

WEP 2-21/WP.178

WORLD EMPLOYMENT PROGRAMME RESEARCH

Working Paper

POPULATION AND LABOUR POLICIES PROGRAMME*
Working Paper No. 178

**IMPROVING THE ACCOUNTING OF WOMEN WORKERS
IN POPULATION CENSUSES:
LESSONS FROM LATIN AMERICA**

by

Catalina H. Wainerman

* Prepared with the financial support of the **United Nations Population Fund (UNFPA)**

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ISBN 92-2-108324-1

First published 1992

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FOR ROSE K. GOLDSSEN
UNFORGETTABLE TEACHER
BELOVED FRIEND

Preface

Improving the measurement of women's labour force activity is a topic which the ILO has been very concerned with over the years. This has included a number of publications that have dealt with the practical issue of why it is that working women often remain invisible in official labour force statistics. This has included results from methodological studies in Costa Rica, India and Egypt (see for example, Anker, Khan and Gupta, 1987; Anker and Anker, 1988; Anker, 1990) and review papers (e.g. Dixon-Mueller and Anker; Anker, 1983).

The present publication by Catalina Wainerman makes an important contribution to this subject by reporting results from a special survey carried out in Argentina and Paraguay where labour force information were collected for almost 10,000 persons. Wainerman undertook a special purpose methodological survey to ascertain the reasons why female labour force activity is usually undercounted by national surveys and censuses. Similar to my own earlier work, different questionnaires (typical census questionnaires and a more detailed questionnaire with a series of more detailed follow-up questions) are used and results are presented for different reference periods (one week or current labour force; one year or usual labour force) as well as for different labour force definitions based on differing amounts of work-time in the reference period. Unlike my earlier work, only one labour force definition is used (although Wainerman's results are analysed by employment status); Wainerman uses less detailed questions in her non-census questionnaire; and the effect on the reporting of labour force activity of the gender of interviewers and respondents is not systematically investigated by Wainerman. On the other hand, Wainerman investigates some issues that were not covered in my own studies, such as the importance of training and sensitising of interviewers to the reporting of women's labour force activity; covering urban as well as rural areas; and collecting labour force data for males as well as females. And, of course, the present working paper covers two Latin American countries as compared to the Asian and Middle Eastern countries covered in my own studies - a very important point, since one is interested in drawing any general conclusions for developing countries as a whole.

Wainerman's results confirm how virtually important the questionnaire is in identifying women workers. Simply put, it is critical to ask specific and detailed questions about labour force activities if women labour force participants are to be identified. (Interestingly, Wainerman also finds similar results for older and younger men - an expected result, in my opinion, as these extreme age groups undoubtedly also suffer from misperceptions and marginalisation as regards economic/labour

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force activity.) Wainerman's results also confirm that the more rural, informal and part-time the work activity women perform, the more working women are missed by poorly constructed questionnaires and poor training.

It is worth repeating the optimistic statements Wainerman makes at the end of her paper where she says that "the producers of [female labour force activity] information used by policy-makers, researchers and planners have the chance of diminishing it" and she further reports on the ways in which the 1991 Argentinian census was changed in order to better measure women workers. The evidence is building up both on the extent to which female labour force activity is under-reported in the Third World and on the ways in which this can be rectified; Wainerman's work significantly adds to this literature.

Richard Anker
October, 1991

Executive Summary

This monograph summarises the findings of empirical research in Argentina and Paraguay specifically designed to improve the accuracy of the measurement of the female labour force on population censuses. Its ultimate aim was to help grant women workers the same chances as men of being counted in labour statistics. The research was guided by two objectives. On the one hand, we wanted to assess the effects upon the enumeration of women workers of three possible sources of under-reporting: the type of procedure of data collection on the activity condition of the population (questionnaire and interviewer training), the length of the reference period, and the length of the minimum working time required from people to be considered economically active. On the other hand, we also wanted to design and to test the adequacy of alternative census procedures after the 1982 ILO recommendations for gathering statistics on the labour status of the population. Although centred on women, the research also included men.

The study was conducted in two Latin American countries, Argentina and Paraguay. More specifically, it was conducted in two urban areas, specifically the city of Posadas (the capital of the Province of Misiones) in Argentina and the city of Asunción (the capital of Paraguay), and two rural areas, Leandro N. Alem and Piribebuy, two predominantly rural localities based on subsistence economy in Argentina and Paraguay respectively.

In each of the four localities, three highly controlled experimental surveys were conducted on comparable household samples. One of the surveys (the "CENSAL" survey) reproduced the usual census procedure (a single item to investigate a person's "activity condition" and a short period of interviewer training), with a short (one week) reference period. In the other two we used an alternative questionnaire and training procedure, with a short reference period in one case (the CENEP-Year survey). The same conceptual definition of economic activity was used in the three surveys, one which follows the 1982 ILO recommendation quite closely. The emphasis of the study was on activity-inactivity rather than employment-unemployment status.

The study consistently produced evidence that the usual Latin American population censuses give a fairly valid portrait of the male labour force but a quite invalid one of the female labour force. This is much more so in rural than in urban areas and more so in the less as compared to the more developed country. The study proved that these censuses give a fairly adequate portrait of full-time, salaried, formal workers. It showed that the type of questionnaire, interviewer training, length of reference period, and length of the minimum working time requirement are indeed responsible for the (sex-differential) underenumeration of female workers. Of the four factors, the questionnaire and the length of the minimum working time requirement proved to have the greater effect, so much so that a fairly high coverage of the labour force may be obtained even with the usual short training of census enumerators and a short reference period.

Acknowledgements

This working paper summarizes the results of a study I carried out with the efficient co-operation of Martín Moreno and the financial support of the Ford Foundation (1985-1987). It is the last stage of a research project addressed to improving the censal measurement of the female labour force. I initiated the project jointly with Zulma Recchini de Lattes a decade ago at the request of the Economic Commission for Latin America and the Caribbean (ECLAC). At other stages the project received financial assistance from The Population Council. The preparation of this report was done while I being a senior researcher for the National Council of Scientific and Technical Research (CONICET) at the Centre for Population Studies (CENEP) in Argentina. The assistance of Georgina Binstock in the preparation of the final manuscript has been most valuable. Among many friends and colleagues who have contributed in one way or another to this work, I should like to mention especially the following: Ana María Botta, Cynthia Pok, and Julio Testa from the National Institute of Statistics and Censuses (INDEC) and Susana Aparicio and Lilia Chernobilsky from the Centre for Labour Studies and Research (CEIL) of Argentina. Arturo León from the Economic Commission for Latin America and the Caribbean (ECLAC) of Chile deserves a special mention for his inspiring and acute comments. To all the people and institutions mentioned I should like to express my gratitude.

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CHAPTER 1

INTRODUCTION

Anyone walking through the commercial areas of Mexico City, Lima, or Quito will be immersed in a crowd of street peddlers --women, as well as men and children-- endlessly offering their merchandise in the streets and markets. A casual observer, driving through the roads of the Caribbean islands or passing through the Bolivian Altiplano, will see women, together with men and children, feeding pigs or working in the fields to prepare the land for planting and harvesting. The traveller might also see women spinning or canning goods that later will be taken to market. It is not difficult to observe the existence of working women. Yet, for a researcher or planner to know the real size of the female labour force through official statistics is impossible, even when the censuses are designed to record all the workers who, irrespective of sex, contribute their labour to the production of economic goods and services.

The inaccuracy of female labour force statistics, especially in developing countries, is a commonplace among experts in the field. Population censuses underenumerate females' economic contributions for two reasons: first, the specific ways that women are positioned in the labour market and, second, the characteristics of the censal procedures. Both factors are related to cultural assumptions concerning the sexual division of labour.

In this monograph I will present the results of a study designed to improve the accuracy of the censal measurement of the female labour force. Its ultimate aim was to grant female workers the same chances as men of being counted in labour statistics. Martín Moreno and I conducted the fieldwork in the rural and urban areas of two Latin American countries, Argentina and Paraguay. We had twofold specific goals: firstly, to assess the effects on the reporting of female workers of three possible sources of underenumeration: (a) the types of procedures of data collection (basically types of questionnaire and interviewers' training), (b) the length of the reference period, and (c) the length of the minimum working time requirement, and secondly, to assess the adequacy of alternative census instruments designed to record the economic activity of the population after the recommendations of the ILO (1983). Although the study focused on female labour, we also included male workers because the comparison between sexes sheds additional light on the results. Also, some sectors of the male population are under-reported by current censuses.

In this first chapter I will review the major conceptual and technical problems underlying the censal underenumeration of female workers, provide empirical evidence for the sex-differential underenumeration of workers by Latin American censuses of the seventies and eighties, and comment on the recently issued international recommendations regarding labour statistics for the censuses of the nineties. The following chapters contain a description of the study design, the socio-

economic characteristics of the context where the study was conducted, and the results.

Why a book on female rather than on female and male labour force measurement?

Why devote a study to the measurement of economic activity of women rather than to the population without sex differentiation? The question is a valid one because, among other reasons, the data gathering instruments used by population censuses have until now been designed without reference to either sex, in accordance with international recommendations. In other words, there is no section in the census questionnaires (or in the household surveys) specifically designed to measure the economic activity status of women as there is, indeed, to assess their fertility. Thus, the section on activity status refers to males and females equally and seldom are different instructions given for questioning one or the other sex.

The justification for this apparently "sexist" work is that the accuracy of the censal measurement of the labour force is related to differences by sex. Ultimately, this is due to cultural reasons, or more specifically, to the socially shared ideas about the sexual division of labour. These ideas are embedded in the conceptual definitions of economic activity and labour force, in their operational translation into data collection instruments (census questions and interviewers' training), in the characteristics of the labour behaviour of women, and in women's own perceptions of the nature of their activities.

Before elaborating on these assertions, I wish to make clear that women do not constitute the only sector of the population undercounted as members of the labour force. The younger and older sectors of the population (irrespective of sex) also tend to be ignored even though they carry out observable economic activities (i.e., students or retirees who engage in activities classified as economic). Although this study does not explicitly address these other sectors, some of the conclusions we reached do in fact have implications for them.

The social construction of the division of labour between the sexes that prevails in most known societies assigns the leadership of production to men and of reproduction to women. In addition to domestic activities, however, women also engaged in activities defined as economic, and women are compelled to devise means to articulate their performance of both roles. Because of this, as well as because of fewer opportunities for formal education and training for the world of productive work, it is more frequent for women to work part-time, seasonally, in activities which are difficult to differentiate from domestic ones, in the more traditional sectors of the economy, in family enterprises without pay or on own-account basis, or in the household or family unit. Researchers encounter other difficulties in rural areas, especially in the agricultural sector, difficulties which derive from the very characteristics of agricultural activities. These activities are conducted in household units which integrate consumption and production, making these processes often difficult to distinguish. These

factors lead many women not to perceive their economic activity as such but as part of the homemaker's duties or the "help" they owe to other productive members of the household, namely fathers or husbands. Hence, in certain sectors, though performing the same activities as men, women see themselves as homemakers who are economically inactive according to the censuses, whereas men perceive themselves as workers who are economically active according to the censuses.

In most respects the labour behaviour of women and men is different. In fact, in most known societies, the males who are in the economically active stage of the life cycle remain (employed or unemployed) in the labour market from entry to retirement, save exceptional situations such as illness, death, war, or economic recession. During the most active years of the life cycle, their behaviour is relatively independent of educational level, family situation (in terms of marital status, number and age of children, and household composition), place of residence (urban or rural), and even of the economic structure of the society. In fact, in most of the countries for which records exist, the proportion of males between 15 and 64 years of age in the labour market exceeds 80 per cent in a variety of occupations and employment status.

The homogeneity of economic participation of males contrasts with the enormous diversity found among females within and between countries. In the eighties such disparate figures for female activity rates were 71 per cent in China, 61 per cent in Czechoslovakia, 54 per cent in Sweden, 27 per cent in Brazil, 24 per cent in Costa Rica, 6 per cent in Egypt and 3 per cent in Pakistan.¹ Unlike men, the labour history of many women registers several entries and exits from the market, usually associated with points of change in the life cycle, such as marriage, pregnancies, and school entrance of the last child. Also unlike males, the level of education, the presence of a husband or companion in the home, the number of children, and residence in an urban or rural setting do indeed make a difference to women and the probability of entry into the labour market. In general, the market selectively recruits working women with higher educational levels, without husbands or companions (single, separated or divorced, and widowed), and without children. And those women who are recruited are given access to a limited number of occupations and occupational categories within a few sectors of the economy. Women are the majority among domestic servants, nurses, and teachers, occupations which bear a similarity to their nurturing roles.

It is because of these characteristics of the labour behaviour of women, which are closely related to ideas about the sexual division of labour shared by people in charge of the design and collection of statistics, data collectors and respondents themselves, that this behaviour is poorly measured and usually underestimated by censuses. The underestimation does not affect every female worker equally; it varies with the degree of invisibility of certain occupations and employment status. The underenumeration is greater in occupations perceived as part

¹ Data from UN (1986, Table 26).

or an extension of household duties, such as the preparation of lunch for the workers of an agricultural enterprise, "aid" to husbands in the attendance of a grocery store or a candy and cigarettes stall, or the carrying out at home of one part of a sequence of tasks required in the garment industry. Invisibility is high among workers in activities that are not registered in the accounting system of an enterprise, as is the case of the unpaid family workers or the self-employed women in the traditional sectors of the economy. Visibility is greater, instead, among women employed in salaried activities in the modern sectors of the urban economy.

Empirical evidence of sex-differential underenumeration

For the 1970 round of Latin American population censuses, Zulma Recchini de Lattes and I jointly collected abundant empirical evidence of the sex-selective underenumeration of the labour force. We compared activity rates obtained by censuses and by (more valid) household surveys collected around the same time in various countries, using the same conceptual definition of labour force, the same length of reference period, and the same minimum working time requirement. The censal underenumeration, high among women and low among men, was higher among workers in the agricultural sector, unpaid family workers, and the less educated.

For example, the 1970 population census of São Paulo (the most developed, urbanised and industrialised region of Brazil) underenumerated 18 per cent of female workers but only 3 per cent of male workers, more females occupied in agricultural activities (68 per cent) than in all other activities (10 per cent), and more unpaid family workers (84 per cent) than salaried females (8 per cent). In the Northeast region (the most backward of Brazil) the same census underenumerated 53 per cent of female workers (three times as many as in São Paulo) but a mere 4 per cent of male workers. Again, the female underenumeration was higher among agricultural workers (68 per cent) than among the rest (36 per cent) and among unpaid (88 per cent) than among salaried workers (30 per cent). The 1974 Guayaquil (Ecuador) census underenumerated 27 per cent of all female workers but only 7 per cent of male workers and many more females with no schooling (31 per cent) or with only primary education (35 per cent) than those with the highest educational level (15 per cent). In Bolivia, the 1976 population census underenumerated 30 per cent female workers --practically one-half (49 per cent) of all rural residents-- but not one male worker. In Colombia, the 1973 census underenumerated 23 per cent of all female workers --43 per cent among rural residents and 19 per cent among urban ones-- but only 5 per cent of all male workers.

The situation did not change substantially by the 1980 round of censuses of the region. With variations in size across different countries, the sex-differential underenumeration persisted. In comparison with the household surveys, the 1980 Panamá census underenumerated 18 per cent of all female workers and only 7 per cent of all male workers. The corresponding figures for the 1980 São Paulo (Brazil) census were 11 and 1 per cent; and for the 1980 census of Greater Buenos Aires (the

largest, more developed and industrialised urban area in Argentina), 11 and 2 per cent. Tables 1.1 and 1.2 recap several 1970 and 1980 censuses of the region. They indicate the size of the censal undercounting for each country by sex and age group and by several other characteristics. The activity rates on which the undercounting was calculated are contained in Tables T1 to T9 in Appendix of Reference Tables.²

Reasons for female underenumeration: Conceptual and technical problems

Why is it that the characteristics of the labour behaviour of women affect the underenumeration of their participation in the labour market? On the one hand, the nature of the conceptual definition of "economic activity", hence, of "economically active population" skews the enumeration. (I include in this definition the length of the reference period and minimum working time required from a person to be considered economically active). On the other hand, technical reasons embedded in the operational translation of "economic activity" into items on the census questionnaire and its application by the interviewers influence census results. I will now address both the conceptual and the technical problems.

The definition of labour force

Starting in the fifties, the Latin American and Caribbean censuses were designed following the international standards issued by the United Nations Statistical Commission and by the Interamerican Statistical Institute. With respect to the economic characteristics of the population, these standards were grounded in the ones issued by the International Labour Organization (ILO). They referred exclusively to conceptual matters and said nothing about their operational translation into items on the censal questionnaire.

