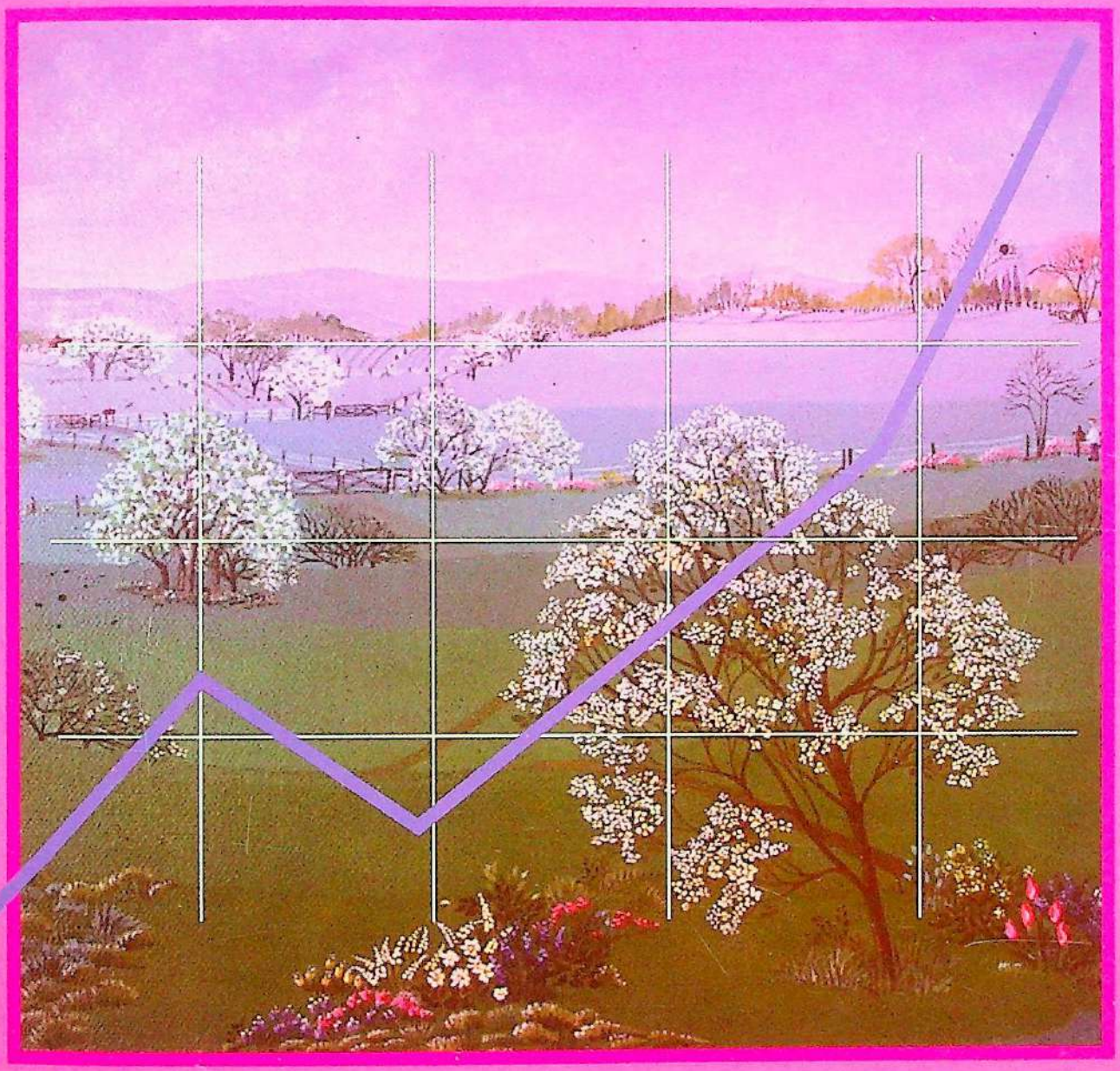
About Women Statisticians:

A Characterization of Statisticians by Gender in Several Countries



General Report on a Project of the ISI Committee on Women in Statistics
A committee of the International Statistical Institute

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General Report on a Project of the ISI **Committee on Women in Statistics**

A committee of the
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Project sponsor: Argentina's Instituto Nacional de Estadística y Censos (INDEC)

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CONTENTS

INTRODUCTION

In its 1995 meeting, the ISI General Assembly created the Committee on Women in Statistics, henceforward CWS or simply the Committee. The following report reflects the stage of implementation as of July 1999 of the Committee's project for the "Characterization of Women Statisticians in Several Countries".

