana. "Estudio de la mujer rural y el desarrollo del capitalismo en el agro colombiano." Demografía y Economía, XXI, 1(34), 1978, 4-37

Knaster, Meri. "Women in Latin America: The State of Research, 1975." Latin American Research Review, Vol. XI, 1 (April, 1976), 3-74.

Rodriguez, Germán. "Family Planning Availability and Contraceptive Practice." International Family Planning Perspectives and Digest, Vol. 4, No. 4 (Winter 1978), 100-115.

Schmidt, Steffen W. "Political Participation and Development. The Role of Women in Latin America." Journal of International Affairs, Vol. 30 No. 2 (1976-77), 243-260.

Silva, Juan Andrés, et al. "Participación de la Mujer en la Fuerza de Trabajo." Revista Paraguaya de Sociología, Año 13, No.36 (Mayo-Agosto, 1976) 143-171.

Theses and Dissertations

Gillespie, Francis Patrick. "Constancy and Change: A Demographic Ecological Study of Paraguay, 1950-1972." Ph. D. Dissertation, University of Texas at Austin, 1977. Mimeo.

Wattiez de Cuevas, Rita. "Oportunidades Curriculares en el Area Técnica para la Mujer Rural Paraguaya." (Plan de la Tesis) Unpublished Thesis Plan, Asunción, 1978. Mimeo.

Other Publications Consulted

Arnold, Adlai F. Foundations of an Agricultural Policy in Paraguay. Praeger Special Studies in International Economics and Development. New York: Praeger Publishers, 1971.

Blaxall, Martha and Reagan, Barbara, editors. Women and the Workplace. Chicago: The University of Chicago Press, 1976.

Brizuela de Ramirez, Fulvia, and Schoemaker, Juan. "Tendencia de la Población Económicamente Activa Femenina desde 1950 hasta 1972." Tomo II. "Participación de las Mujeres en la Actividad Económica en el Paraguay." Asunción, Paraguay: Centro Paraguayo de Estudios Sociológicos, 1978. Mimeo.

Castagnino, Darío. La Mujer en el Contexto Socio-Económico y Jurídico del Paraguay. Asunción, Paraguay: Centro Paraguayo de Estudios de Población, n.d.

Centro Paraguayo de Estudios Sociológicos. "Estudio de la Migración Interna al Area de Asunción." Tomo II. "Resultados." Asunción, Paraguay: Centro Paraguayo de Estudios Sociológicos, 1973. Mimeo.

Centro Paraguayo de Estudios de Población. "Perfil Estadístico de la Mujer Paraguaya." **Asunción, Paraguay: Centro Paraguayo de Estudios de Población, Diciembre 1975. Mimeo.**

Galeano Luis, A. "Las Mujeres como Proveedoras de Fuerza de Trabajo en el Paraguay, 1972." Vol. III. "La Participación de las Mujeres en la Actividad Económica en el Paraguay." **Asunción, Paraguay: Centro Paraguayo de Estudios Sociológicos, 1977. Mimeo.**

Kocher, James E. Desarrollo Rural, Distribución del Ingreso y Disminución de la Fecundidad. Mexico: Editorial Limusa, 1976.

Liga Paraguaya de los Derechos de la Mujer. "Primer Congreso Nacional de la Mujer. 19 al 26 de Julio de 1975." (Report of Proceedings). **Asunción, Paraguay, n.d. Mimeo.**

Pedrero, Mercedes. "La Participación Femenina y su Presupuesto de Tiempo: Notas sobre Problemas Relativas a Conceptos y Captación." Mexico: Centro Nacional de Información y Estadísticas del Trabajo, Secretaría del Trabajo y Previsión Social, 1976. Mimeo.

Rivarola, Domingo M., et al. La Población del Paraguay. **Asunción, Paraguay: Centro Paraguayo de Estudios Sociológicos, 1974.**

Smith, Timothy G. "Paraguayan Communication Patterns." Merio Park, California: SRI International, June 1978. Mimeo.

Vittone, Luís. La Mujer Paraguaya en la Vida Nacional. **Asunción, Paraguay: Dirección de Publicaciones, Imp. Militar, 1968.**

Wellesley Editorial Committee, Editors. Women and National Development: The Complexities of Change. Chicago: University of Chicago Press, 1977.

PREALC. Situación y Perspectivas del Empleo en Paraguay. Santiago, Chile: Oficina Internacional del Trabajo, 1975.

Survey Methodology and Computer Handbooks

Freedman, Deborah and Mueller, Eva.. "Cuestionario Estandar de Temas Económicos y Demográficos." Centro de Estudios Demográficos, Universidad de Michigan, 26 de abril de 1976. Mimeo.

—. A Multi-Purpose Household Questionnaire: Basic Economic and Demographic Modules. Prepared for the World Bank and the United States Agency for International Development. Washington, D.C. : International Bank for Reconstruction and Development, 1977.

Klecka, William R. , Nie; Norman H.; and Hull, C. Hadlai. Statistical Package for the Social Sciences. Primer. New York: McGraw-Hill Book Company, 1975.

Nie, Norman H. , et al. Statistical Package for the Social Sciences. New York: MacGraw-Hill Book Company, 1975.2nd edition.

Bibliographies

Buvinić, Mayra. Women and World Development. An Annotated Bibliography. Washington, D.C. : Overseas Development Council, 1976.

Rihani, May. Development: As If Women Mattered: An Annotated Bibliography With a Third World Focus. Overseas Development Council. Occasional Paper No. 10. Washington, D.C. : Overseas Development Council, 1978

Tinker, Irene, and Branssen, Michele Bo. , editors. Women and World Development. Washington, D.C. : Overseas Development Council, 1976.

Impreso en la Dirección General de Estadística y Censos