Until the eighties, the definition of the "economically active population" in use by censuses all over the world was, with minor variations, the one adopted by the Eighth International Conference of Labour Statisticians in 1954. The definition follows the "labour force approach", one which investigates the economic characteristics of the population (above a certain minimum age) on the basis of current activity status, i.e., during a brief (one week) reference period close to the census collection date. According to this definition, the "economically active population comprises all persons of either sex who furnish the supply of labour for the production of economic goods and services during the time-reference period chosen for the investigation". (United Nations: 1967). Persons defined as active are further classified as employed or unemployed, i.e., working or seeking work for pay or profit. Homemakers, students, rentiers, and permanently sick, retired, or pensioned people are defined as economically inactive. These

² The data are from Recchini de Lattes and Wainerman (1986) and from Wainerman and Moreno (unpublished report, 1983).

international recommendations have been severely criticized (Hauser: 1974; Horstmann: 1977; Blacker: 1978, 1980; Seltzer: 1978; PREALC: 1979; Beneria: 1982; Dixon: 1982; Anker: 1983).

First, "activity status" is too loosely defined as "the relationship of each person to current 'economic activity'". Second, it has been pointed out that "economic activity" has been defined by following the model of developed economies and the behaviour of salaried, stable, full-time workers. Such a definition is inadequate to capture a sizable part of the labour force in developing countries where labourers are more likely to work seasonally rather than year-round, to be unemployed rather than formally employed, and to engage in a fluid pattern of diverse and shifting economic activities. Finally, the definition lacks conceptual neatness. The distinction between economic and non-economic (mostly domestic) activities is not based on clear criteria; the criteria are not payment or non-payment (for the activity of unpaid family workers is counted as economic), it is neither the nature of the activity, or the context where the work takes place (for domestic work is considered economic if paid but non economic if unpaid and done for the consumption of the worker's household, whereas agricultural own-consumption production is economic even though it is done by unpaid workers producing for their own household). It seems that the distinction is based on a set of arbitrary, non-rational conventions established by the economists to estimate the national income. For instance, why should the production of raw material used for cooking be considered economic but the preparation and elaboration of the same raw material for consumption not? According to some authors, this is not an example of arbitrariness but rather evidence of the socially shared ideas regarding the sexual division of labour. Blacker (1980) argues,

Let us take, for example, the chain of processes leading to the production of a loaf of bread; the harvesting of the wheat, the threshing and winnowing of the grain, the milling or pounding of the grain into flour, the kneading of the flour into dough, and the baking of the dough into bread. Where, it may be asked, in this series of actions does economic activity begin and end? I suggest that in practice the answer is determined not by the intrinsic nature of the operation, but by the point at which it is performed by "housewives" --i.e., by female unpaid family workers. (p.72).

Anker (1983) makes the point even more clear in the following paragraph:

Notice that those activities where women are active (such as subsistence livestock, free gathering, and food processing) are usually not considered to be labour force activities. It is almost as if the criteria were made on the basis of existing knowledge on male and female activity patterns. (p.714).

In sum, what I am suggesting is that even though the definitions of "activity status" and "economic activity" have not made explicit sex-distinctions, the problems and inconsistencies they suffer affect women and men differently (as well as young and old people). (It should be noted that I am not discussing here whether domestic work should or should not be counted as economic and incorporated into the national accounting. I am discussing whether the criteria for demarcation are or are not neat).³

The short time reference period adopted by the censuses of the last decades also contributes to the underenumeration of female workers for, as was already discussed, women move in and out of the labour market throughout their active lives more often than men. Horstmann's analysis (1977) of the 1971 Indonesian population census showed that the number of workers of both sexes counted when the reference period was the previous week included only one third of those counted when the reference period was the previous season. The differences were noticeably greater among females than among males, regardless of employment status. Among employees the differences in enumeration using different

³ Around the mid-seventies a hot debate was launched regarding the role played by this type of work in society, its productive or unproductive nature, and its capacity to generate value. (See, among others, Harrison: 1973; Seccombe: 1974, 1976; Coulson, Magas and Wainwright: 1975; Gardiner: 1975; the Conference of Socialists Economists: 1976; Humphries: 1977; Collectif Remois: 1977; de Barbieri: 1978; Beneria: 1981). So far there is no agreement about whether this kind of work produces goods, is productive, fulfils a need in capitalist economies or could be replaced by alternative institutions. It is agreed, however, that domestic work plays a vital role in (daily) maintaining and preserving and in (generationally) reproducing the labour force, and hence, that domestic work should be taken into account when analyzing overall social production.

The debate has recently produced abundant empirical research recognising the need to assign importance and value of unpaid domestic and household work for the sake of development and labour market planning and women's status enhancement. Irrefutable evidence on the importance of this kind of work, mostly done by women, comes from the analysis of Goldschmidt-Clermont (1987) of forty evaluation studies conducted in Third World societies on the contribution of domestic and related activities to the satisfaction of human needs. The conclusion of the study is that, if economic value were given to unpaid household activities, such as caring for children, the aged, the ill and the handicapped, cooking, serving, cleaning up, laundering, ironing and mending, water fetching and firewood collection, national income estimates would be increased by somewhere between 25 and 50 per cent.

In response to this evidence, the United Nations System of National Accounts is under review. Among other topics, the possibilities and obstacles of further expanding the coverage of subsistence activities beyond the present SNA limits (IARIW: 1986) will be examined.

reference periods reached 48 per cent for females and barely 1 per cent for males; among employers, 91 and 41 per cent; among own-account workers, 22 and 5 per cent; and among unpaid family workers, 106 and 50 per cent, respectively. Standing (1978) reports similar results for two labour surveys conducted in Iran in 1971 which discovered differences between female activity rates of about 50 per cent using two different time reference periods. Evidence supporting similar conclusions is mentioned by Durand (1975); Mueller (1974); PREALC (1979); Dixon (1982); De Vries Bastiaans (1983); CEPAL (1982).

The former international definition of "economically active population" used in censuses prior to 1982 does not specify a minimum of working time except for unpaid family workers who must work at least 15 hours or one third of the weekly hours to be counted. It is as if these were the only workers assumed to work less than full-time, hence ignoring all other cases of part-time work, which is more frequent among females than among males. The absence of specification of a minimum working time on the part of international recommendations has led to a variety of approaches by the censuses of the seventies and eighties. Some countries required most of the week, others part of the week down to a minimum of a single hour, and many others did not state any time period. As it is conceptually different to include in the labour force only full-time workers or to add part-time and even occasional workers, the absence of recommendations in this respect weakens international comparisons, especially for the female (as well as the young and old) labour force.

Census questions and censists

In this section I will deal with two technical aspects of the census collection: the items used to gather information on activity status and the censists who administered them. During most of the 1970s and 1980s, Latin American and Caribbean censuses used a single question of the form "What did you do during last week?", followed by various response alternatives indicating activity or inactivity ("worked", "did not work but was seeking job", "homemaker", "retired", etc.). This format influences the interviewer to present the alternatives together, which in turn makes the interviewees choose one alternative. As most censuses ask solely for the main activity, married women (also young students and retired people) engaged in economic activities tend to declare themselves as economically inactive (Lopes: 1981).

Many censuses use terms like "job", "employment", and "for pay or profit" which influence interviewees to equate economic activity with formal, paid, full-time activity. In a national survey conducted in Kenya, Anker and Knowles (1978) found that the activity rates for married women aged 20 to 49 years varied from about 20 per cent to about 90 per cent depending on whether the "key" word used was "job" or "work". Out of the 90 per cent who classified themselves as economically active in response to the word "work", 20 per cent responded that they were referring to domestic work when asked to specify the kind of activity they engaged in.

Anker (1983) attributes the strong differences between female (but not male) activity rates obtained by the Indian censuses of 1961, 1971, and 1981 to these "key words". He hypothesizes that the extremely low 1971 female activity rates result from the phrasing "What is your main activity?", whereas the high 1961 rates are related to a question which includes examples of activities: "Are you working as a 'cultivator', 'agricultural labourer', working at 'household industries' or working under any other category other than the three mentioned?" The assumption is that in the 1971 census many women considered "homemaking" to be their main activity and that the examples contained in the 1961 phrasing contributed to a better enumeration because they made explicit the meaning of "work". The question used in the 1981 census, closer in form to the one used in 1971 than in 1961, said: "Worked any time at all last year?" The female activity rates for the 1961, 1971 and 1981 censuses were 28 per cent, 12 per cent and 51 per cent. What Anker stresses, unlike previous researchers, is that the difficulties and ambiguities involved in the distinction between the "key" words used in censuses lead interviewees to provide unreliable and non comparable information.

Little can be expected from censists in the sense of overcoming the effects of the format and the phrasing of the censal questions. In Latin America most censists are badly trained, poorly paid or not paid at all, lacking in motivation and supervision, and generally reluctant to study and even to read the instruction manual. Last but not least, they bring pre-conceptions (shared by the interviewees themselves) to the interviews about the suitability of certain activities for women and men. This seems to be not only the experience in Latin America but also in other parts of the world (see, among others, D'Souza: 1980; Baster: 1981; Dixon: 1982; Pittin: 1983; Anker: 1983). This is the reason why Blacker (1980) suggests that:

Unless enumerators are explicitly instructed to ask about the possible economic activity of women in the household in the same way as about that of men, they may tend automatically to enter women as homemakers, particularly if the women are married... (pp.71-72).

Acknowledgement of the problem

The low quality of the measurement of the female labour force and some of its causes have been acknowledged for some time (Bancroft: 1958), but it was not until the last decade that awareness grew about the extent of the problems (Hauser: 1974; Durand: 1975; Standing: 1978; D'Souza: 1980; Baster: 1981; Wainerman and Recchini de Lattes: 1981; Beneria: 1982; Dixon: 1982; Fong: 1982; Safilios-Rothschild: 1982; Anker: 1983; Anker, Khan and Das Gupta: 1987; Zurayk: 1983; Hamad: 1984; Leon: 1985). The enumeration of female workers has been the central topic of several seminars and conferences, among others, the seminar on "Women in the labour force in Latin America" held in Rio de Janeiro in 1979 (IUPERJ: 1979); the regional workshop on "The measurement of rural employment and income" held in Ixtapan de la Sal (Mexico) in 1982 (PREALC-CEPAL: 1982); the technical

seminar on "Women's work and employment" held in New Delhi in 1982, where a full session was devoted to measurement problems (Fong: 1982); the seminar on "Women, work and demographic questions" held in Tashkent in 1983 (ILO: 1984); and the regional seminar on "The 1990 censuses: economic characteristics of the population" held in Buenos Aires in 1986 (INDEC:1987).

In Latin America, researchers from PREALC and ECLAC, among others, have concentrated on the measurement of employment in rural areas and in the urban informal sector. (For rural employment, see PREALC: 1979; Torrado: 1978, 1981; Paraguay, DGEC: 1979; Buvinic: 1982; Deere and León de Leal: 1982, ECLAC: 1982; Klein: 1983; Pisoni: 1983; Wainerman and Moreno: 1987. For the measurement of the informal sector, see Arizpe: 1977; Souza and Tokman: 1976; Kritz and Ramos: 1976; Tokman: 1977; PREALC: 1978; Marulanda: 1979; Raczynski: 1979; Pina Riquelme: 1981). Outside the region similar questions have arisen, especially in relation to African and Asian countries. (Boserup: 1975; Durand: 1975; Sethuraman: 1976; Shaefer and Spindel: 1976; Mazumdar: 1976; Horstmann: 1977; Anker and Knowles: 1978; Blacker: 1978, 1980; UNDP: 1980; Fong: 1980; D'Souza: 1980; Baster: 1981; Beneria: 1982; Dixon: 1982; Safilios-Rothschild: 1982; Pittin: 1983; De Vries Bastiaans: 1983; Zurayk: 1983; Hamad: 1984; Vanek, Johnston and Seltzer: 1985).

International organizations that issue standards for the collection of labour statistics have taken up these issues only sporadically until the eighties. In 1966, in preparation for the census round of the seventies, the United Nations Statistical Commission called attention to population sectors which are difficult to classify. The commission stressed that:

Particular attention should be given to groups which may be especially difficult to classify, such as female unpaid family workers in agriculture, young persons seeking work for the first time, and persons receiving pensions consequent upon retirement from one job who are, at the same time, working at another job. Census publications should provide information on the rules which are applied in the classification of such groups. (United Nations, 1967, para. 289).

But it was not until 1978, barely two years before launching the census round of the eighties, that the United Nations explicitly acknowledged the difficulties involved in enumerating female workers. The warning read as follows:

The stereotype that women are usually confined to home-making duties can result in a serious loss of data on women's economic activity in many countries where such activity is becoming increasingly significant. Unless enumerators are explicitly instructed to ask about the possible economic activity of the women in the household exactly as they do for men, they may tend automatically to enter women as home-makers, particularly if the women are married, without asking whether they participate in any other activity. This tendency seems to be most pronounced in rural areas where most men are engaged in agriculture

and the contribution of their wives and daughters as unpaid family workers in agriculture is easily overlooked, but it can also occur in urban areas where modern labour-force conditions are changing the traditional economic role of women. Great care should be taken, therefore, to impress upon enumerators the importance of investigating the economic activity of women. (United Nations, 1978, para. 2190).

Two years later, in 1980, in a document prepared at the request of the United Nations, D'Souza (1980) singled out the sex-based stereotypes and biases as one of the major factors hindering the quality of census measurements by influencing women to perceive themselves and influencing others to perceive them as homemakers rather than labour force members.

The sensitivity of the United Nations was not an isolated phenomenon. The activities developed during the United Nations Decade for Women (1975-1985) contributed to a general awareness of the situation of women. The Decade also contributed to a general surge in research on women's issues in general and women's statistics in particular that might have influenced the revision of the definition of economic activity incorporated by the Thirteenth Conference of Labour Statisticians.

Prospects for the nineties

The conceptual criticisms and the empirical evidence that have accumulated, especially during the last fifteen years, point to the conceptual and technical inadequacy of population censuses to enumerate women who supply labour to the economy, mainly in developing countries. The inadequacy is even more obvious in the rural agricultural and urban informal sectors. The recognition of this state of affairs and of the need to review and to enlarge current norms and recommendations to improve the adequacy of labour statistics came at the Thirteenth International Conference of Labour Statisticians held by ILO in 1982.

The report prepared for the Thirteenth Conference (1982) contained recognition of "...the need to re-examine the existing concepts and methods so as to improve the conceptualisation and measurement of the participation of women in economic activities both in and outside the home". (para. 12). In order to face the problem, it was suggested that:

To obtain more accurate statistics on women's participation in economic activity, it is important not only to control available statistics for possible effects of sex-based stereotypes and sex biases but also to conduct, wherever necessary, specialised surveys to identify objectively the size, nature and sources of the biases involved and to develop appropriate methods of reducing them. It may be necessary to conduct specially designed activity/time-use surveys, to experiment with different choices of respondents and interviewers, and to test the significance of other conceptual and operational variations. (para. 230).

The recommendations that emerged from the Conference modify the definition of labour force used until the eighties in a number of aspects. The major ones are:

(a) the explicit inclusion of own-account workers who produce for self-consumption producers of economic goods and services within the labour force, whenever this activity makes "an important contribution to the total consumption of the household";

(b) the elimination of the minimum working time criterion (one third of a normal working week) for everyone, including unpaid family workers, and the adoption of a single hour of activity to qualify as active;

(c) the use of two reference periods (one week and one year) to collect information on the "current" and the "usual" active population.

Women constitute the largest population sector of those who will be most affected by the changes mentioned above, especially by the explicit inclusion of self-consumption producers in the labour force. This kind of production is not only a rural phenomenon; in Latin America, as indicated by Jelin (1976), it has acquired important dimensions in urban areas. Even though the modifications improve the conceptual definition of the labour force, a certain vagueness remains regarding a number of aspects.

The ILO resolution defines the "economically active population" as:

...all persons of either sex who furnish the supply of labour or the production of economic goods and services as defined by the United Nations systems of national accounts and balances, during a specified time-reference period. According to these systems, the production of economic goods and services includes all production and processing of primary products, whether for the market, for barter or for own consumption, the production of all other goods and services for the market and, in the case of households which produce such goods and services for the market the corresponding production for own consumption.

According to the current United Nations system of national income account statistics (SNA), production of goods and services covers three types of non-market activities for own consumption (in addition to all market activities). They are:

(a) production of primary products (growing field crops; producing eggs, milk and food; hunting animals and birds; catching fish, crabs and shellfish; cutting firewood and building poles; collecting thatching and weaving materials; burning charcoal; mining salt; cutting peat; etc.);

(b) processing of primary commodities by their producers (threshing and milling grain; making butter, ghee and cheese; slaughtering livestock; curing hides and skins; preserving meat and fish; making beer, wine, and spirits; crushing oil-seeds; weaving baskets and mats; making clay pots and plates; weaving textiles; making furniture, etc.);

(c) production of fixed assets (construction of dwellings and farm buildings; building boats and canoes; clearing land for cultivation; etc.).⁴

Although the reference to the SNA definition of "economic activity" introduces greater precision, vagueness remains concerning the criterion to distinguish economic and non-economic activities and the meaning of "important" contribution to the household's consumption. It remains difficult, if not impossible, to establish the distinction between "repairing" one's own house (defined as non-economic) and "improving" and "constructing" one's own house (defined as economic). Nor is it evident why the "processing of primary products for preservation" (such as making butter, cheese, or preserves) is considered economic but cooking products from the family farm for personal consumption (i.e., processing of primary products for immediate consumption) is not.