This project was submitted to the Committee during the ISI Session at Istanbul, 1997, as an answer to the document "What About Women Statisticians?", jointly submitted by Lelia Boeri de Cervetto, member of the CWS, Alicia Masautis and Celina Curti, both of them IASS members. The Committee entrusted Lelia B. de Cervetto with the coordination of the project, and she proceeded to invite Alicia Masautis and Celina Curti to join her in this task. This group wishes to underline the active participation in the general coordination work of Mirta Verón and María Nieves García, members of the Argentine Local Group.

The general coordination of the CWS project wishes to express its gratitude to the INDEC (Argentina's National Institute of Statistics and Censuses) for its support and specifically its help in editing this General Report.

The project "Characterization of Women Statisticians in Several Countries" is being implemented in some twenty countries. Even though the various national projects are not all equally advanced, we should in all cases commend very especially here the dedication of the members of the local groups, whether as coordinators o simple members.

It should be noted that taking into account ISI's circumstances, firstly as a scientific and academic institution and secondly as a non-governmental organization, the members of the ISI family participating in this project on behalf of their country do so on professional and personal terms, in response to the invitation thus proferred.

Through this project we expect to answer the Committee's questions on the role of women in statistics as well as to provide a useful set of information in line with the Committee's goals.

General Coordination of the CWS Project

Buenos Aires, July 1999

PART 1

A PROJECT OF THE ISI COMMITTEE ON WOMEN IN STATISTICS

1.1.- Objectives and Plan of the CWS Project

The project with the title "A Characterization of Statisticians by Gender in Several Countries" originated in the 51st ISI Session at Istanbul, 1997. It is related mostly to the following three objectives of the ISI Committee on Women in Statistics:

"To promote and strengthen the representation of women statisticians in the ISI and its Sections.

To collect information on women in the statistical professions in different countries and to facilitate the flow of information among women statisticians.

To support the compilation of statistics on women, with a view to generating relevant studies concerning women's roles in the various activities in their countries."

The project's objective may be summarized as purporting to answer one of the questions that all women statisticians have surely wondered about—"What is meant by women statisticians?"

This is not a simple question to answer, and at the CWS it was considered convenient to take specific action to find some answers to it. The CWS showed interest in the work proposal included in the project document[1] because it seemed appropriate to initiate the Committee's activity.

There were certain features in the proposal that made it particularly interesting, among them:

it required appealing to colleagues in many countries;
it helped to make known the creation of the CWS and its activities;
it could have a mobilizing effect;
it did not demand special resources and funding, at least initially.

The essence of the project requires taking four specific and fundamental actions:

to produce in each country participating in the project the same set of simply constructed and easily interpreted indicators;

to identify in each country the WS population targeted in the project, as well as the complementary MS population;

to determine in each country the variation range of each of the four variables indicated in the project and to apply the simple algorithms described therein;

to take up the project in a mode similar to that applied in preliminary planning, i.e. extracting the utmost from the available information since there are no resources for special additional research.

The work proposal included a tentative schedule that soon turned out to be too optimistic.

In its first Open Meeting (Istanbul, 1997), the CWS recommended that the project be initiated.

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[1] BOERI DE CERVETTO, L., CURTI, C., Col. And MASAUTIS, A., Col. (1997), *What about women statisticians?* Work presented at the Open Meeting of the ISI Committee on Women in Statistics, Istanbul, August 1997
Original version in Spanish : La Participación de las Mujeres en la Estadística

1.2. The reference population

1.2.1. Composition of the WS and MS populations

In order to calculate the indicators proposed by the project it is necessary to conceptually define the populations involved.

The *WS population* of a country is made up of:

a) the women members of ISI or some of its sections (the so-called "basic or nuclear group" in the project document);

b) the women doing statistical work who are university graduates.

The *MS population* of a country is made up of:

a) the male members of ISI or some of its sections (the so-called "basic or nuclear group" in the project document);

b) the men doing statistical work who are university graduates.

The rate of a) to b) varies from country to country. There are those where a) is a high number, whereas in others it is small. In advanced European countries those numbers are significant. In less developed or recently organized countries those figures are quite small. In Latin America, Asia and some African countries the a) figure seems to depend upon specific stimuli, such as the biannual ISI sessions or meeting of its sections taking place in the region.