On the other hand, the definition of what constitutes "an important contribution to the total consumption of the household" is not sufficiently precise. In fact, "important contribution" is not translated (and it is very difficult to translate) into conceptual and operational criteria that establishes the "importance" in a valid way. One could ask: important for which type of household structure?, for which consumption level?, measured with objective or subjective parameters?

These questions, as well as the absence of recommendations for the operationalisation of concepts, may become reasons for questioning the validity of future enumerations of the labour force. So far, attempts to test the new recommendations in order to improve the censal recording of the female labour force have been conspicuously scarce. Two such attempts were produced within the context of the ILO, one within the Bureau of Statistics (Mehran: 1985; Trigueros Mejia: 1986), the other within the World Employment Programme (Anker: 1983; Anker, Khan and Gupta: 1987; Anker and Anker: 1989).

The research by the Bureau of Statistics is part of the preliminary work on a manual detailing the application of the new international standards adopted by the Thirteenth International Conference. Two methodological surveys tested the application of the new standards in household surveys in different cultural settings. The English version was conducted in Kerala (India) and the Spanish version in Costa Rica from 1983 to 1984. In both countries the surveys were carried out in two urban and two rural areas. The major objectives were to test two alternative questionnaires, the application of the new standards, and the feasibility of measuring the relationship between employment and income.

Though not exclusively an investigation of the female labour force, the results of the research have important implications for women. For example, the results of Costa Rica's survey indicated huge differences between the current and the usual

⁴ A clear statement of the concepts and limits of economic activity adopted by the 1982 ILO resolution and its relation with the SNA criteria is contained in Rao, M.V.S. and F. Mehran (1984).

activity rates among women but not among men. They also showed that four out of every five people, who originally were classified as unemployed, later declared that they had performed "marginal" economic activities when answering yes-no questions from a list of activities; these four out of five people also were women, mostly working in the agricultural sector in an own-account basis an average of 7.3 hours per week.

In the case of Anker, he has been concerned with producing scientifically derived statistical evidence on the effects of four factors on the level of female economic activity: type of data collection instrument, sex of interviewer, (mostly male) proxy- vs. (female) self-respondents, and labour force definition. Two methodological surveys were conducted in India and Egypt on statistically identical samples of households randomised in such a way as to have roughly equal numbers of female and male interviewers, "self-" and "proxy-respondents", key-word and key-phrase questionnaires ("work", "job", "main activity", "pay or profit") and a simplified 13-activity/time use schedule. Activity rates were estimated for paid, market-oriented, 1982 ILO and extended labour force definitions. Research was done exclusively on employed females; hence, the results do not provide estimates of the female labour force. According to the authors, this does not pose a major problem because unemployment rates in rural India and Egypt are traditionally very low.

The Indian data showed the under-reporting of female labour force participation to be mainly related to the type of data collection instrument and labour force definition used. Little or no effects resulted from the interviewer's sex or from male respondents answering on behalf of female household members. The authors conclude that "the failure of official statistics to reflect all of women's work is no myth. Approximately 90 per cent of adult women were found to engage in labour force activities [extended labour force definition] and approximately one-third were found to engage in activities that resulted in monetary transactions [market-oriented labour force definition]". (Anker et al.: 1987, p.164). The type of data collection instrument and the labour force definition adopted prove also to be the major reasons for the under-reporting of the female labour force in Egypt. In this country the extended labour force definition allowed about 80 per cent of female workers to be counted.

Our recognition of the problem and the lack of solid empirical evidence on sex-differential census undercounting in most Latin American countries, in addition to the total absence of efforts to redress the situation, originated the research which is presented in the following chapters. As in both Mehran's and in Anker's studies (although Anker's research dealt only with women), the emphasis of this study has been on exploring the sources of the invisibility of the female labour force in official statistics (focusing on the recording of the activity-inactivity status, not on the employment-unemployment status) and on devising techniques to decrease that invisibility. Unlike Anker's, this study dealt with both females and males.

CHAPTER 2 THE DESIGN OF THE STUDY

Economic and social contexts

The study was conducted in two rural and two urban areas of the Latin American countries of Argentina and Paraguay; specifically, in the city of Posadas and the district of Leandro N. Alem in Argentina, and the city of Asunción and the district of Piribebuy in Paraguay.

Though sharing a common cultural tradition, basically derived from hispanic colonisation, both countries differ markedly with respect to their physical, demographic, economic and social characteristics. With over 28 million people in 1980, 85 per cent of whom resided in urban centres, Argentina is one of the most urbanised countries in the world, and by far, the most urbanised of Latin America. A high literacy level, a relatively aged population, a large middle class, and a considerable degree of industrialisation set Argentina apart from most of the countries of the region.

Paraguay is a mediterranean country, predominantly rural, with low population density, and a low level of economic development. Out of three million people, only about 37 per cent resided in urban areas in 1980, mostly in Asunción, the capital city, and the rest in seven minor cities. Because of the high fertility and relatively low child-mortality rates, the population of Paraguay is young. Though primary education is obligatory, illiteracy remains high, especially in rural areas.

According to data from the ECLA and the IDB, the yearly population growth rate from 1971 to 1982 was only 1.5 per cent in Argentina but as much as 2.5 per cent in Paraguay as a result of their different fertility and mortality rates. By 1980, the illiterate population amounted to 6 per cent in Argentina and to 15 per cent in Paraguay. The structure of the labour force of both countries reflects their diverse level of development. Whereas 13 per cent of the labourers are concentrated in agriculture, 28 per cent in industry, and 59 per cent in services in Argentina, the corresponding figures in Paraguay are 49, 19 and 32 per cent respectively. The per capita gross domestic product in Argentina (US\$ 1,345) is more than double that of the Paraguayan figure (US\$ 633).⁵

Argentina is a country with marked regional contrasts. The area chosen for the study, the province of Misiones, located in the northeast extreme of the country and neighbouring with Paraguay, has one of the largest rural populations: 50 per cent. Posadas and Asunción are capital cities, the former of the province of Misiones and the latter of Paraguay. Both are the site of governmental authorities at the provincial level in the former and at the national level in the latter. According to the most recent population censuses, Posadas had a population of 140,000 in 1980; the metropolitan area of Asunción, had 800,000 inhabitants in 1982.

⁵ Data are taken from CPES (1984).

Because of their role as capital cities, the economic activities that prevail in both areas are those linked to the tertiary sector, i.e., services (mostly governmental) and commerce. Posadas is the commercial centre of the province, a commerce which has developed in very small stores. Commerce also has been the most dynamic sector in the last years in Asunción, its development linked to the large amount of export and import commerce and to the gross commerce in general, as well as to the huge proliferation of small businesses and street vendors. Manufacturing and construction are secondary activities in both cities, even though the latter has recently seen a remarkable increase in Asunción because of the construction of housing and a variety of public works projects, such as the Itaipú central hydroelectric plant.

The Leandro N. Alem district is located in a sub-tropical area with no dry season, very high temperatures and abundant rainfalls. The Piribebuy district, in the Cordillera department, 113 miles from Asunción, has a mild climate with minor variations over the year. Both are rural populations: 65 per cent in Leandro N. Alem and 73 per cent in Piribebuy. Both are also old settlements areas, where small land-holdings (minifundios) prevail as a consequence of the successive subdivisions historically underwent by the property. The typical productive unit in Leandro N. Alem (68 per cent of all units) is not larger than 25 acres. In Piribebuy the typical productive unit is even smaller, barely 9 acres, but somewhat over half does not extend beyond five acres, a fourth has only between five and ten, and the majority of the remaining fourth is not larger than twenty acres. Such a small size allows the labour demand to be met within the family unit. In Leandro N. Alem occasional salaried workers are employed only during the harvest season.

The economy of both localities is based on agriculture; herding plays only a secondary role. But the principal crops in Leandro N. Alem are agro-industrial crops: yerba mate, tung, tobacco, sugar cane, cotton and, in some areas, tea. Only part of the Piribebuy crops are agro-industrial crops; instead, the dominant crops are maize, cotton, mandioca, and sugar cane. The diversified nature of the agricultural activity of Leandro N. Alem (where the production of sugar cane is combined with tea, tung, or tobacco, and the subsistence production of maize and mandioca) demands labour throughout the year, except from mid July to mid September, a period devoted to maintenance activities requiring less labour. A similar situation is found in Piribebuy, where the production of sugar cane, cotton, and subsistence production continues throughout the year with the same exception in labour demand as in Leandro N. Alem. There is also some manufacturing of agricultural products in Piribebuy --honey cane, honey sugar, mandioca starch-- but in very small productive units.

To sum up, the rural areas where the research was conducted are extremely poor agricultural areas based on old settlements where small land-holdings (smaller in Piribebuy) and subsistence economy prevail. The Argentinian locality is, however, relatively more developed, has a more differentiated economy and greater market opportunities for its agricultural production than the Paraguayan locality.

Design of the surveys

We carried out the fieldwork almost simultaneously in the four localities between August and September. The date was chosen for two reasons: to make our test stronger (for it is the period of low labour demand) and its relative closeness to the time of the year when the 1980s censuses were collected (October in Argentina, and July in Paraguay). The former reason was guided by the rural context. The rationale was that if at a time of low labour demand the procedures whose efficiency we were to test were to enumerate more female workers than those used in population censuses, the weight of the evidence in favour of its efficiency would be greater than if it were made easier by the abundance of labour force.

The fieldwork was made possible by the cooperation of the statistical offices of the province of Misiones (Argentina) and of Paraguay.

We conducted three experimental surveys in each locality. One of the surveys (the "CENSAL survey") reproduced the usual census procedure (questionnaire and training). In the other two, we put an alternative data collection procedure in practice, establishing a short reference period in one case, "the CENEP-week survey", and a long one in the other, the "CENEP-year survey".

In fact the research included two other surveys, five in total. These other two set a one-week reference period and a combination of the CENSAL type training and the CENEP type of questionnaire, and vice-versa. They were designed to assess the separate effects of both variables upon the enumeration of workers. During the fieldwork, we came to the conclusion that some of the censists had had previous experience as interviewers, hence the "type of training" variable failed to be validly manipulated. We also came to the conclusion that personality ("individual") characteristics of the censists (manifested in the ability to play the role) was a relevant factor, which was confounded with the type of training. The relatively low number of censists that participated in each survey did not allow randomisation of these individual characteristics which, in some cases, were confounded with the type of training variable. As these circumstances impaired the valid assessment of the effects of the type of training while controlling the type of questionnaire, I decided to exclude the two surveys from the analysis.

The three surveys contain three independent, explanatory variables with effects on the enumeration of the labour force; we studied type of data collection procedure (CENSAL and CENEP), length of the reference period (one week and one year), and length of time worked during the reference period (less than part-time --1 to 19 hours per week, or at least 1 month per year--; part-time --20 to 34 hours per week, or at least 6 months per year--; and full-time --35 or more hours per week, or all 12 months per year). The first two variables were manipulated when creating the experimental surveys; the third one was investigated during the interviews. The dependent variable to be explained was labour force, or economic status as measured by the economic activity rate. We focused on the recording of the

activity-inactivity status, not on the employment-unemployment status.

In the three surveys we collected information on the same socio-demographic and economic variables: sex, age, marital status, educational level, household status, activity status, occupation, industry, employment status, place of work, time worked, and destination of the agricultural production (mostly for the market or for self consumption). The economic characteristics referred to the main activity, defined in terms of time, not income, as this is inadequate for unpaid family workers. Although the information would have been useful, we did not ask for secondary activities because such a complicated design is unnecessary for the central aim of the research --to assess the effects of a set of variables upon the activity rates.

We used the same conceptual definition of labour force in the three surveys, following the 1982 ILO definition quite closely but with some modifications. We focused on the enumeration of one part of self consumption labourers considered active by the ILO: the producers of primary products (vegetable cultivation, sowing, and poultry and animal care, which are mostly feminine activities). Also, we did not emphasize, but we did not explicitly exclude, people processing primary products produced by themselves or producers of fixed assets such as houses, boats or canoes. In the case of the former group of activities, the reason for changing the definition is that it is extremely difficult to draw the line between making cheese, butter or fat and cooking for one's own consumption (considered non-economic by the ILO), thus, we preferred to run the risk of not counting some of the producers rather than to decrease the validity of the measurement.

Another modification is that we did not limit the definition of self-consumption producers to those whose activity makes an important contribution to the total consumption of the household. This was due to the conceptual and operational difficulties involved in determining what counts as "important" (for what kind of household structure?, for which consumption level?, according to objective or subjective parameters?, etc.). Nevertheless, using the length of working time during the reference period as a proxy, it is possible to calculate activity rates that take the "importance" of the activity into account. We did not set any minimum requirement of working time in any of the three surveys. Summing up, we defined "work" as any activity ending in the production of economic goods and services, irrespective of whether they are or are not remunerated. On this basis, we classified the population of both sexes aged 12 (in Paraguay) or 14 (in Argentina) years or more as economically active or inactive and the former as employed or unemployed.

The three surveys in each locality were based upon statistically representative household samples of the population of each of the four localities. Even though it was not required, representativeness was sought to insure comparability. We interviewed all active-age members of each household sampled, the age limits being those set by the 1980s censuses of Argentina and Paraguay (14 and 12 years of age and over, respectively). The household was defined as the set of persons currently living in the dwelling sampled.

We interviewed close to four thousand persons of both sexes in Argentina (1,738 in Posadas and 2,000 in Leandro N. Alem) and five thousand in Paraguay (1,367 in Asunción and 3,629 in Piribebuy). The differences in sample sizes between countries and between urban and rural contexts coincide with the smaller female activity rates registered by the censuses for Paraguay and for the rural contexts in both countries. Table 2.1 shows the size of the samples by households and individuals according to countries and localities.

The size of the samples were determined as a function of the average number of members per household, the index of masculinity (both from the 1980 and 1982 population censuses), and the female activity rates (from the 1980 and 1982 censuses for the CENSAL survey and the closest household surveys for the CENEP surveys), plus the requirements of the analysis (a minimum average of twenty economically active employed females per cell up to 10-cell tables⁶). The economic activity rates of females were chosen because they generally are lower than male activity rates; hence, the female rates define the necessary size of the samples. Appendix A of Appendix on methods contains detailed information on the sampling procedures. Tables 2.2 and 2.3 show evidence of the comparability of the three samples within each locality. Table 2.2 shows evidence of the younger age structure of the female and male Paraguayan populations compared with the age structure of the Argentinian populations. Table 2.4, in turn, shows the relatively less educated structure of the female population of active ages of Asunción. In effect, the proportion of the Asunción women with primary school level or less in each age group is significantly larger than it is among the Posadas women.

Data collection instruments: questionnaires and interviewers' training

The questionnaires

In the three surveys we used one questionnaire for the household unit and one for each of the economically active-age members (individuals). The same questionnaires were used in both countries, with the sole difference being that in Paraguay the survey was printed in two languages, Spanish and j'io pará (colloquial Guaraní). The Paraguayan interviewers, all bilinguals, used either language depending upon the familiarity of the interviewees with either language. We requested interviewees to answer by themselves, but when this was impossible, we accepted proxy-respondents.

⁶ "10-cell table" is the result of cross-tabulating two variables, one with two categories (sex) and the other with up to five categories (eg occupational category), ie female-male by professional-technical workers, business and sales workers, service workers, farm labourers, non-farm labourers. For each sex, then, the maximum number of cells is five.

The figure 20 was established by the statistician in order to insure the reliability of the results.

Two kinds of household questionnaires were printed, differing only in the inclusion of the "self-consumption module", which I will later describe. Three kinds of individual questionnaires were used: one, a brief census-type that requires information on activity status and economic characteristics for a weekly period; the other two, longer than the first, are similar, except they refer to different reference periods, one being weekly and the other yearly.

The CENSAL questionnaire

The household questionnaire used in the CENSAL survey⁷ contains three blocks of information. The first section is devoted to the identification of the house, the sampling household, and the type of experimental survey; the second, to the identification and control of the interviewer and the interview (interviewer's name, interview date, whether completed or not, supervisor's name); and the third, to the household composition and the socio-demographic characteristics of all economically active-age members (sex, age, kinship status, marital status, and educational level). The content of this third section is reproduced in Appendix B of Appendix on methods, figure B.1.

The individual questionnaire also contains three blocks. The first is addressed to the identification of the house and the sampling household, the interviewer, the interviewee or the person who responds on his behalf, and the socio-demographic characteristics of the interviewee. The second block inquires about the activity status of the previous week, duplicating the procedure used by the Argentinian and the Paraguayan censuses of the eighties and by most Latin American censuses of the seventies and eighties. One single question followed by a set of pre-coded response alternatives (see figure 2.1) was asked by interviewers with an average of three hours of training. According to the instructions, the interviewers were to read out the response alternatives one by one until the interviewee gives an affirmative answer. The question identifies economically active

⁷ Example of how the sample size of the CENSAL survey in Posadas was established.

$$\text{Samples size females} = \frac{(1) \quad (2)}{16,574} = 450$$

(3)

$$\text{Sample size females + males} = 450 \times 1.927 = 867$$

(4)

$$\text{Sample size households} = \frac{867}{4.3} = 202$$

(5)

(1) 100 = 5 x 20 number of cells established on the basis of the analysis times number of active females established on the basis of reliability requirements.

(2) Total females (1980 Census)

(3) Total active females (1980 Census)

(4) Index of masculinity (1980 Census)

(5) Average number of members per household (1980 Census)

persons, i.e., the employed (1 and 2) and the unemployed (3) and the economically inactive one (4, 5, 6, and 7).

The third block contains a series of questions on economic characteristics posed to people identified as employed: occupational status (Q8); employment status (Q9); place of work (Q10); industry (Q11 for persons working in a firm and Q12 for the rest); destination of production solely for people employed in agriculture; and total time worked over the week, recorded quantitatively as the sum of hours worked day by day (item 14) or qualitatively as the sum of portions of the day (item 15), depending on the interviewee's ability to estimate the time. Employed people who did not work during the previous week were asked for the time worked during the last week they actually worked, usually the one before the last. All questions, except for time, refer to the main activity and were asked solely to employed people; time refers to all occupations.

Figure B.2 in Appendix B of Appendix on methods, reproduces the CENSAL individual questionnaire. All data on economic characteristics were collected with closed, pre-coded questions, except for occupational status and industry which were open questions coded in the office.

The CENEP questionnaires

The CENEP-week and CENEP-year surveys use a group of questions for activity status and two-and-a-half days of interviewer training. The CENEP-week survey uses the previous week as the reference period and the CENEP-year, the previous year.

The CENEP questionnaire contains a group of seven questions when the reference period is one week and five when the period is one year. The survey's design is based on the principle "you are active unless you prove otherwise" and it has the following characteristics: a) it "unfolds" the response alternatives of the (apparently) single CENSAL question into a set of mutually exclusive questions (Q7, Q9, Q10, and Q12 in CENEP-week, and Q7, Q9, and Q10 in CENEP-year); b) it makes the definition of "work" and "economic activity" explicit to the interviewees (Q8) by giving examples of concrete activities generally invisible as such (carried out inside the household, for a short time, helping another worker, similar to domestic chores, etc.); and c) it emphasises the inclusion of agricultural workers who produce for their own consumption (SCM). A reminder printed in capital letters at the top of this block of questions reminded the interviewers of the meaning of "work" in the context of the research, thus emphasising the instructions given to them during the training sessions.

The first question (Q7) resembles the CENSAL question with one major difference: it only allows an answer of "yes" or "no". For those who answered negatively, the question was repeated, this time with concrete examples of activities and of ways of carrying out the activities. The examples of activities are those usually not perceived as "work" and consequently not reported as "work" by women, young and old people (Q8). Question 9 (in CENEP-week) was addressed to employed people temporarily not

working. Questions 10 and 11 in CENEP-week (Q9 in CENEP-year) identified unemployed people who looked for a job during the reference period. The last two questions differ from the classical census question in two respects: the inclusion of concrete modes of job searching and the admission of the possibility that the job searching might have been interrupted during the previous week. Question 12 in CENEP-week (Q10 in CENEP-year) addressed economically inactive people, implicitly allowing the possibility of the double condition of activity and inactivity; interviewees were asked to choose between four alternatives of the format: "you were a housewife (student, retired, invalid) and you did not work".

The self-consumption module (from now on labelled SCM) was applied to the members of all rural households and of urban households who, having a plot of land that allowed the development of small-scale agricultural activities (growing vegetables, raising chickens, etc.), had been classified as economically inactive according to questions 7 to 12 in the CENEP-week or 7 to 10 in the CENEP-year survey. Because of our interest in assessing the extent to which the recording of these workers is inadequate and the extent to which special emphasis on different categories of work can improve the enumeration, the "self-consumption module" was presented when the interview to all the members of the household came to an end. This prevented the learning that might have occurred if posed at the end of the interview to each active-age member of the household because frequently the interview was carried out in the presence of other prospective interviewees or one of the interviewees acted as a proxy in the absence of other members. This is the reason why the self-consumption module was not printed in the section on activity status of the individual questionnaire but on the back of the cover page of the household questionnaire. As shown in figure 2.2, the phrasing of all questions required a "yes" or "no" answer before proceeding to the next one.

The CENEP-year questionnaire is identical except for the reference period and for the elimination of Q9 and Q11, which were meaningless for a long reference period. As shown in figure B.4, in Appendix B of Appendix on methods, all questions were phrased as follows: "during the last twelve months".

CENEP questionnaires operationalise a set of theoretical criteria. They were not meant to be applied in its current design in future censuses. The format of the set of questions allowed us to determine the capacity of each one to identify labour force members and, at the same time, to identify the factors which make for greater improvement in the counting of workers.

Both CENEP questionnaires include two other blocks of questions similar to the CENSAL questionnaire. One section addresses identification issues, the other economic characteristics of the employed interviewees. The categories used for the qualitative measurement of time worked are "full day", "about half a day", and "less than half-time" for each of the seven days of the week. For the reference period of one year, the corresponding categories are: "the twelve months",

"more than six months", "less than six months", and "one month or less".

The training of interviewers

Interviewers were recruited among school teachers, university students, and advanced secondary students (the latter in Paraguay) of both sexes, as is done in population censuses in Latin America. We looked for people with no previous experience in interviewing, but we did not succeed in meeting this criterion. Some of the personnel in charge of recruiting the interviewers allowed people (personal friends) with previous experience as household survey interviewers to be hired.

The fieldwork involved 36 interviewers in total (8 in Posadas, 7 in Leandro N.Alem, 6 in Asunción, and 15 in Piribebuy). They were recruited among local residents; in Leandro N.Alem, however, the personnel were residents from Posadas who relocated temporarily during the period of the fieldwork. The training of interviewers was done separately for the three surveys by Martín Moreno in Asunción, Piribebuy, and Posadas.

The CENSAL training mirrored the usual training provided to interviewers in Latin America: one brief session lasting three hours and devoted to handling the questions and the definition of their categories with neither post-training evaluation nor selection of trainees. The CENEP training consisted of five sessions over two and one-half days. It included two quite distinct sections. One was devoted to the conceptual and technical handling of the questionnaires and included role-playing and evaluation of the trainees (four sessions of two to three hours in length). The other one (one session of four hours in length) was devoted to sensitising data collectors to the socially shared ideas about the sexual division of labour to make them aware of groups of the population (women, young and old people) who are liable to be defined as inactive without further investigation and on the exclusive basis of sex and age characteristics. This section of CENEP's training was not meant to be used in all its details in population censuses. On the one hand, it was designed and tested as part of a search for feasible ways of limiting the effects of cultural biases on the recording of female (and male) workers, and on the other hand, of assessing the extent to which sex biases are present among interviewers. The CENEP training started with the sensitising exercise and followed with the technical aspects.

The sensitising exercise took place in one-half day (four hours) in three stages: elicitation, insight-building, and conceptualisation. To avoid drawing attention to the main objective of the research, the improved counting of female workers, in the general introduction to the training sessions (which included the sensitising exercise), we told the trainees (prospective interviewers) that the "research intends to find out what relation there is between the amount of labour and the type of household. More specifically, [...] how many persons work in households of different sizes and structures".

The elicitation stage started. The stimulus consisted of a brief description of five households in terms of the sex, age, marital status, number and age of children, position within the

household of its members, and the socio-economic and urban or rural status of the units (indicated by the name of the resident area). Trainees were first given form 1 (see figure C.1 in Appendix C of Appendix on methods) and were asked to write down at least one and no more than three activities each member of each household might have performed during the previous week. They were then given form 2 (see figure C.2 in Appendix C of Appendix on methods) and were asked to classify the activity status of the household members on the basis of the activity (out of those listed in form 1) they considered to be the most important. The classification was to be done in terms of the usual census alternatives: "worked", "looked for a job", "student", "housewife", "retired, pensioned or rentier". Only one was to be assigned per person. Though working in groups, at this stage we asked the trainees to answer individually.

The instructions that preceded the sensitising exercise, before form 1 was given out, were the following:

Now we are going to do an exercise. I am going to give each one of you a form which contains the description of five kinds of households. I am going to ask you to show which activities were carried out by each of its members. You will see that for each household and for each of its members there is space (three lines) to write down what activities each one carried out from Monday to Friday last week. Please, show at least one activity for each household member. It is not necessary to fill up all the spaces available for each person. Don't include activities such as: eating, sleeping, taking a shower, brushing teeth, etc.

The task is to be done individually, please don't talk to each other. Before starting, please write your first name and surname, place, and today's date.

Upon the completion of form 1, the trainees were handed form 2 and its instructions. When both forms were filled out and collected by the trainer, this first stage was over. A break followed during which the trainer compiled a table based on "activity" or "inactivity" status and the tasks (form 1) and the categories of activity status (form 2) attributed to each one of the members of the households by all the trainees. The table was done only for the six pairs of cases that could provide an opportunity for the attribution of the activity status based on sex, age, marital status, and the stage of the family cycle of the members of the households. Percentages were calculated, totalling 100 per cent for each pair of cases. Those cases were:

1. Adult, married females with adolescent children vs. adult, married males with adolescent children
2. Young, married females with small children vs. young, married males with small children
3. Old females vs. old males

4. Adult, married females with no children vs. adult, single females with no children
5. Adult, married females with children vs. adult married females with no children
6. Adult, married males with children vs. adult, married males with no children

After the break was over, the second stage began. The insight building stage attempted to elicit in the consists an awareness of their own biases. We first gave the trainees the results of the tabulation obtained, highlighting the regularities found. The aim was to elicit insight, i.e., intuitive rather than intellectual knowledge. When there was no time to complete the tabulation, we presented fictitious results (designed earlier for the purpose of the exercise) as if they were real.

In order to encourage insight-building, we asked the subjects to produce "counter-examples" based on people known to them. Some of the counter-examples included a woman who takes in and cooks for boarders; a woman who "helps" on the farm; a washerwoman at home; female teachers, professors, and domestic servants; young students who work as shoe-shiners or who sell newspapers; and retired men who work as night watchman or who sell lottery tickets in the streets. When no examples came out spontaneously, the trainer prompted them by mentioning some concrete cases (actually found by the researchers in the test stage of the questionnaire). By way of example,

Woman with only one child less than one-year old, resident in city X, near Y Ave., who sells Avon cosmetics two hours a day, three days a week. She said she was a "housewife".

Woman who runs a cigarette and candy stall set up in the yard of her house, in city M, in Z street. She said she was a "housewife".

When this stage was completed, the trainees were encouraged to formulate conjectures about the reasons for the differential attribution of the activity status based on sex, age, marital status, etc. In this stage we tried to get the subjects to conceptualise verbally their intuitive insights. The trainers encouraged the trainees to express the following reasons:

1. In our societies, the married woman is assigned the almost exclusive responsibility for the care of the house and children, whereas the man is assigned the responsibility for the financial upkeep of the house and family. This is assumed to be a 'natural' division based on the biological characteristics of both sexes. It is accepted that the woman works until she marries or until she has her first child. Many men feel their masculinity is threatened if they are incapable of supporting the household on their own.

2. As primary school attendance is compulsory and as certain jobs are prohibited for minors (underground, nightwork, printing). Many children (or their parents), if they do work (as well as studying or not), do not declare it. As there is a sanction on receiving a pension at the same time as the salary for a job, retired people engaged in with some economic activity do not declare it either.
3. As "work" is frequently considered to be such only if done outside the home (in businesses, offices, manufacturing firms) with fixed schedules for a salary or per day, the casual or seasonal workers, those who work a short time per day or per week, and those who "help" another worker (many unpaid) often do not recognise (attach little importance to) their economic activity.
4. Some activities that are performed for the household's maintenance (reproduction of the labour force) are also sold as services on the market. This means that many of those who carry out the services for others do not perceive them as economic activities. This is typical in the agricultural sector, especially in small land-holdings, where persons of both sexes and of any age find it difficult, artificial, or arbitrary to distinguish between domestic and economic activities.

In case the trainees did not produce these reasons, they were provided to them as already established knowledge. After this stage finished, the sensitising exercise ended.

As previously mentioned, the application of the exercise allowed us to assess the extent to which sex biases are present among interviewers. In effect, there were two occasions when the interviewers could reveal their conception of the division of labour according to sex and to other socio-demographic characteristics of the persons. These characteristics were the only ones about which the trainees had information. They did not have explicit information on, for example, physical capacity, motivation, level of education, or the values of the individuals, nor on the market's demand for labour. On one occasion, the interviewers had to attribute activities to the household members (form 1), and on the other, they had to choose one activity (the main one) from many activities and, based on this, classify the same members as economically active or inactive according to the usual census categories (form 2). The analysis of the answers elicited by the stimuli that involved pairs of couples (i.e., persons similar in most characteristics except for sex), showed that on these two occasions the trainees attributed economic activities much more frequently to males than to females who were similar in several basic socio-economic characteristics. The similarity of responses of male and female trainees indicates that both share conceptions about the sexual division of labour. More details on the presence of sex biases among the trainees can be found in Table C.1, Appendix C of Appendix on methods.

One word of warning is needed. I am not discussing whether the differential attribution between both sexes reflects reality or not, a reality which incidentally responds to the cultural conception about the sexual division of labour prevailing in both societies where the experience was carried out. This conception is shared by both interviewers and interviewees. Such a discussion would go further than is my aim here which is to present a technique to sensitise consists against assigning the category "housewife" to women, especially if married and with children or that of "student" or "retired" to children and old people, without any further search for what other economic activities they could be carrying out.

CHAPTER 3

RESULTS BY QUESTIONNAIRE AND TRAINING

In this chapter I will examine the effects of the different types of data collection procedures (CENEP and CENSAL questionnaire and interviewers' training) upon the recording of the labour force. This examination will be made on the basis of a comparison between the CENEP-week (CENEP-W) and the CENSAL surveys, both using a one-week reference period. As the within-country socio-economic differences are greater than the between-country differences, I will present separately the results of the tests by rural and urban localities rather than by country. I will start with the rural contexts, where the effects are greater, and then I will move to the urban contexts. I will end by attempting to assess the relative effects of both the questionnaire and the training and by hypothesizing about the reasons for the greater efficiency of CENEP's questionnaire.

As mentioned in Chapter 2, the research included two additional surveys. They were meant to test separately the relative effects of the type of questionnaire and the type of training. Both used a one-week reference period and did not set any minimum working time requirement. One of the surveys used the CENSAL type of training and the CENEP type of questionnaire; the other, the CENEP training and the CENSAL questionnaire. Much too late into the fieldwork, I discovered that we had failed to manipulate the training variable, for we had failed to randomise individual characteristics of the interviewers, thus confounding them with the type of training. In effect, while supervising the interviewers' performance in the field, we realised that, contrary to our recruiting requirement, some of the interviewers had had previous experience as data collectors, i.e., they were not "interviewing naive". We also realised that, irrespective of the type of training received, people differed in, among other factors, their capacity to establish rapport, their readiness to follow instructions closely, and their awareness of sex biases prevalent in society. All these characteristics ("individual" variables) acquired before and independently of the training received had an impact upon the quality of the data collection.

In fact, people with certain individual traits, in spite of having received the CENSAL type of training, achieved an equally good, and sometimes even better quality, interview as people who received the CENEP type of training but did not have the appropriate individual traits. In other words, these individual traits modified the type of training, making its effects stronger or weaker. In order to create the experimental surveys, the interviewers were randomly assigned to the type of training and the type of questionnaire. As the number of interviewers in each survey was small, however, these "individual" variables could not be distributed randomly among the experimental surveys. Consequently, their effects were confounded with those of the type of training. Hence, I failed to assess the separate effects of training and questionnaire and came to treat them together as dimensions of a new variable called "type of procedure".

Rural contexts: Leandro N. Alem and Piribebuy

Sex-differential CENSAL underenumeration of workers: self-subsistence producers become visible

It is important to stress at the very beginning that we were highly successful in setting up a census-type operation in both rural localities. The statistically significant similarity between the activity rates obtained by the CENSAL survey and by the 1980 and 1982 population censuses (see Table 3.1) demonstrates this point.

The CENEP-W survey enumerated more workers in total than the CENSAL survey in both rural localities, more in the less developed Paraguayan context than in the more developed Argentinian one, and more among women than among men. The CENEP-W female activity rates are almost three and six times as great as the CENSAL rates of Leandro N. Alem and Piribebuy, respectively. The corresponding CENEP-W rates for males do not surpass more than ten per cent of the CENSAL rates (see Table 3.1). As shown in Chart 3.1, CENEP-W records more female workers than the CENSAL survey at all age groups. The additional male workers recorded by CENEP-W, instead, come from extreme age groups of the life cycle, either young students (mostly in Piribebuy) or old, retired people, mostly in Leandro N. Alem. Therefore, the CENEP-W survey reveals that the majority of women (over 80 per cent) are contributing economically at rates similar to those of most men. It is worth recalling that these results were obtained during a period of low labour demand. This picture is consistent with what is known of poor, small land-holding areas where the subsistence of the household unit is based on the labour of all of its members, whether old or young, women or men. However, these findings openly contradict most Latin American census statistics which record an extremely low participation of rural females, much lower than that among urban females (Elizaga and Mellon: 1971).