If one considers the fact that the proportion of WS within the total of ISI members (i.e., ordinary members and members of the ISI sections) is close to 15 %, observing its distribution in different countries we find certain peculiarities that should be taken into account in this project. The following table shows the 1997 distribution figures for 85 countries.

Number of WS	Number of countries
1	25
2	11
3	7
4	7
5	7
6 to 10	9
11 to 15	8
16 to 30	5
31 to 50	3
51 to 100	2
+ than 100	1
TOTAL	**85**

One can readily see that there is a great number of countries with only one woman member of ISI or its sections, and that in a large number of countries there are five or less WS. This situation has already been considered in the project document (1, pag 3), which states that :

"There undoubtedly are other women who are not yet members of the ISI or its Sections and who have achieved a high level of professional standing and made outstanding contributions to statistical activity in their countries. We are of the opinion that the task of characterizing the WS population as a distinct group should not leave such cases out. It would be therefore interesting to identify them and, by doing so, we would be fulfilling one of the terms of reference of the Committee.

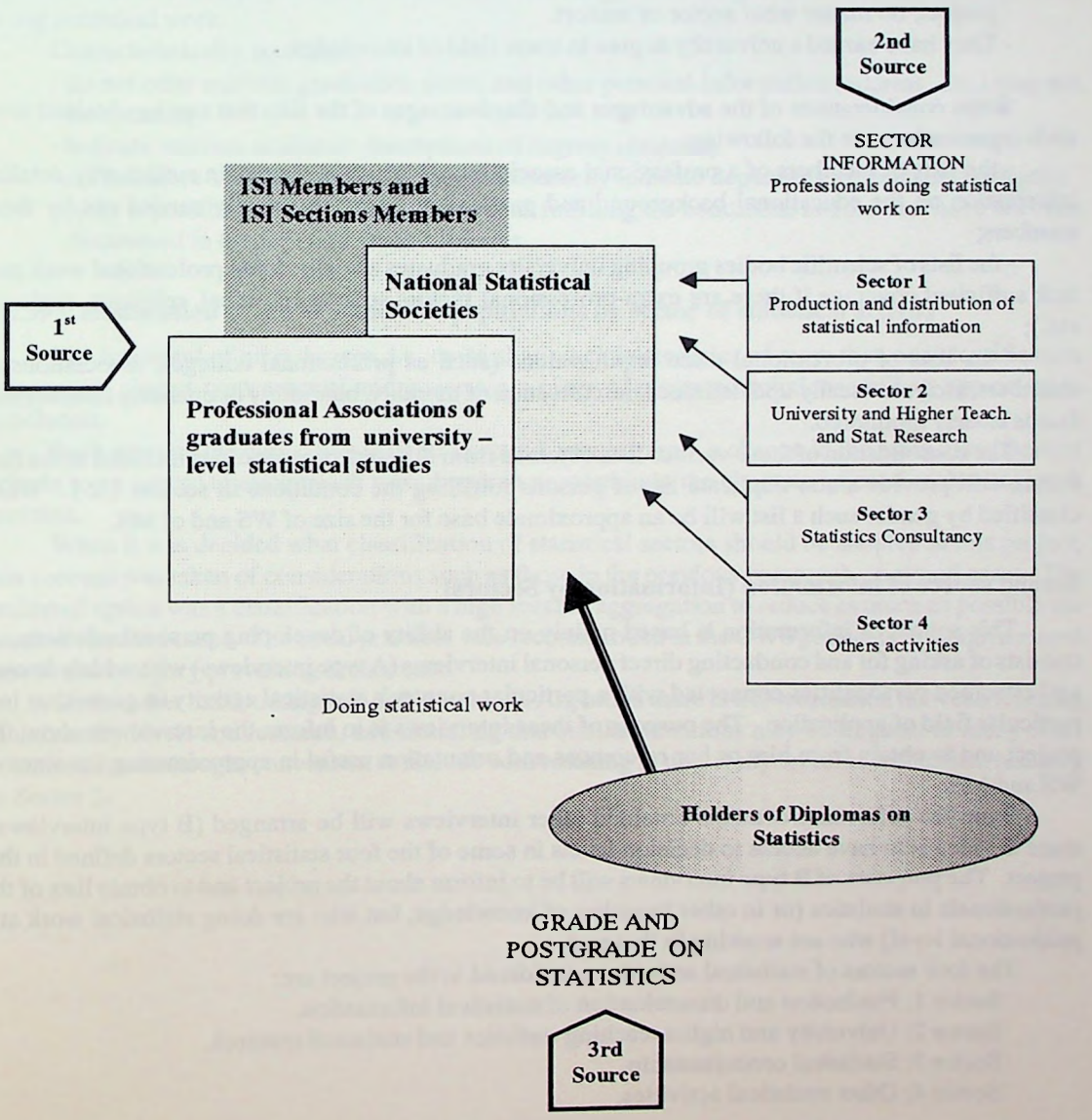
The characterization of the WS population would make little sense if we did not consider at the same time the complementary group that might be referred as "men in statistics" (ISI members or ISI Sections members). For this reason we also refer to an "MS population".