As previously indicated, the economy of both areas is based on agriculture, but most of the production in the Paraguayan locality is devoted to self subsistence, whereas agricultural products in the Argentinian locality are largely sold in the market. The CENEP-W and the CENSAL portraits of male labour in both areas are significantly similar, the surveys, however, give significantly different portraits of female labour (see Table 3.4). The presence of women in the agricultural sector, mostly producing for their own consumption⁸, is much greater according to the CENEP-W than to the CENSAL survey. Also the presence of women working in small scale manufacturing, petty trade and service sectors is much greater according to the CENSAL than to the CENEP-W survey.

⁸ It should be remembered that self-consumption producers were identified in two ways: by asking agricultural workers for the destination of their production (mainly for market or mainly for own consumption) and by the SCM.

A procedure such as CENEP-W does not capture significantly more male workers than the other which reproduces the standard census because men who work in agriculture, either for market or for own consumption, consistently define their activity as work, perceive themselves as workers and declare themselves as economically active. A very high proportion of women, instead, do not define their activity as work and do not perceive nor declare themselves as economically active but as housewives (economically inactive according to the censuses). This means that the priority rule that according to the international standards censuses should follow is often not applied by censists in the case of female workers. According to this rule, in case of multiple status, the active status should have priority over the inactive status (and the occupied over the unoccupied status).

The magnitude of these findings may be stated in another way. Although contributing labour to economic production, two-thirds of the females in the Argentinian locality (67 per cent) and five-sixths (84 per cent) in the Paraguayan locality do not perceive and do not declare themselves to be economic actors and are, therefore, invisible in census statistics. The statistically significant similarity between the female activity rates obtained by the CENSAL survey and by the population censuses of the eighties in both localities is further evidence of the importance of these findings.

The sensitivity of CENEP's questions in eliciting labour force data

When examining the capacity of CENEP's questions to record the labour force, we focus on the employed population as unemployment is virtually non-existent in subsistence economies such as the research areas in Argentina and Paraguay. Data vary significantly by sex (see Table 3.2). In both areas around 90 per cent of the employed male labour force counted by CENEP-W is elicited by Q7 ('During last week, did you do any work?') and no more than 6 per cent by Q8 and the SCM taken together. Q8 reiterated Q7, conveying the meaning of work through concrete activities chosen among those usually not considered to be economic. The SCM module made explicit, again with concrete examples, that certain activities which result in products that do not go to the market but are consumed in the household, are to be considered work also (see Chapter 2 for CENEP-W questionnaire). These results make it plain that a single question phrased similar to Q7 is adequate enough to register most of the male labour force in either locality. Indeed, if the workers counted by the SCM are excluded, the male activity rates do not decrease significantly (see Table 3.3).

Among females, however, a single question like Q7 proves quite inadequate to register most of the female agricultural labour. It elicits only one-third and one-half of the employed labour force in the Paraguayan and the Argentinian localities, respectively (see Table 3.2). Practically all of the remaining employed females are counted by the SCM. The lack of recording capacity of Q8 was totally unexpected; we had anticipated a much higher capacity for Q8 and a much lower capacity for Q7. The

overwhelming capacity of the SCM went far beyond our expectations. As will be elaborated on later, contrary to the rural areas, in the urban context in Paraguay, Q8 recorded a seizable proportion of female (but not of male) workers: 9 per cent (see Table 3.7). The same is true, and even more so, in the urban and rural contexts of Paraguay when the reference period is one year in length (see CENEP-Y rates in Tables 3.2 and 3.7).

It could be hypothesized that the large recording capacity of Q7 is invalid. Such would be the case if, at the time of responding to Q7, some of the interviewees would have already learned the meaning of "work" conveyed by Q8 because of having attended to or answered on behalf of other household members who were previously asked Q8. This hypothesis can be rejected because the number of men and women who defined themselves as economically active in response to Q7 after another household member responded to Q8 is very small. (The issue is discussed in more detail in relation to the urban contexts).

These results show plainly that, contrary to males, one single item such as Q7 is not adequate to register most of the female agricultural labour. In both localities studied, had it not have been made explicit to women that self-consumption production is considered work, as SCM did, the measurement of its labour force participation would have been far from accurate.

If the female workers elicited by the SCM are excluded, the activity rates significantly decrease from 80.5 to 42.3 per cent in the Argentinian locality and from 87.6 to 30.2 per cent in the Paraguayan one, thus cutting down the differences with respect to the CENSAL rates (see Table 3.3 and Chart 3.2). Nothing like this occurs among males.

The identity of workers invisible in census statistics

Which workers do not perceive and do not declare themselves as workers unless a special effort is made to capture them? The question is pertinent for females because the male labour force enumerated by either procedure is not only quite similar in size but also in most socio-demographic and economic aspects. The exception is workers who labour part-time or less which CENEP-W enumerates in greater numbers in both areas (see Table 3.4). The very few self-consumption producers brought in by the SCM are persons in the extreme stages of the life cycle: either old people identified as "retired or pensioned" or "sick or invalid" (Leandro N.Alem) or young people identified as students (Piribebuy), who work for only a few hours or half-time per day (see Table 3.5).

As regards females, in the Argentinian locality CENEP-W counts a working population much larger than the CENSAL survey. Both are similar in age structure but differ in most other aspects. The CENEP-W is more liable than the CENSAL survey to elicit females who are wives of the head of the household, the overwhelming majority being active in agriculture, producing mostly for own consumption as unpaid family aids or on own-account basis at home, half-time or less. In Paraguay the situation is grossly similar.

It is not possible to elucidate the reasons why some self-consumption producers identified themselves as such "spontaneously" in response to Q7 and, eventually, Q8, and some others responded only when confronted with the SCM. The "spontaneous" are very few, only 5 out of all female self-consumption producers in Leandro N. Alem and 52 out of the 387 corresponding female workers in Piribebuy. Both groups are similar in age, position in the household, and length of working time.

The differences between the CENEP-W and the CENSAL portraits of the female labour force in both localities are partly due to the workers captured by the self-consumption module (SCM) and partly to those elicited by the remaining questions (7 to 9). The SCM captures self-consumption producers who would otherwise overwhelmingly declare themselves to be housewives, and much less frequently enumerates students, when initially responding to the interviewer (see Table 3.5). The other questions --specifically Q7 (see Table 3.2)-- make a greater contribution to counting workers who are more visible because of other factors, such as work outside the agricultural sector or agricultural production for market on a salaried basis, full-time, outside their homes.

In other words, in Leandro N. Alem --a rural agricultural locality where market production predominates-- as well as in Piribebuy --a rural agricultural locality where self-consumption production predominates-- the usual population censuses are more sensitive in recording females with a greater propensity to work, who perceive themselves and are perceived as members of the labour force. They are the single daughters and the household heads who work on a full-time basis in the agricultural sector selling their production in the market. The usual censal procedures are not as sensitive, however, in recording the economic activity of married women or wives of the heads of the household who work short hours or half-time partly in agricultural production sold in the market and partly for family consumption.

Urban contexts: Posadas and Asunción

Sex-differential CENSAL underenumeration of workers:
informal activities become visible

As in the rural contexts, though less frequently, the CENEP-W survey enumerated significantly more workers than the CENSAL survey in both urban centres, more in the less developed Paraguayan context than in the more developed Argentinian one and again more among women than among men (see Table 3.6). The CENSAL survey undercounted 22 per cent of the Posadas women and 42 per cent of the Asunción women counted by the CENEP-W survey but only 9 and 14 per cent of the males of both localities, respectively. In other words, the proportion of the working females who did not perceive and did not declare themselves as workers but as economically inactive (mostly "housewives") in these two cities, and who would remain invisible in the usual census statistics, amounted to one-fifth in Posadas and to close to one-half of the female labour force in Asunción.

The underenumeration of working women in Posadas is concentrated among those 20 to 50 years of age and in Asunción, from 15 to 60 years of age. The slight underenumeration of males in Posadas is distributed among those 15 to 60 years of age, while in Asunción the underenumeration is only noticeable among the youngest and oldest groups (see Chart 3.3). As will be seen in the following pages, the CENSAL and the CENEP-W portraits of the labour force not only differ in size. The CENEP-W survey is more sensitive to informal women workers than the CENSAL survey.

The sensitivity of CENEP's questions in eliciting labour force data

What are the reasons for the greater sensitivity of the CENEP procedure, i.e., its ability to elicit more accurate labour force data? Again, with the focus on the employed population, the capacity of CENEP questions to record labourers significantly varies by sex and, among female workers, by country (see Table 3.7). In both cities, close to 90 per cent of the employed male labour force counted by CENEP-W was elicited by Q7 ("During..., did you do any work?") and no more than 6 per cent by Q8 and the SCM. The same was true when the reference period was one-year long.

Similar to the results in the rural population, a single question phrased such as Q7 was adequate to register most of the male labour force participation in the urban localities of both countries. If the workers registered by CENEP-W Q8 and the SCM are excluded, the male activity rates do not decrease significantly either in Asunción (from 83.6 to 79.2 per cent) or in Posadas (from 79.6 to 76.3 per cent) (see Table 3.8). Among females, though, Q7 was not as adequate, especially in Asunción where it elicited only two-thirds of the employed labour force (see Table 3.7) whereas in Posadas nearly four-fifths are elicited by Q7. Most of the remaining employed females are enumerated firstly by the SCM and secondly by Q8.

When dealing with the rural context, I indicated that I had anticipated a much higher capacity for Q8 and a much lower capacity for Q7 to elicit responses. A hypothesis could be that the result was a spurious consequence of some interviewees having learned the content of Q8 (either because they had attended to or had answered on behalf of other household members who had previously answered that question). Yet, a careful analysis of CENEP-W data for Asunción showed that, out of the 85 women classified as active on the basis of Q7, 44 had been interviewed after another household member had gone through Q8. (This analysis was made possible because the order of interviewing of the household's members was known). Of those 44 women who could have been acquainted with Q8, most were adults who had worked every day, twenty or more hours a week, half of them as salaried domestic servants living in their employers' homes, hence visible as members of the labour force. In other words, they had a high probability of perceiving themselves as workers, hence, a low probability of responding "did not work" when answering Q7. Only four women out of the 44 had the opposite characteristics. Two were street vendors, one a seamstress and the fourth a

washerwoman who had worked only a few hours the previous week down the street or at home. These were the only ones who would have answered affirmatively to Q7 after having the meaning of "work" conveyed to them by the censists. Similarly, out of the 35 Posadas women with chances of being exposed to Q8 before answering negatively to Q7, only 3 had a high probability of not perceiving themselves as workers. One was a seamstress, one a street vendor, and the third a domestic servant who worked at home, in the street or in an employer's home for only a short time per week. On the basis of this analysis, the hypothesis of learning was rejected and with it, the spuriousness of the results.

It should be noted, however, that Q8 had a differential recording capacity among females depending on the level of development of the population. This item proved to be "efficient" in Asunción (though not in Posadas) in both the CENEP-W and the CENEP-Y surveys. The lower educational level of Asunción female population as compared with the educational level of Posadas female population might also explain these results.

The overwhelming capacity of the SCM to elicit responses among urban females, especially in Asunción (21 per cent of all employed females), went far beyond our expectations. For people unfamiliar with urban settings in developing societies, the relatively high percentage of women engaged in production for self consumption in the capital city of Paraguay may be surprising. Indeed, the mixture of social areas is extremely diverse in Asunción. It is not infrequent to find the modern house of a surgeon side by side with the precarious house of a water seller who grows vegetables or raises chickens for his own consumption in the backyard, only ten or fifteen minutes from downtown.

Again the conclusion is that, contrary to the situation of the males, one single item such as Q7 is not adequate to register the urban female labour force, especially in a low developed society like Paraguay. In the Paraguayan capital city, had it not have been made explicit to women that self-consumption production was considered work, as the SCM did, the measurement of its labour force activity would have been somewhat inaccurate. A similar result, though much less obvious, would have happened if the meaning of work through concrete examples had not been conveyed to them through the use of Q8.

If the female workers elicited by both Q8 and the SCM of CENEP-W questionnaire are excluded, the urban activity rates significantly decrease in Asunción from 59.0 to 42.2 per cent and in Posadas from 46.0 to 39.6 per cent. This is not the case for Q8 and the SCM separately, and it is not the case for males (see Table 3.8 and Chart 3.4).

The identity of workers invisible in census statistics

Is there any difference between the economically active population enumerated by CENEP-W and by the CENSAL survey apart from sheer size? Which workers do not perceive and do not declare themselves as such unless a special effort is made to discover them? The answers to these questions give some

indication of the groups that need special attention in order to be more adequately registered.

In Asunción, the capital city of Paraguay, the CENEP-W survey enumerated about three-quarters more female workers than the CENSAL procedure. Both surveys give portraits of the female labour force which differ significantly in terms of age, marital status, position in the household and educational level. CENEP-W registered a female working population that was younger, less educated and more frequently married than the corresponding population registered by the CENSAL survey. But both portraits differ even more in their descriptions of the ways female workers are positioned in the labour market. These clearly reveal which are the workers that are most invisible to the usual census statistics (see Table 3.9). CENEP-W enumerated more informal workers, self-employed or family aids than the CENSAL survey (55.6 versus 35.9 per cent). As a consequence, CENEP-W detected more females working in their homes (40.7 versus 22.0 per cent) than the CENSAL survey, which identified more owners and salaried women usually working outside the home in an establishment (47.3 versus 24.4), although a few worked inside their own homes (22.0 versus 40.7 per cent). More female workers in the CENEP-W than in the CENSAL survey devote only a short time per week to working (one-third of CENEP-W workers compared with only 7 per cent of CENSAL workers invest less than 19 hours a week), and less than one-half work full-time, a figure which rises to 71 per cent among CENSAL workers (see Table 3.9).

The differences between both pictures of the female labour force are only partially due to the (29) self-consumption producers discovered by the SCM, all of whom are agricultural labourers contributing a few hours per week without pay to the household production. The differences are also only partially accounted for the small (12) number of workers registered by Q8, most of whom work a few hours per week inside their homes for themselves or as unpaid family workers. Among the remaining workers enumerated by the other CENEP questions (Q7 and Q9), own-account or unpaid family workers, whose working place is outside an establishment, are more numerous than among the workers counted by the CENSAL question. There is something built into the CENSAL procedure that makes it more sensitive to enumerating female workers in the formal labour market; conversely, there is something in the CENEP-W procedure that makes it more sensitive to enumerating female workers with lower (cultural) probabilities of participating in the labour market and higher probabilities of working, if necessary, in the informal sector.

In Posadas the situation is rather similar. Relative to Asunción, the Posadas female labour force is somewhat more educated and participates in a more developed, diversified economic structure with a larger per cent employed in higher occupational categories as professional and technical workers (employers and employees) in an establishment; yet, the CENSAL survey is more sensitive to enumerate less visible, informal own-account and unpaid family labourers, working at home less than twenty hours a week. As in Asunción, the difference between the female labour force recorded by the CENSAL and by the CENEP-W surveys is only partly due to the increased number of female

labourers captured by the SCM and Q8. The remaining items on the CENEP-W questionnaire are also more sensitive to recording less visible workers than is the CENSAL survey.

As far as males are concerned, the CENSAL and the CENEP-W surveys give quite similar portraits. The only important difference concerns the amount of time worked: the CENEP-W survey is again better at capturing labourers who work less than full-time, whereas the CENSAL survey is more sensitive to full-time labourers.

The differential sensitivity of the CENSAL and CENEP-W surveys to the informal and the formal labour force can be made more evident by computing the "refined activity rate in informal occupations". Informal activities are poorly remunerated, low productive activities, conducted in small productive units with low capital requirements and based on a rudimentary division of labour and scarce differentiation of the means of production (PREALC: 1987). The labour force engaged in these kind of activities generally has a high turnover and labour instability, low level of qualifications and very low income. A high percentage of informal workers are self employed (Raczynski: 1979).

This study did not specifically address the measurement of informal labour but the information gathered makes an approximation possible. For this study I operationally defined the "refined activity rate in informal occupations" in terms of employment status, place of work, and school level. According to the definition, informal labour includes own-account workers with only primary schooling or less, all unpaid family workers irrespective of the place of work and the school level, and salaried workers and employers working outside establishments (on the street or route, at home, or in the employer's home) with primary schooling or less.

Most women in the informal sector in Posadas and Asunción are domestic servants (around fifty per cent of all informal female workers), washerwomen, ironers, cooks and cleaning women who work for more than one employer for only a few hours per week. In Asunción, street vendors of food and other manufactured goods purchased for resale are also a sizable proportion of the informal workers. Most informal male workers in both localities are own-account workers with low schooling, who work in small industrial enterprises, commercial establishments and repair workshops at home or outside at fixed premises. As can be seen in Table 3.10, the CENEP-W informal activity rates are systematically higher than the corresponding CENSAL rates for both sexes in both localities.

But it is worth highlighting again the greater sensitivity of the CENEP-W survey to capture formal employment among women than among men in the less developed economic context of Asunción than in Posadas. In fact, CENEP-W captures over fifty and over one-hundred and thirty per cent more informal female labourers than the CENSAL survey in Posadas and in Asunción, respectively. In addition, CENEP-W captures about one-third and over fifty per cent more informal male labourers in Posadas and Asunción respectively.

The small number of self-consumption producers captured by the SCM had originally declared themselves mostly as housewives, if women, and as retired or pensioned, if men, in both localities (see Table 3.11).

Relative effects of questionnaire and training in the rural and urban contexts

As was repeatedly shown throughout this chapter, the CENEP-W procedure captures more workers than the CENSAL procedure. This greater capacity of CENEP-W is differential by sex, by area of residence, and by level of development. CENEP-W made visible more female than male and more rural than urban workers. The CENEP-W also made more workers visible in the less developed than in the more developed country.

To assess the reasons for the greater recording capacity of the CENEP-W procedure, it is worth recalling that CENEP-W differs from the CENSAL procedure in two aspects: the questionnaire and the training of interviewers. The CENSAL survey reproduces the way Latin American censuses usually gather information on the activity status of the population. This means one single question followed by a set of pre-coded response alternatives administered by interviewers with at most an average of three hours of training. On the other hand, the CENEP-W survey uses a set of questions based on the (apparently) single CENSAL item and attempts to discover workers otherwise self-defined as inactive. These questions are asked by interviewers given more extensive training not only emphasising the handling of items and concepts but also the awareness of the cultural norms ruling the sexual division of labour.

As previously stated, with the available information it is impossible to assess how much of CENEP-W enumeration is due to the questionnaire and how much to the training. The activity rates obtained by CENEP-W and CENSAL surveys include the joint effects of the questionnaire and the training. There is some evidence, however, that both affected the results but that the questionnaire had a greater effect. One reason among many could be that a better questionnaire leads to a better administration by interviewers. One piece of evidence is that the differences between the CENSAL and the CENEP-W rates, excluding workers enumerated by the SCM in the rural contexts and by the SCM and Q8 in the urban contexts, are substantially smaller than the differences with respect to the total CENEP-W rates (see Tables 3.3 and 3.8). This is true for women and men, though the size of the differences among the former are much greater than among the latter. Since both CENEP-W rates were obtained by identically trained interviewers, it can be hypothesized that the effect of the training is lower than the effect of the questionnaire.

The greater enumerating capacity of CENEP questionnaire, especially among women, can be attributed to different factors. First, by "unfolding" the response alternatives of the CENSAL item in a set of questions to be read (and answered) one by one, interviewers and interviewees were compelled to read them one at a time before proceeding to the next. In the CENSAL survey, however, many interviewers read the response alternatives

together (as many data collectors in population censuses do, in spite of being instructed to do otherwise). In doing so, interviewees learned about all the alternatives at once and were directed toward choosing one of the following responses: worked, looked for a job, or engaged in household chores, etc. In this situation, it is not surprising that many women engaged in some kind of economic activity, in addition to domestic chores, declared themselves housewives because they considered this role either to be the main one in terms of social acceptability or time devoted to housekeeping. The same happened with retired people or with students of either sex.

Second, the CENEP phrasing "did you work at anything" (Q7) is less biased toward formal employment than is the CENSAL phrasing "did you work".

Third, the inclusion of two "rescue" items addressed to people who initially declared themselves as inactive, captured a substantial portion of the female labour force otherwise overwhelmingly self-identified as housewives or students. Both items reiterate the question on the activity status and convey to the interviewees the meaning of "work" adopted by the researchers. This was done by giving examples of activities (usually not perceived as "work") with products sold in the market (Q8) or consumed within the household (SCM). Irrespective of the rural or urban nature of the population, the SCM uncovered many more economically active "inactives" than Q8.

It is not possible to assess how much of the questionnaire effect is due to the unfolding of the response alternatives, how much to the reiteration, and how much to the translation of the meaning of "work". It is evident, however, that the effects of one or the other vary along the degree of socio-economic development. In fact, the greater recording capacity of Q7 among women in Argentina than in Paraguay, both in urban and rural areas, is a consequence of the higher educational level of the former as well as the more developed economic context in which the women are immersed. The same reasons might explain the recording capacity of Q8, and especially of the SCM, in Paraguay, which was practically absent in Argentina, except for the rural area.

If future censuses had to choose between developing and using a new questionnaire or adopting a new training program for interviewers, these findings suggest that a new questionnaire would be more beneficial. The questionnaire could be simpler than the one used here but the replacement of the single CENSAL question by a set of mutually exclusive questions is essential. In addition, one of the questions must convey that production for self consumption is considered "work". Anker (1987) arrived at a similar conclusion when testing his "key word" questionnaire against another containing a brief activity list.

CHAPTER 4

RESULTS BY LENGTH OF THE REFERENCE PERIOD AND MINIMUM WORKING TIME REQUIREMENT

The usual and the current labour force

To assess the effects of the length of the reference period upon the recording of workers, I will compare the activity rates recorded by both CENEP surveys. One of the surveys measured the "current" labour force by establishing a one-week reference period (CENEP-W); the other measured the "usual" labour force by establishing a one-year reference period (CENEP-Y). As women are known to engage more frequently than men in seasonal, sporadic activities, it was hypothesized that the effect of increasing the reference period would be to obtain a greater increase in female than male activity rates.

As shown in Tables 4.1 and 4.2 and Charts 4.1 and 4.2, increasing the reference period leads to only a small increase in female and male activity rates in the four localities. In effect, the gross per cent difference between the "usual" and the "current" activity rates goes from only 2.4 to 16.9 per cent in the rural localities (Table 4.1) and from 3.5 to 17.3 per cent in the urban Paraguayan locality of Asunción (Table 4.2). In Posadas not only is there no increase but there is even a slight, unexplained decrease in activity rates with a longer reference period. These results, which contradict expectations, find an explanation in the high level of the "usual" activity rates. Indeed, the CENEP-W activity rates are so high (in the case of the female population due to the large recording capacity of the SCM in the rural areas) that there is a very small possibility of discovering a substantial number of additional workers. If one takes into account these circumstances and computes the actual per cent increase in activity rates out of the potential per cent increase (the relative increase), the increase shown is great, even for men, except in Posadas where no more workers of either sex are captured with a one-year reference period. In effect, this relative per cent increase goes up to 70 and 48 per cent for females and males in Leandro N. Alem, to 29 and 41 per cent in Piribebuy, and to 25 and 18 per cent in Asunción.

If the survey were to exclude the self-consumption producers uncovered by the SCM, the effect of increasing the reference period would be much greater for the remaining workers (see Tables 4.1 and 4.2). In this case the gross effects are quite evident for women (but not for men) in all four localities except for Posadas. These effects amount to 35 per cent in Leandro N. Alem, 48 per cent in Piribebuy, and 25 per cent in Asunción.

The absence of increase in male activity rates using a longer reference period both in the urban and the rural areas of Argentina and Paraguay is evidence that leaving and re-entering the labour market and working seasonally or sporadically is much less frequent among men. It may also be evidence that men are more willing than women (because of cultural reasons) to perceive and to declare themselves as workers under any circumstances.

The greater effects upon the enumeration of female workers that the inclusion of the SCM has relative to the effect of a longer reference period makes it advisable, in the case of adopting only one or the other, to include an item to capture the self-consumption producers.

Less than part-time versus full-time working time

We did not set any minimum working time requirement for people to be considered economically active, but we asked employed people for the total time they worked during the reference period, i.e., last week (CENEP-W) and last year (CENEP-Y). In other words, time was considered for all, not just the main occupation, as we did with the activity status.

As reported in Chapter 2, we recorded the amount of time worked quantitatively and qualitatively. In the first case we added the number of hours worked day by day for each of the seven days of the week. In the second case, we added the portions of time worked (full-time, about half a day, less than half a day) for the same seven days. The choice between the quantitative and the qualitative way of estimating the working time depended on the interviewer's ability to use either method. For the yearly reference period the estimation was only qualitative: twelve months, more than six months, less than six months, and one month or less. The self-consumption producers counted by the SCM were asked for the time worked exclusively in qualitative terms both in the CENEP-W and the CENEP-Y surveys.

Before looking at the effects of the length of time worked on the activity rates, I will discuss the differential use of qualitative and quantitative estimates of time by female and male workers recorded by the CENSAL and the CENEP-W surveys in the rural and urban localities of both countries. The analysis excludes the self-consumption producers counted by the SCM for they were not given the opportunity to make quantitative estimates, hence their inclusion would bias the results by weighting the qualitative side.

As shown in Table 4.3, in the urban areas of both countries, most male and female workers estimated the amount of time worked during the previous week in quantitative terms. There are no significant differences between the sexes either in Posadas or Asunción. However, the quantitative approach is much more generalised among workers in the more developed Argentinian society than in Paraguay: around 90 per cent in Posadas but around 70 per cent in Asunción, according to both the CENSAL and the CENEP-W surveys. In the rural areas the qualitative estimation of time is much more prevalent and it is significantly more among workers recorded by CENEP-W than by the CENSAL survey. In fact, over half to two-thirds of CENEP-W workers could answer in quantitative terms only. These findings, which would be more dramatic if the workers counted by the SCM were included, point to the importance of measuring time qualitatively in future censuses, especially in rural areas, as, otherwise, this information would be lost.

The activity rates for different amounts of time worked can now be considered. We calculated weekly and yearly activity

rates assuming that the actual time people reported to have worked corresponded to minimum time requirements established by the definition of economically active population and stated in the questionnaire. These are activity rates of employed people because the amount of time worked is only pertinent for the economically active who have had an occupation during the reference period. The analysis focuses on the CENEP surveys for they provide more valid measurements of the labour force. The CENEP-W activity rates are occasionally compared with the CENSAL rates, as both are weekly, only to emphasise certain specific aspects. For the purpose of this analysis, working time assumes three values: full-time, part-time, and less than part-time. For a one-week reference period, these correspond to 35 hours or more, 20 hours or more, and 1 hour or more. For a one-year reference period, these correspond to 12 months, 6 months or more, and 1 month or more.

Table 4.4 and Charts 4.3 and 4.4 show that the shorter the time worked per week and per year, the higher the activity rates. In other words, the shorter the time requirement, the larger the number of workers counted. This is true among rural and urban residents in both countries irrespective of level of development, but some differences are evident.

According to the CENEP-W as well as to the CENEP-Y survey, women are much more affected than men by the minimum working time requirement. This is true in the rural and the urban areas of both countries. Or, to put it another way, female workers vary much more than male workers in regard to the time they devote to work; male working behaviour is much more homogeneous and tends more frequently to follow a full-time pattern of work. In fact, the differences between the full-time and the less than part-time female employment rates obtained by the CENEP-W surveys are from twice (Piribebuy: 104.5 and 48.3 per cent) to over six times greater than the difference for the corresponding male rates (Leandro N.Alem: 198.9 and 30.6 per cent). A less intense but similar trend is found in the CENEP-Y survey.

It is worth pointing out that when the length of the working time requirement is shortened, the employment rates increase much less in the CENSAL than in the CENEP-W survey. For example, in Leandro N. Alem, whereas the female employment rates obtained by CENEP-W increase from 26.4 to 78.9 per cent (i.e., 198.9 per cent), the corresponding rates obtained by the CENSAL survey only grew from 21.3 to 25.6 per cent (i.e., 20.2 per cent). This finding is evidence of the lower sensitivity of the CENSAL survey to capture female workers who do not work on a full-time basis. The evidence acquires more weight when taking into consideration that no minimum time requirement was set to classify people as economically active in this as well as in the remaining surveys. A similar pattern is found among male workers, but the pattern is much less intense because fewer men than women declare working on other than full-time basis.

Relative effects of the length of the reference period and the length of the minimum time requirement

One question remains to be answered. Which factor has a greater effect upon the activity (employment) rates: the length of the reference period or the minimum working time requirement? The answer is quite evident: the working time requirement. This is for females as well as for males in the rural and urban areas of Paraguay and Argentina. In effect, for the Leandro N. Alem females the difference between the full-time and the less than part-time weekly activity rates amounts to 198.9 per cent, whereas the difference between the weekly and the yearly activity rates of full-time workers amounts to 43.6 per cent only. The corresponding figures for the Piribebuy females are 104.5 and -21.9 per cent; for the Posadas females, 120.7 and 72.9 per cent; and for the Asunción females, 126.9 and 60.3 per cent. With minor exceptions the same trends appear when the comparison is made for the yearly activity rates (see Table 4.4).

This means that in order to measure the labour force as completely as possible (whatever the length of time women and men devote to supplying labour to the production of goods and services), it is more efficient to lower (or to eliminate) the minimum working time requirement than to enlarge the reference period. This does not mean that labourers who work only less than part-time are to be given equal weight in the labour force with labourers who work full-time. But it is important to stress the need to identify all the people who contribute labour to society and to collect information on the amount of time they devote to it. Once a reliable and complete enumeration is obtained, different activity rates for different purposes may be calculated for different working time requirements.

CHAPTER 5

SUMMARY AND CONCLUSIONS

The invisibility of a large sector of women workers in censuses, especially in developing countries, has already been found to be commonplace by experts in the field. Population censuses underenumerate women's economic contribution, offering, therefore, a distorted view to planners, policymakers, researchers, and to society at large. There is already abundant empirical evidence that the underenumeration is selective by sex: high for women and low for men. Such a state of affairs results from the specific ways that women are positioned in the labour force, the definition of economic activity, and the characteristics of the censal procedures, all of which are related to cultural assumptions concerning the sexual division of labour. In spite of the existing consensus on the matter, there have been few systematic attempts to modify the situation.

This monograph summarizes the findings of empirical research specifically designed to improve the accuracy of the censal measurement of the female labour force. Its ultimate aim was to grant women workers the same chances as men of being counted in labour statistics. The research was guided by two objectives. On the one hand, we wanted to assess the effects upon the enumeration of women workers of three possible sources of under-reporting: the type of procedure of data collection on the activity condition of the population (questionnaire and interviewer training), the length of the reference period, and the length of the minimum working time required from people to be considered economically active. On the other hand, we also wanted to design and to test the adequacy of alternative census procedures after the more recent ILO recommendations for gathering statistics on the labour status of the population. Although centred on women, the research also included men.

The study was conducted in two Latin American countries, Argentina and Paraguay. More specifically, it was conducted in two urban areas, specifically the city of Posadas (the capital of the Province of Misiones) in Argentina and the city of Asunción (the capital of Paraguay), and two rural areas, specifically Leandro N. Alem and Piribebuy, two predominantly rural localities based on subsistence economy in Argentina and Paraguay respectively.

Both countries, though sharing a common cultural tradition, differ markedly with respect to their physical, demographic, economic, and social characteristics. Argentina is one of the most urbanised and developed countries of the region; Paraguay is still predominantly rural and ranks among the less developed countries of the region.

In each of the four localities we conducted three highly controlled experimental surveys on comparable household samples. One of the surveys (the "CENSAL" survey) reproduced the usual census procedure (a single item to investigate the "activity condition" and a short period of interviewer training), setting a short (one week) reference period. In the other two we used an alternative questionnaire and training procedure, using a

short reference period in one case (the "CENEP-Week" survey) and a long one in the other (the "CENEP-Year" survey). We used the same conceptual definition of economic activity in the three surveys, one which follows the 1982 ILO recommendation quite closely. The emphasis of the study was on activity-inactivity rather than employment-unemployment status.

In sum, the three surveys contain three independent, explanatory variables: type of data collection procedure (CENSAL and CENEP), length of the reference period (one week and one year), and length of time worked during the reference period (full-time, part-time, and less than part-time). The first two variables were manipulated when creating the surveys (CENSAL, CENEP-Week, and CENEP-Year), the third one was investigated during the interview. On the whole we interviewed close to 4,000 persons of both sexes in Argentina and 5,000 in Paraguay. Those interviewed were the potentially active members of the households, defined as those aged 14 years and over in Argentina and 12 years and over in Paraguay, according to the 1980s respective population censuses.

The CENSAL procedure investigated the activity status of the population in the same way as most Latin American censuses of the last three decades: one single question followed by a set of pre-coded response alternatives asked by interviewers with an average of three hours of training.

The CENEP procedure investigated the activity status with a set of questions posed by interviewers with two and one-half days of training. The set of questions includes response alternatives of the (apparently) single item used in the CENSAL questionnaire and makes the definition of "work" explicit to the interviewees by giving concrete examples of activities generally not recognised to be economic, placing special emphasis on those examples addressed to producing for self consumption. The training was organised to obtain an adequate conceptual and technical handling of the questionnaire and to sensitise census takers to sex biases operating in the assignment of activity status to men and women. In addition, the three surveys gathered information on a number of socio-demographic and economic variables: sex, age, marital status, educational level, household status, occupation, industry, employment status, place of work, time worked, and destination of the agricultural production (mostly market or self consumption). All questions, except for length of time worked, asked for the main activity. Time was investigated both quantitatively and qualitatively.