Therefore it has been thought appropriate, where the number of WS in a given country is low, to include in that country's WS population the professional women fulfilling the above conditions.

1.2.2. Possible sources of information available in each country

In order to establish the approximate WS and MS populations, and taking in account the experience of the LG of Argentina, we believe it can be done by examining in each country three main sources of information which are summarized in the graph:

COMPOSITION OF THE WS AND MS POPULATIONS



First source of information

Consists of the specific statistical organizations which provide lists of professionals voluntarily associated therein and doing professional work.

This basic group is made up of those statistics professionals who do statistical work and are voluntarily associated in specific statistical bodies or institutions.

Organizations making up the first source of information are:

- the ISI and its sections,
- the scientific statistical associations established in the country,
- the professional trade organizations grouping university graduates in statistics,
- the professional bodies joined by those who share a given specialty (biostatistics, probability theory, demography, etc.).

The characteristics of such professionals, as indicated in section 1.2.1 are:

- They do professional statistical work in one or more of the statistical sectors defined in this project, no matter what sector or sectors.
- They have earned a university degree in some field of knowledge.

Some considerations of the advantages and disadvantages of the lists that can be obtained from such organizations are the following:

- the lists of members of a professional association do not always contain sufficiently detailed information on the educational background and professional activity actually carried out by those members;

- the lists of scientific bodies grouping university graduates actually doing professional work may lack sufficient coverage if there are extra-professional factors such as (political, religious, regional, etc.);

- the lists of professional trade organizations (such as professional colleges, associations or chambers, etc.) are usually updated since the collection of monthly, bimonthly or quarterly membership fees is closely monitored.

The consolidation of these various lists obtained from different organizations included in the first source will provide a non-duplicate list of persons fulfilling the conditions in section 1.2.1. When classified by gender such a list will be an approximate base for the size of WS and of MS.

Second source of information (Information by Sectors)

This source of information is based mainly on the ability of developing personal relations. It consists of asking for and conducting direct personal interviews (A type interviews) with widely known and esteemed personalities connected with a particular country's statistical activity in general or in a particular field of application. The purpose of these interviews is to inform the interviewee about the project and to obtain from him or her references and orientation useful in approximating the sizes of WS and MS.

From the references/contacts obtained other interviews will be arranged (B type interviews), since the idea is to have access to decision levels in some of the four statistical sectors defined in this project. The purposes of B type interviews will be to inform about the project and to obtain lists of the professionals in statistics (or in other branches of knowledge, but who are doing statistical work at a professional level) who are working in that sector.

The four sectors of statistical activities considered in the project are:

Sector 1: Production and dissemination of statistical information.

Sector 2: University and higher teaching statistics and statistical research.

Sector 3: Statistical consultantship.

Sector 4: Other statistical activities.

The professionals found in the second source of information who are to be included in the lists should have the following characteristics:

- they carry on statistical activities at a professional levelthey have earned a university degree in statistics or have done graduate studies therein or in any other branch of knowledge;
- a high proportion of them is included in the lists previously obtained from the first source of information; the personal data previously obtained can be ratified and supplemented by the information obtained from the second source.

Third source of information

It is essential to have access to the lists of graduates from university-level statistical studies in the country. The usefulness of such lists is apparent in the formulation of hypotheses about the sizes of WS and MS or some of its components. However, these lists should not be directly incorporated to the previously established populations without first screening out those graduates who are not at present doing statistical work.

Characteristically, such lists:

- do not offer uniform graduation dates, and other personal information (address, etc.) may not be updated;
- indicate uniform academic descriptions of degrees obtained;
- are inclusive in nature, but they do not necessarily indicate departures, retirements or deaths;
- make it possible to detect names of persons fulfilling the conditions in 1.2.1 that have not been discovered in the first and second sources.