The study consistently produced evidence that the usual Latin American population censuses give a fairly valid portrait of the male labour force but a quite invalid one of the female labour force. This is much more so in the rural than in the urban areas and in the less than in the more developed country. For the study proved that these censuses give a fairly adequate portrait of full-time, salaried, formal workers. It showed that the type of questionnaire, interviewer training, length of reference period, and length of the minimum working time requirement are indeed responsible for the (sex-differential) underenumeration of female workers. Of the four factors, the questionnaire and the length of the minimum working time requirement proved to have the greater effects, so much so that

a fairly high coverage of the labour force may be obtained even with the usual short training of censists and a short reference period.

The study also provided conclusive empirical evidence that, even though international standards of censuses through the eighties neither included nor excluded self-consumption production from the definition of economic activity, national census practices, however, did capture it when performed by men and not by women.

Though using the same conceptual definition of "economic activity" as the CENEP-Week survey, the CENSAL procedure underenumerated as many as five-sixths of the rural female workers and close to one-half of their urban counterparts in Paraguay. Only about one-tenth of the male workers, both rural and urban, were victims of similar statistical invisibility. The corresponding figures for Argentinian females are two-thirds in the rural area and one-fifth in the urban one. The figures for males do not reach one-tenth in either the rural or the urban location.

The women workers made visible by the CENEP procedure in the rural areas of Argentina and Paraguay are overwhelmingly self-consumption producers working as unpaid family aids or on own-account basis at home, part-time or less. The women workers "uncovered" by the CENEP procedure in the urban areas are "secondary workers", engaged in informal activities also as self-employed or unpaid family aids, at home, part-time or less. Most of these women, either in the rural or urban areas, had originally identified themselves as economically inactive housewives. Most of them belong to the central age groups of the active life. The few men "uncovered" by the CENEP procedure had originally identified themselves as either students or retired or sick persons; they belong to extreme age groups who devote little time to working.

Neither the CENEP nor the CENSAL survey set a minimum working time to define persons as economically active. Therefore, the priority that many working females assign to the domestic chores when reporting their activity status cannot to be attributed to a temporal requirement. Other reasons related to the socially shared ideas about the sexual division of labour seem responsible for the non-perception of interviewees and of (female and male) interviewers of their activity status.

The question of whether people who work less than part-time should be counted equally with people who work part or full-time is another issue which also cannot be tackled if no reliable enumeration of everyone contributing to production is obtained.

The evidence is conclusive in regard to the need to re-examine the current concepts and methods to improve the measurement of the female participation in economic activity. The international organisations have taken some steps in this direction. Indeed, the new recommendations issued by the ILO-UN for the upcoming 1990 round of censuses, if put into practice, will have a marked effect on the measurement of the female labour force, much more so than on the male population. In particular I single out the explicit inclusion of self-consumption producers within the labour force; the elimination of a minimum working time criterion for all workers, including the unpaid family

workers; the acceptance that only one hour's work is to be required for people to qualify as economically active; and the collection of information on the current and the usual labour force. Nevertheless, attempts to translate the concepts into reliable measurement procedures have been absent so far.

On the basis of the study conducted in Argentina and Paraguay, it seems highly advisable to drop the use of a single censal item to investigate the activity condition of the population and to "unfold" the response alternatives into a set of questions that must be read (and answered) one by one, thus eliminating the possibility of offering a choice among alternatives. It also seems essential to convey to the interviewees the meaning of "work" by using concrete examples usually not perceived as economic activities and stressing that self-consumption production is also "work". While lowering the working time requirement to a minimum of one hour, it seems advisable to collect information on the actual time worked using both a short and a long reference period. This information allows the computation of different measurements of the labour force for different purposes. The qualitative appraisal of time worked should be included to gather information from people unable to report time quantitatively.

The pertinence of the new recommendations for the censuses of the 1990s and the urgency for re-designing the instruments to put them in practice are highlighted by the empirical evidence supplied here. If not changed, the future censuses will continue to offer a quite distorted portrait of women's contribution to the economy and to society at large. Each country has to decide whether investing in these changes is worthwhile, but this decision should be made with an awareness of the size of the omission they are willing to accept.

The size of the distortion has been made evident here, and the producers of information used by policy makers, researchers, and planners have the chance of diminishing it. The producers of information are also the ones to face the significant problem of maintaining the comparability of the statistical series as any change that improves the enumeration of some segments of the labour force at the same time endangers the interpretation of social changes.

POSTSCRIPTUM

I do not want to end this monograph without acknowledging a most promising event. The study summarized here, which is the result of a decade of research, has already had an impact on the coming population census of Argentina. Indeed, after two long years of discussions addressed to improve the census, one of the very few changes that the National Institute of Statistics and Censuses of Argentina introduced in the questionnaire to be applied in 1991 concerns the measurement of activity status.

The major changes included are: 1) the "unfolding" of the response alternatives of the single 1980 question into a set of questions to be answered by yes or no, together with the elimination of the economic inactivity categories, two of which will be identified by means of other sections of the questionnaire (students and retired or pensioned); 2) the explicit elimination of a minimum time requirement for everyone, including unpaid family workers; and 3) the reiteration of the question on activity status phrased in a way which de-emphasises formal employment.

The significance of the changes introduced are evident from a comparison between the 1980 and the 1990 questions on activity status quoted below.

1980 Argentinian census
What did you do last week?

Worked
Did not work but had a job
Looked for work
Engaged in household activities
Studied
Is retired, pensioned, rentier
Is sick or invalid

1990 Argentinian census
During last week, did you
work, even if only for a
a few hours?

yes
no

Did you do any activity for
others at home or did you
help somebody with his/her
job, store or farm?

yes
no

Were you on license because
of illness, vacations,
etc.?

yes
no

During the last four weeks,
did you look for a job?

yes
no

It is rewarding to witness a change in attitude, a coming together of researchers and producers of statistics that has the potential to improve our understanding of a large sector of women workers whose contribution to society until now has been invisible.

APPENDIX ON METHODS

APPENDIX A

Samples and sampling procedures

In Argentina, for the urban surveys conducted in Posadas, we used probabilistic sampling with systematic selection in one single stage. We used as a sampling frame the list of dwellings of the 1985 Permanent Household Survey, where the units were disaggregated into four strata corresponding to four socio-economic levels. The selection of dwellings, proportional to the four strata, was done with random start and fixed interval. When replacement was needed, we selected the contiguous dwelling within the same block. The Permanent Household Survey's cartography was used, which consists of a map of the city containing the limits of the strata, the blocks, and other usual divisions.

As the Permanent Household Survey is not collected in the rural areas of Argentina (with few exceptions), we did not have an up-to-date sampling frame for the rural surveys conducted in Leandro N. Alem. In this case we used a two-stage probabilistic sampling. In the first stage, "radios" were chosen from among all censal fractions excluding the one corresponding to the urban centre (16 out of the 32 rural "radios"). In the second stage, we selected the dwellings. In order to accomplish this, with the help of the fraction and "radio" summary forms of the 1980 Population Census, we formed clusters of ten dwellings average in a systematic and independent way with a variable sampling fraction which resulted from the number of dwellings registered in each "radio" and from the number needed to meet the requirements of the analysis. When replacement was needed, the closest dwelling was selected.

Since neither a list of dwellings nor cartographic material with their location were available, the sample was drawn jointly with the fieldwork, something that required a strict following of the plan and a considerable amount of supervision. The supervisor randomly assigned the households of each cluster to each interviewer. The procedure was reiterated "radio" by "radio". The cartographic material used was a departmental map of the 1980 census where the limits of fractions and census "radios" were registered, together with several reference points (roads, routes, landed properties) which facilitated the interviewers' work.

In Paraguay, the sampling frame for the surveys conducted in the metropolitan area of Asunción⁹ was formed by the enumeration areas used by the 1982 census. These areas, which are easy to locate, contain 25 dwellings on average. The sample chosen was the one used by the 1984 Household Survey. It is a two-stage probabilistic sample. In the first stage the enumeration areas were selected systematically with random start

⁹ The metropolitan area of Asunción includes the city of Asunción, the districts of Fernando de la Mora, Lambaré, Limpio, Luque, Mariano Roque Alonso, Nemby, San Antonio, San Lorenzo, Villa Eliza, and the urban area of Villa Hayes.

and a selection probability proportional to the size of each area; in the second stage, five dwellings per censal area were selected with equal selection probability. When an interview with household members was not possible, either because of rejection, absence of the dwellers or other reasons, the replacement proceeded as follows: i) if the units of the enumeration area were relatively homogeneous, the dwelling was replaced by one contiguous to it; ii) if the units were heterogeneous, the supervisor selected at random, within the same sample area, a dwelling similar in its characteristics to the one replaced.

As in Asunción, the sampling frame in Piribebuy was formed by the enumeration areas used in the 1982 census. On the basis of the census records containing the number of occupied dwellings and population, clusters of about fifty dwellings were formed. The selection interval was set up on the basis of the number of enumeration areas available and the number of dwellings required by the surveys. The actual selection of clusters was done systematically and with random start. These clusters were divided into segments and randomly assigned by the supervisor to the interviewers in the field.

When replacement was necessary, the same procedure as in Asunción was followed. The cartography used consisted of sketches at the locality level, divided into the enumeration areas used in the 1982 census, with indication of the dwellings then recorded, plus reference points which made the interviewers' work easier (rivers, routes, roads, etc.).

APPENDIX B

The questionnaires

Figure B.1 Household's questionnaire: block on socio-demographic characteristics of household members.

SOCIODEMOGRAPHIC CHARACTERISTICS OF ALL HOUSEHOLD RESIDENTS AGED 12/14 YEARS OF AGE AND OVER

1. How many persons aged 12/14 years of age and over usually live in this house? Don't forget to count the relatives, friends, and domestic servants.

No. of persons —

| Order No. | 1a. Which is the name and surname of the household head? WRITE IT DOWN IN ORDER No. 1. We are now going to write down the names of all other residents aged 12/14 years and over. Let's start with the household's spouse, then with the single children, from the oldest to the youngest. If there are, let's then proceed with the married people and their children, also from the oldest to the youngest. At the end there come the other relatives and the non-relatives. | 2. What is your relation to the head of the household? | 3. Is he/she a man or a woman? | 4. How old is he/she? | 5. What is your marital status? | 6. What is the last grade or year of study you have completed? |
|-----------|--|--|--------------------------------|-----------------------|---------------------------------|--|
| 1 | | 1. head | 1. man | | 1. single | 1. none |
| 2 | | 2. spouse | 2. woman | | 2. legally married | 2. incomplete primary |
| 3 | | 3. son/daughter | | | 3. consensually married | 3. complete primary |
| 4 | | 4. other, which one? | | | 4. widowed | 4. incomplete secondary |
| 5 | | 9. doesn't know | | | 5. separated/divorced | 5. complete secondary |
| 6 | | | | | 6. doesn't know | 6. incomplete higher education |
| 7 | | | | | | 7. complete higher education |

Figure B.2: Censal questionnaire.

Name and surname of interviewee: _____

| Country | Cartographic location | Household # | Order # in household | Order # of respondent | Kinship relation | Sex | Age | Marital status | Educational level |
|---------|-----------------------|-------------|----------------------|-----------------------|------------------|-----|-----|----------------|-------------------|
| | | | | | | | | | |

7. What did you do last week?

- Worked..... 1] GO TO 8
- Did not work but had a job.... 2]
- Looked for work..... 3]
- Engaged in household activities 4]
- Studied..... 5]
- Is retired, pensioned, rentier 6] END OF INTERVIEW
- Is sick or invalid..... 7]
- Other situation, wich one?....]
- _____]
- Don't know..... 9]

8. Which was your main activity or occupation, that in which you worked more time last week?

- _____] GO TO 9
- _____]
- Don't know XX]

9. In that activity, were you:

- Owner or partner?..... 1]
- Salaried worker?..... 2]
- Worker for commission?..... 3]
- Own-account worker?..... 4]
- Unpaid family worker?..... 5] GO TO 10
- Unpaid non-family worker?..... 6]
- Another, which one? _____]
- _____]
- Don't know..... 9]

10. Where did you carry it over?

- In a firm?..... 1] GO TO 11
- In the owner's home?..... 2]
- In the street or route, in a fixed place?..... 3]
- In the street or route, in a non-fixed place?..... 4] GO TO 12
- In the home of others?..... 5]
- At home?..... 6]
- Another, which one? _____]
- _____]
- Don't know..... 9] GO TO 14

11. Which is the main product or service supplied by the firm?

- _____] IF AGRICULTURE,
- _____] GO TO 13,
- _____] OTHERWISE TO 14
- Don't know 99] GO TO 14

12. What product or service did you supply?

- _____] IF AGRICULTURE,
- _____] GO TO 13,
- _____] OTHERWISE TO 14
- Don't know 99] GO TO 14

13. That product was:

- Mostly for selling?..... 1]
- Mostly for your own or your family consumption?..... 2] GO TO 14
- Don't know..... 9]

14. How many hours did you work each day of last week in all your activities, not only in the main one?

- Monday?]
- Tuesday?]
- Wednesday?]
- Thursday?]
- Friday?]
- Saturday?]
- Sunday?]
- TOTAL]
- Don't know..... 99] GO TO 15

15. Let's see, in all your activities, on monday, did you work the whole day, about half a day, or small amount? MARK DOWN AND RE-ITERATE FOR EACH DAY OF THE WEEK.

| | Full day | About half a day | Small amount | Didn't work | Don't know |
|------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Monday? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Tuesday? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Wednesday? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Thursday? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Friday? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Saturday? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Sunday? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

END OF INTERVIEW

Figure B.3: CENEP-week questionnaire.

Name and surname of interviewee: _____

| Country | Cartographic location | Household # | Order # in household | Order # of respondent | Kinship relation | Sex | Age | Marital status | Educational level |
|---------|-----------------------|-------------|----------------------|-----------------------|------------------|-----|-----|----------------|-------------------|
| | | | | | | | | | |

ACTIVITY STATUS

You should remember that "work" means, in the context of the census, not only activities performed outside the home (in farms, industrial firms, stores or public offices) but also those performed on own-account basis or helping a relative with his job or store without pay.

The labour of family members for their own farm, store, or industrial firm is conceived to be "work" both whether remunerated or unremunerated. Washing and sewing clothes, cleaning the house, cooking, carrying of water or firewood, or shopping for the members of the household consumption are not conceived to be "work", instead.

You should remember that women, children and old people wrongly define themselves as "homemakers", "students", and "retired" even when engaged in some kind of work.

7. During last week, did you work at anything?

- Yes..... 1 — GO TO 13
- No..... 2 — GO TO 8
- Don't know..... 9 — END OF INTERVIEW

8. And during that week, did you do or help to do any activity, paid or unpaid, inside or outside your household, if only for a few hours? For instance: helping in a grocery store or kiosk; selling crafts, food, vegetables, newspapers, lottery tickets or cosmetics; planting, harvesting, or raising chickens to be sold; washing, ironing, or sewing clothes for others; making confitures, cheeses, or knitting to sell; taking care of children or old people for pay.

- Yes..... 1 — GO TO 13
- No..... 2 — GO TO 9
- Don't know..... 9 — END OF INTERVIEW

9. During last week, did you not work because of illness, leave, strike, bad weather conditions or any other temporary reason, even though you had a job or an occupation?

- Yes..... 1 — GO TO 13
- No..... 2 — GO TO 10
- Don't know..... 9 — END OF INTERVIEW

10. During that week, did you look for a job or any activity by talking to friends, offering yourself in a firm, advertising or answering ads, or in any other way?

Yes, what activity or occupation? _____

- _____ 1 — END OF INTERVIEW
- No..... 2 — GO TO 11
- Don't know..... 9 — END OF INTERVIEW

Figure B.3 (continued)

11. During that week, did you stop looking for a job or an occupation because either you or a family member were sick, because of bad weather conditions, or for any other reason?

- Yes..... 1 — END OF INTERVIEW
- No..... 2 — GO TO 12
- Don't know..... 9 — END OF INTERVIEW

12. And during that week

- Were you a housewife and did you not work?..... 1 —
- Were you a student and did you not work?..... 2 —
- Were you retired, pensioned or rentier and did you not work?..... 3 —
- Were you chronically sick or invalid and did you not work?..... 4 —
- Were you in another situation? which one? _____
- _____
- _____
- Don't know..... 9 — END OF INTERVIEW

WRITE DOWN THIS PERSON'S NAME AND SURNAME IN SCM. END OF INTERVIEW.

////////////////////////////////////
Self Consumption Module
 //////////////////////////////////////

ONLY FOR PEOPLE SELF-DEFINED AS HOUSEWIFE; STUDENT; RETIRED, PENSIONED, OR RENTIER; CHRONICALLY SICK, INVALID; OR OTHER.

IN POSADAS/ASUNCION, THIS MODULE IS TO BE APPLIED ONLY IN HOUSES WITH A VISIBLE PLOT OF LAND WHERE AGRICULTURAL ACTIVITIES OR ANIMAL HUSBANDRY, EVEN IF IN SMALL SCALE, CAN BE DONE.

A. Although you've already said that (NAME EACH OF THE PERSONS IDENTIFIED) didn't carry out any activity, during last week, did you (he/she) work in the family farm or did you (he/she) raise chickens for your own or your family's consumption, even if only for a few hours?