1.2.3. Classification of the WS and MS populations by sector of statistical activity

The treatment of mixed cases, i.e. those sharing characteristics of more than one classification category, is always controversial and generates a range of proposed solutions until an agreement is concluded.

Such agreements may cover different ground, ranging from a change in the basic classification criteria to an accord to assign each mixed case in proportion to the characteristics of each category it contains.

When it was decided what classification of statistical sectors should be adopted in this project, due account was taken of considerations such as those in the previous paragraph on mixed cases. The preferred option was a classification with a high level of aggregation to reduce as much as possible the number of mixed cases. The usual practical rule recommended in the CWS project is to assign a mixed case to the category prevailing in that case.

On the other hand, taking into account that in Argentina there is a close relation between teaching in university levels and research, and assuming that similar situations may be frequent in many other countries, it was thought convenient to include both teaching in university levels and statistical research in Sector 2.

PART 2

MEMBERS OF ISI AND OF ISI SECTIONS BY GENDER

The ISI family is made up of the men and women who are ordinary members of the ISI or who are members of any ISI Section. The five ISI Sections are the following:

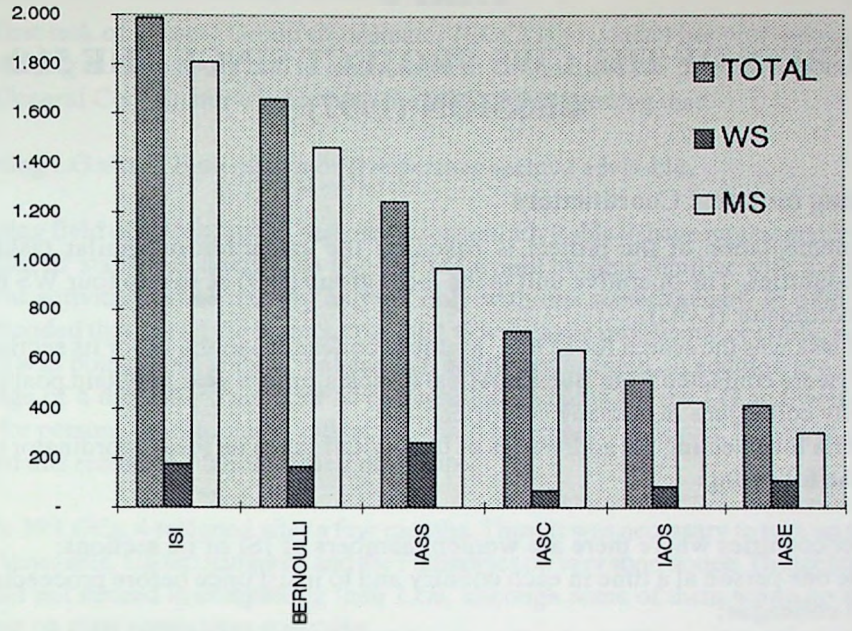
- International Association of Survey Statisticians (IASS)
- Bernoulli Society for Mathematical Statistics and Probability,
- International Association for Official Statistics (IAOS)
- International Association of Statistical Computing (IASC)
- International Association for Statistical Education (IASE).

In absolute terms the composition of both WS population and MS population, in July 1998 were as follows:

ISI FAMILY - (July 1998)

	Women	*Men*	*Total*
1 - ISI Ordinary Members	176 9%	1,813 91%	1,989 (100%)
2 – ISI Sections Members	706 16%	3,822 84%	4,528 (100%)
IASS	268 22%	976 78%	1,244 (100%)
Bernoulli Society	164 10%	1,463 90%	1,627 (100%)
IAOS	89 17%	432 83%	521 (100%)
IASC	73 10%	644 90%	717 (100%)
IASE	112 27%	307 73%	419 (100%)
TOTAL(with duplications)	**882..14%**	**5,635 86%**	**6,517 (100%)**

Source: ISI Permanent Office, July 1998. IASS: authors´ elaboration from labels received from IASS, July 1998.



It is important to point out that although the members lists elaborated by ISI Permanent Office constitute tools of great interest, they state some difficulties for analysis because of different classifications criteria appear.

ISI Ordinary Members lists are classified by nationality with indication for each name of the residence country. At the same time the **ISI Sections lists are classified by country of residence** (in fact, they are mailing lists). This situation does not imply big differences, if one considers absolute values and high level of aggregation. However, for a specific country there may be very notorious changes, if quantities are very low.

It would be convenient applying unified criteria to all list or unless, asking for that WS Committee could be provided with lists of ISI Ordinary Members classified by country of residence.

How many women and men are ISI Ordinary Member or Member of any ISI Section? The question makes sense for the ISI Committee on Women in Statistics (CWS). The answer is the size of the initial reference population of the project which have been discussed in PART I.

Lists provided by the ISI Permanent Office in July 1998 to the authors, indicated that ISI ordinary members were: 176 women and 1813 men.

On the other hand the complete list of females members of five ISI Sections Society, had 706 names in July 1998. When cleaning them of duplications (several ISI members are also members of any ISI Section), that 706 women become 590.

The total quantity of WS without duplications, in July 1998, was 766 women: 176 ISI members plus 590 ISI Sections members.

PART 3

PROGRESS OF THE CWS PROJECT SINCE THE 51th ISI SESSION (1997)

3.1. - Searching for Local Coordinators

The implementation of the project is based on the execution of similar tasks in all the participating countries. The operative unit is the local group (LG) of two to four WS headed by a local group coordinator (LGC).

The first task was the search for LGCs. Member colleagues in the ISI or its sections in about sixty countries were contacted from Buenos Aires. It took almost a year to obtain positive answers from about forty colleagues in as many countries.

The criteria for selecting the addressees of the invitations to be local coordinator of the CWS project were the following:

- to select countries where there are women members of ISI or its sections;
- to invite one person at a time in each country and to insist once before proceeding to invite another colleague;
- to use a standard form of letter in all cases, although there were individual variations when personal situations turned up in the exchanges.

This was a very active stage because in some cases it became necessary to contact as many as two or three colleagues in the same country, and this was reflected in considerable schedule delays. Messages were sent mostly by fax and e-mail. Exceptionally, some letters were posted through ordinary mail services, but most bulky materials were mailed through the post office. More than 800 remittances were made in the course of ten months. Around April-May 1998 the stage of inviting potential LGCs and receiving their answers was concluded. The names of the LGCs who have confirmed their participation are included in the respective list.

In most of the African nations, there is only a small number of women members of the ISI or its Sections.. It was decided to deal with the countries on a regional basis: thus there would be two local groups, one for the English-speaking nations and another for the French-speaking nations.

The difficulties met with in the communications exchange is worth mentioning. It seems uncertain that a specific message sent by e-mail was received by the specific addressee. At most, it can be assumed that if a message was received at the e-mail address, somebody read it, but of course this is not good enough.

3.2. Organization of Local Groups, Data Base LG

The first task of a Local Group Coordinator (LGC) is to contact her professional colleagues in statistics working in the country and to invite them to join in the CWS project as members of the LG.

The General Coordinator tried to help the LGCs by suggesting that:

a) concerning LG size, a limit of four or five persons seemed advisable;

b) concerning field of activity of the persons, it seemed advisable to have representatives of more than one sector of statistical activity, so that the LG would become familiar with the whole range of statistical activities in the country and not only with one sector thereof. In other words, it was recommended that not all the members of the LG were to be professors, or public statisticians, and so on. It was pointed out to them that such diversity would entail, in addition to a global view, the advantage of a diversified network of professional relations for the LG and would facilitate the search for personal backgrounds and the access to representative levels. However, only a few LGs followed this recommendation in their make-up.

Of the 39 LGCs, 4 resigned after a few months. Thus, it was necessary to take up new contacts in Colombia, Venezuela, United Kingdom and the Philippines on very short notice. Thirteen of the remaining 35 LGCs did not succed in completing their LGs, although some of them wrote up and presented a partial report on their respectives countries.

The following table enumerates the LGCs:

LOCAL GROUP COORDINATORS

	Country	*LGCoordinator*	*Affiliation*
01	Italy	Rosa GIAIMO	ISI – IAOS
02	Hungary	Stefania TUU	ISI
03	India	Nanjamma CHINNAPPA	ISI - IASS
04	Argentina	Mirta VERON	non member
05	United States	Marta BILOTTI ALIAGA	IASE
06	Malaysia	Ann Lee WANG	BS
07	Russian Fed.	Irina ELISSEEVA	ISI – IASE
08	Trinidad-Tobago	Linda HEWITT	IASS
09	Mauritius	M.J. POCHUN	IASS
10	Netherland	Edith DE LEEUW	IASS
11	Spain	Pilar IBARROLA MUÑOZ	ISI
12	Egypt	Nadia MAKARY	ISI
13	Colombia	desisted	
14	Croatia	Vesna Hljuz DOBRIC	IASC
15	Venezuela	desisted	
16	Vietnam	Phan Vu Diem HANG	BS
17	New Zealand	Sharleen FORBES	IAOS - IASE
18	Turkey	Ulgu GURLER	ISI
19	Uruguay	Monica BELTRAMI	non member
20	Sweden	Elizabeth SVENSSON	non member
21	Bulgaria	Liliana BONEVA	ISI
22	Mexico	Norma SAAVEDRA	non member
23	Great Britain	desisted	

24	Portugal	H. BACELAR-NICOLAU	ISI
25	Germany	Ursula GATHER	ISI
26	Zimbabwe and African countries (English)	Erika KEOGH	ISI
27	Canada	Susana RUBIN-BLEUER	IASS
28	Greece	Jenny PANGE	IASE - IASS
29	Panama	Gladys SEGURA	IASE - IASS
30	Senegal and African countries (French)	Awa THIONGANE	ISI
31	Romania	Monica DUMITRESCU	ISI
32	Pakistan	Fazia TABASSUM	IASE
33	Philippines	desisted	
34	Albania	Milva EKONOMI	ISI
35	Slovenia	Irena KRIZMAN	ISI
36	Thailand	Mooka MANMIN	
37	Finland	Eeva-Sisko VEIKKOLA	
38	Costa Rica	Mayra RIOS	non member
39	France	Annie FOUQUET	ISI

LG Data Base

Each LGC was asked to send to the General Coordination certain information on each member of its LG. This information had to do with the variables defined in the CWS project for the characterization of WS. In other words, the information is meant to characterize the set of coordinators and LG members.

The required information is:

- Name and family name.
- Role in the local group(coordinator or member).
- Gender.
- Professional achievement as graduate or post-graduate.
- Membership in ISI and/or any of its sections.
- Postal address, telephone, fax, e-mail address.
- Field of study(VAR1).
- Sector of statistical activity(VAR 2).

By mid-1998 a large part of the information on the coordinators and members of the LG was received. During the first months of 1999 a new batch of information for the LG Data Base was received. However, information from 24 coordinators and 31 members is still pending. The completion of the LG Data Base is a pending task to be completed shortly by the General Coordination.

The majority of the LGCs have had formal training in Statistics and are active in the sectors of university and higher teaching and of statistical research.

LG members are almost equally distributed between the sector of statistical information production and dissemination and that of university and higher teaching, and statistical research. Most of them have had basic training in statistics, and the second largest group has had basic training in social sciences and natural sciences.

It should be pointed out that in many countries the LGs have become real discussion forums, which is a very productive development even if the compilation of quantitative information is not much advanced.

Appendix 1 includes the LG Data Base.

3.3. Series of procedural notes (PROC)

The general coordination of such a large number of LGCs, scattered over the five continents, turned into an arduous job, especially when considering that:

Each country has its own organization schemes that are reflected in the quantity and quality of the factors determining the peculiarities [limits] of the four sectors of statistical activity. In other words, the four sectors of statistical activity indicated in the CWS project do not cover exactly the same ground in every country. As typical examples of differences from one country to another we can think of the following: the differences in financial or banking organization, in political organization, and so on.

The national report prepared by the LG of each country should take in consideration these national peculiarities, and for this reason the guidelines and recommendations of the general coordination should keep a reasonable balance between the extremely general and the extremely detailed.

The complications and difficulties met with when a third language (i.e., neither one speaker's or writer's nor the other's) is used in an exchange.

The lack of phase derived from seasonal differences—i.e., annual holidays in the Northern Hemisphere usually start in mid-year, whereas in the Southern Hemisphere they usually start in the Christmas season until the end of February. Thus the periods of simultaneous activity in both North and South are reduced to a few months (March through June, September through November).

In order to carry out the general coordination it was decided to use an instrument that would reach every LG almost simultaneously. The idea was to communicate simple guidelines that could be followed by every LG and that would accomplish the expected results, i.e. drafting the Final General Report with the analysis of results obtained for each country by the respective LG.