- Yes ___ 1 who? _____
- No ___ 2 END OF INTERVIEW
- Don't know ___ 9 END OF INTERVIEW

MARK DOWN X NEXT TO THE NAME

B. How long did you (he/she) work every day last week?

- 1. Full day
- 2. About half a day
- 3. Small time
- 4. Didn't worked
- 9. Don't know

| Order # | Name and surname | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|---------|------------------|--------|---------|-----------|----------|--------|----------|--------|
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |

Figure B.3 (continued)

ECONOMIC CHARACTERISTICS

ONLY FOR EMPLOYED, THOSE ANSWERING "YES" TO 7, 8 OR 9.

| Country | Cartographic location | Household # | Order # in household |
|---------|-----------------------|-------------|----------------------|
| | | | |

13. What was your main activity or occupation, that in which you worked more time last week?

_____]
 _____] GO TO 14
 Don't know XX]

17. What product or service did you supply?

_____]
 _____] IF AGRICULTURE,
 _____] GO TO 18,
 Don't know 99] OTHERWISE TO 19
 GO TO 19

14. In that activity, were you:

Owner or partner?..... 1]
 Salaried worker?..... 2]
 Worker for commission?..... 3]
 Own-account worker?..... 4]
 Unpaid family worker?..... 5]
 Unpaid non-family worker?..... 6] GO TO 15
 Another, which one? _____]
 Don't know..... 9]

18. That product was:

Mostly for selling?..... 1]
 Mostly for your own or your family consumption?..... 2] GO TO 19
 Don't know..... 9]

15. Where did you carry it over?

In a firm?..... 1] GO TO 18
 In the owner's home?..... 2]
 In the street or route, in a fixed place?..... 3]
 In the street or route, in a non-fixed place?..... 4] GO TO 17
 In the home of others?..... 5]
 At home?..... 6]
 Another, which one? _____]
 Don't know..... 9] GO TO 19

19. How many hours did you work each day of last week in all your activities, not only in the main one?

Monday? _____ Friday? _____]
 Tuesday? _____ Saturday? _____] END OF INTERVIEW
 Wednesday? _____ Sunday? _____]
 Thursday? _____ TOTAL _____]
 Don't know..... 99] GO TO 20

16. Which is the main product or service supplied by the firm?

_____]
 _____] IF AGRICULTURE,
 _____] GO TO 18,
 Don't know 99] OTHERWISE TO 19
 GO TO 19

20. Let's see, in all your activities, on Monday, did you work the whole day, about half a day, or small amount? MARK DOWN AND RE-ITERATE FOR EACH DAY OF THE WEEK.

| | Full day | About half a day | Small amount | Didn't work | Don't know |
|------------|----------|------------------|--------------|-------------|------------|
| Monday? | _____ | _____ | _____ | _____ | _____ |
| Tuesday? | _____ | _____ | _____ | _____ | _____ |
| Wednesday? | _____ | _____ | _____ | _____ | _____ |
| Thursday? | _____ | _____ | _____ | _____ | _____ |
| Friday? | _____ | _____ | _____ | _____ | _____ |
| Saturday? | _____ | _____ | _____ | _____ | _____ |
| Sunday? | _____ | _____ | _____ | _____ | _____ |

END OF INTERVIEW

Figure B.4: CENEP-year questionnaire.

Name and surname of interviewee: _____

| Country | Cartographic location | Household # | Order # in household | Order # of respondent | Kinship relation | Sex | Age | Marital status | Educational level |
|---------|-----------------------|-------------|----------------------|-----------------------|------------------|-----|-----|----------------|-------------------|
| | | | | | | | | | |

ACTIVITY STATUS

You should remember that "work" means, in the context of the census, not only activities performed outside the home (in farms, industrial firms, stores or public offices) but also those performed on own-account basis or helping a relative with his job or store without pay.

The labour of family members for their own farm, store, or industrial firm is conceived to be "work" both whether remunerated or unremunerated. Washing and sewing clothes, cleaning the house, cooking, carrying water or firewood, or shopping for the members of the household consumption are not conceived to be "work", instead.

You should remember that women, children and old people use to wrongly define themselves as "homemakers", "students", and "retired" even when engaged in some kind of work.

7. Since August last year, did you work at anything?

- Yes..... 1 — GO TO 11
- No 2 — GO TO 8
- Don't know..... 9 — END OF INTERVIEW

8. And during that time, did you do or help to do any activity, paid or unpaid, inside or outside your household, if only for a few hours? For instance: helping in a grocery store or kiosk; selling crafts, food, vegetables, newspapers, lottery tickets or cosmetics; planting, harvesting, or raising chickens to be sold; waling, ironing, or sewing clothes for others; making confitures, cheeses, or knitting to sell; taking care of children or old people for pay.

- Yes..... 1 — GO TO 11
- No 2 — GO TO 8
- Don't know..... 9 — END OF INTERVIEW

9. Since August last year, did you look for a job or any activity by talking to friends, offering yourself in a firm, advertising or answering ads, or in any other way?

Yes, what activity or occupation? _____

- _____ 1 — END OF INTERVIEW
- No..... 2 — GO TO 10
- Don't know..... 9 — END OF INTERVIEW

Figure B.4 (continued)

10. And since August last year:

- | | | |
|---|---|---|
| Were you a housewife and did you not work?..... | 1 |] WRITE DOWN THIS PERSON'S NAME AND SURNAME IN SCM. END OF INTERVIEW. |
| Were you a student and did you not work?..... | 2 | |
| Were you retired, pensioned or rentier and did you not work?..... | 3 | |
| Were you chronically sick or invalid and did you not work?..... | 4 | |
| Were you in another situation? which one? _____ | | |
| Don't know..... | 9 | END OF INTERVIEW |

//////////////////////////////////// Self Consumption Module //////////////////////////////////////

ONLY FOR PEOPLE SELF-DEFINED AS HOUSEWIFE; STUDENT; RETIRED, PENSIONED, OR RENTIER; CHRONICALLY SICK, INVALID; OR OTHER.

IN POSADAS/ASUNCION, THIS MODULE IS TO BE APPLIED ONLY IN HOUSES WITH A VISIBLE PLOT OF LAND WHERE AGRICULTURAL ACTIVITIES OR ANIMAL HUSBANDRY, EVEN IF IN SMALL SCALE, CAN BE DONE.

A. Although you've already said that (NAME EACH OF THE PERSONS IDENTIFIED) didn't carry out any activity, during last year, did you (he/she) work in the family farm or did you (he/she) raise chickens for your (their) own or your (their) family's consumption, even if only for a few hours?

Yes ___ 1 who? _____ No ___ 2 END OF INTERVIEW Don't know ___ 9 END OF INTERVIEW

MARK DOWN X NEXT TO THE NAME

B. How long did you (he/she) work since August last year?

- 1. The twelve months
- 2. More than six months
- 3. Less than six months
- 4. One month or less
- 5. Didn't work
- 9. Don't know

Order # Name and surname

| | | |
|-------|-------|-------|
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |

////////////////////////////////////

Figure B.4 (continued)

ECONOMIC CHARACTERISTICS

ONLY FOR EMPLOYED, THOSE ANSWERING "YES" TO 7 OR 8.

| Country | Cartographic location | Household # | Order # in household |
|---------|-----------------------|-------------|----------------------|
| | | | |

11. Which was your main activity or occupation, that in which you worked more time during that period?

- _____] GO TO 12
- _____]
- Don't know XX]

12. In that activity, were you:

- Owner or partner?..... 1]
- Salaried worker..... 2]
- Worker for commission?..... 3]
- Own-account worker?..... 4]
- Unpaid family worker..... 5]
- Unpaid non-family worker..... 6]
- Another, which one? _____]
- _____]
- Don't know..... 9]

13. Where did you carry it over?

- In a firm?..... 1] GO TO 14
- In the owner's home?..... 2]
- In the street or route, in a fixed place?..... 3]
- In the street or route, in a non-fixed place?..... 4] GO TO 15
- In the home of others?..... 5]
- At home?..... 6]
- Another, which one? _____]
- _____]
- Don't know..... 9] GO TO 17

14. Which is the main product or service supplied by the firm?

- _____] IF AGRICULTURE,
- _____] GO TO 18,
- _____] OTHERWISE TO 17
- Don't know 99] GO TO 17

15. What product or service did you supply?

- _____] IF AGRICULTURE,
- _____] GO TO 18,
- _____] OTHERWISE TO 17
- Don't know 99] GO TO 17

16. That product was:

- Mostly for selling?..... 1]
- Mostly for your own or your family consumption?..... 2] GO TO 17
- Don't know..... 9]

17. How long did you work since August last year in all your activities, not only in the main one?

- The twelve months..... 1]
- More than six months..... 2]
- Less than six months..... 3]
- One month or less..... 4]
- Don't know..... 9]

END OF INTERVIEW

APPENDIX C

The sensitising experiment

I present here the data collected among 30 trainees in Argentina and 23 in Paraguay. I selected only those stimuli involving pairs of couples so as to show the regularities with which economic and non-economic tasks are assigned according to sex, especially within the same household.

The analysis is centred on the differences of sex even when the same cases, and others, allow regularities associated with other socio-demographic characteristics (age, presence or absence of children and of different ages, status in the household relative to the head, urban or rural residence) to be shown. The cases chosen in the urban area were:

1. adult female/male, married with adult children: Martina and Husband (household 1).

2. adult female/male, consensually married with no children: Fidencia and Victorio (household 3).

Those chosen in the rural area were:

3. young female/male, married with three small children: Rosana and Eligio (household 2).

4. older female/male, married grandparents, living in a married son's house with the grandchildren: grandmother Yegros and grandfather Yegros (household 2).

5. older female/male, married with single adult daughter and adolescent nephew and niece: Mrs. Krasuk and Mr. Krasuk (household 4).

One word of warning is necessary. By attributing activities and activity condition to the households' members, the trainees "created" urban and rural populations. These fictitious populations have the same composition (in terms of sex, age, and all the other socio-demographic characteristics) in both countries and are therefore comparable. However, the urban and the rural populations within each country are not comparable. In the urban context the population is made up of adult married males and females, whereas in the rural one, only one case is similar to the urban as the other two are made up of older married females and males (grandparents).

When the trainees filled in form 1, they attributed "only non-economic activities" much more frequently to females than males, both being identical in all socio-demographic aspects except sex. This was true in examples of Argentina as well as Paraguay, as shown in Table C.1. In the former, the urban figures are 38 per cent for females and 0 per cent for males, and the corresponding rural figures are 59 and 22 per cent. In the latter, the equivalent figures are 42 against 0 per cent and 44 against 0 per cent. For the rest of the household members, trainees attributed "only economic activities" to some and

"economic and non-economic" to others. Females again are found more frequently than the males in the latter category. This is the case for female administrative employees, cosmetic saleswomen, domestic servants or those who work in a candy stall who had also done domestic chores at home. This is also the case, much less frequently, for male newspaper sellers and yerba mate harvesters, who are also students or retired. Therefore, for the interviewers of Argentina and Paraguay, those who carried out "only economic activities" are found much more frequently among males than among females in the urban and the rural context. When the trainees filled in form 2, again the results show many more inactive females than males for both Argentina and Paraguay and for the urban and the rural cases (see Table C.1).

The higher percentages of economic inactivity assigned to females in form 2 compared with form 1 in Argentina is due basically to the fact that, when choosing the main task (when more than one had been attributed in form 1, some being economically active and some inactive) to fill in form 2, trainees were more prone to select those defined as inactive by the censal definition. This, which violates the "priority rule" recommended for censuses (according to which the active condition has to have priority over the inactive one when classifying persons with more than one activity) occurred for females but not for males. The lack of a similar difference in Paraguay is due to the fact that most trainees in this country filled in only one activity per person in form 1, whereas in Argentina most filled in two or three. The difference between both countries is assumed to be related to cognitive development associated with the lower level of formal education of the population in Paraguay than in Argentina.

Figure C.1: Form 1 (Posadas and Leandro N. Alem)

LABOUR AND THE TYPE OF HOUSEHOLD

First name and surname: _____

Place and date: _____

INSTRUCTIONS

For each of the five households described below, please list the activities carried out by each one of its members from Monday to Friday of last week. Show at least one activity for each one. It is not necessary for you to fill in all the spaces.

Household 1

The Villalbas live in Posadas, in a house in El Palomar. The household is composed of the wife, Martina, her husband and their two children, a boy and a girl. Martina's mother live with them. Martina is 42 years old, her husband is 45, the daughter, 21, the son, 18 and the grandmother, 68.

| | | | | |
|--------------|--------------|---------------|----------|------------------|
| Martina (42) | husband (45) | daughter (21) | son (18) | grandmother (68) |
| _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ |

Household 2

The Yegros family live in Leandro N. Alem, in the colony. The household is made up of the husband, Eligio of 32, his wife, Rosana of 27, their three children (two boys and a girl) and Eligio's parents. The older son is 10, the next one, 8, and the daughter is 6. The grandfather is 59 years old and the grandmother, 56.

| | | | | | | |
|-------------|-------------|----------------|-----------------|--------------|------------------|------------------|
| Elegio (32) | Rosana (27) | older son (10) | younger son (8) | daughter (6) | grandfather (59) | grandmother (56) |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ |

Household 3

Victorio Santa Cruz lives with his girlfriend, Fidencia, and a single sister of hers, in Posadas, in a house in the San Cayetano neighbourhood. Victorio and Fidencia do not have any children. He is 34 years old, she is 32 and the sister-in-law is 38.

| | | |
|---------------|---------------|--------------------|
| Victorio (34) | Fidencia (32) | sister-in-law (38) |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |

Household 4

The Krasuks live in Leandro N. Alem in the colony. He is called Juan and is 64, she is 59. A single daughter (without any children) of 32, a nephew of 16, and a niece of 19 live with them.

| | | | | |
|-----------|-----------|---------------|------------|-------------|
| Juan (64) | wife (59) | daughter (32) | niece (19) | nephew (16) |
| _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ |

Household 5

The widow of Mr. Villafior lives in Posadas in a house in the General Belgrano neighbourhood. Since she was widowed four years ago, she has lived with her two children, a boy and a girl. She is 29, her son, 8, and her daughter, 6.

| | | |
|---------------------|---------|--------------|
| Mrs. Villafior (29) | son (8) | daughter (6) |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |

Figure C.2: Form 2 (Posadas and Leandro N. Alem)

LABOUR AND THE TYPE OF HOUSEHOLD

First name and surname: _____ Place and date: _____

INSTRUCTIONS

According to the activities that you assigned to each member of the five households, please place each person in one of the following categories: "looked for work"; "student"; "housewife"; "retired", "pensioned" or "rentier". Only one category should be assigned to each member, the one that you consider to be the main one; and mark it down with an "x".

| | | Worked | Looked for work | Student | Housewife | Retired, pensioned, rentier | Does not know |
|--------------------|------|--------|-----------------|---------|-----------|-----------------------------|---------------|
| <u>Household 1</u> | | | | | | | |
| Martina | (42) | ___ | ___ | ___ | ___ | ___ | ___ |
| husband | (45) | ___ | ___ | ___ | ___ | ___ | ___ |
| daughter | (21) | ___ | ___ | ___ | ___ | ___ | ___ |
| son | (18) | ___ | ___ | ___ | ___ | ___ | ___ |
| grandmother | (68) | ___ | ___ | ___ | ___ | ___ | ___ |
| <u>Household 2</u> | | | | | | | |
| Eligio | (37) | ___ | ___ | ___ | ___ | ___ | ___ |
| Rosana | (27) | ___ | ___ | ___ | ___ | ___ | ___ |
| older son | (10) | ___ | ___ | ___ | ___ | ___ | ___ |
| younger son | (8) | ___ | ___ | ___ | ___ | ___ | ___ |
| daughter | (6) | ___ | ___ | ___ | ___ | ___ | ___ |
| grandfather | (59) | ___ | ___ | ___ | ___ | ___ | ___ |
| grandmother | (56) | ___ | ___ | ___ | ___ | ___ | ___ |
| <u>Household 3</u> | | | | | | | |
| Victorio | (34) | ___ | ___ | ___ | ___ | ___ | ___ |
| Fidencia | (32) | ___ | ___ | ___ | ___ | ___ | ___ |
| sister in law | (38) | ___ | ___ | ___ | ___ | ___ | ___ |
| <u>Household 4</u> | | | | | | | |
| Juan | (64) | ___ | ___ | ___ | ___ | ___ | ___ |
| wife | (59) | ___ | ___ | ___ | ___ | ___ | ___ |
| daughter | (32) | ___ | ___ | ___ | ___ | ___ | ___ |
| niece | (19) | ___ | ___ | ___ | ___ | ___ | ___ |
| nephew | (16) | ___ | ___ | ___ | ___ | ___ | ___ |
| <u>Household 5</u> | | | | | | | |
| Mrs. Villaflor | (29) | ___ | ___ | ___ | ___ | ___ | ___ |
| son | (8) | ___ | ___ | ___ | ___ | ___ | ___ |
| daughter | (6) | ___ | ___ | ___ | ___ | ___ | ___ |