This general coordination instrument was called PROCEDURAL NOTES (PROC), and six issues of it were distributed. The respective subject matter was:

PROC 1: Integration of the Local Group
PROC 2: Country data
PROC 3: Sectors making up the statistical activity in ...[name of country]...
PROC 4: Final Report on each country
PROC 5: Local Group Coordinator's Responsibilities
PROC 6: (void)
PROC 7: Rough estimation of the WS and MS populations

3.4. Work done by the Local Groups

The national report on every country should conform to a common table of contents so that it may be integrated into the final general report. The country reports should include the following items:

Contents
Introduction
Chapter 1. Country data
Chapter 2. Component sectors of the statistical activity in ...[name of the country in question...]
Chapter 3. WS and MS population in ...[the country in question]...
Chapter 4. WS and MS distribution in ...[the country...]
Chapter 5. Selected indicators of ...[the country...]
Chapter 6. Conclusions

APPENDIX:
-Personalities of [the country in question] especially interviewed for this project.
-Official and private institutions of [the country...] that were consulted.
-List of existing researches or reports on [the country...] directly related to this project.

3.4.1. Reception of National Reports

In August 1998, at the joint meeting of IAOS-IASS in Mexico City, the general coordination of the CWS project believed it would be possible to comply with the project schedule and have the Final General Report ready by mid-1999. However, the delays originally planned in the project document turned out to be overoptimistic. In fact, only five or six countries completed their reports, but their compliance was probably due to the advantages enjoyed by the respective LGs stemming from the fact that most of their members were statisticians working for their governments.

The first partial remittances covering Chapter 1 reached the general coordination towards mid-1998. There were complementary remittances between March and June 1999. The following graph shows the coverage of the material received before the deadline for this General Report.

CURRENT WORK STATUS AT JULY 1999

		CHAPTER					
	Country	1	2	3	4	5	6
Africa	Egypt	■	■		■	■	
	Franc-ph Countries			▤			
	Mauritius			■			
America	Argentina	■	■	■	■	■	■
	Mexico	■					
	United States						▤
	Uruguay	■					
Asia	India			▤			
	Malaysia	■					
Europe	Croatia	■	■				
	Finland	■	■		■	■	
	France	■	■				
	Greece	■					
	Hungary	■	■	■	■		■
	Italy	■	■				
	Romania	■					
	Slovenia	■	■		■	■	■
	Spain	■					
Oceania	New Zealand	■	■	■			

▤ Special Reports

According to the material received, the LGs may be classified into two groups:

- those that covered only Chapter 1, Country Data, and thus did not tackle the specific subject matter of the CWS project, and

- those that did go into the specific subject matter of the project, i.e. attempting to estimate the size of the WS and MS populations, with a further discussion of AT LEAST SOME INDICATORS suggested in the CWS project.

The contributions of the second group, by order of arrival (from December 1998 through early July 1999), were received from:

1) Hungary
2) Egypt
3) Italy
4) Slovenia
5) Finland
6) New Zealand
7) France
8) Argentina

The recent simultaneous arrivals of various remittances have not made it easy to evaluate and analyze the information contributed by the various LGs. Each of those papers requires a close examination of the CWS project themes. From what we have seen in some of these contributions there seem to have been certain misinterpretations of the basic guidelines. We still have to verify if this is a result of a lack of clearness in the guidelines produced by the General Coordination.

The following table shows a general view of the contributions from the second group, including the information sources tapped by the LGs in their attempt to obtain a rough estimation of the sizes of WS and MS.

Sources for rough estimations of WS and MS population

	WS	MS	Total	Date
1 - **SLOVENIA**				
*Sector 1				
-Production and Distribution of Statistical Information (persons)	310	79	389	
*Sector 2				
- University and Higher Teaching and Statistical Research (persons)	5	14	19	
- Secondary school	33	18	51	
2 – **HUNGARY**				
*ISI (persons)	3	20	23	1997
*Hungarian Statistical Association (persons)	248	188	436	1998
*Nat. Register of. Experts Statistician (persons)	39	18	57	1999
*Hungarian Central Statistical Office (Structure Staff)(persons)	a)central unit		800	
	b)country directorates		1,000	
*Microcensus	Business professionals:			1996
	51,3 %	48,7 %	100 %	
	Business clerks:			
	84,8%	15,2%	100 %	

	WS	MS	Total	Date
3 – FINLAND				
*Statistics Finland				
- University level	202	191	393	1997
- total			854	1997
*Finnish Statistical Society				
- Membership register (persons)	124	343	467	
- Advanced level	57 %(1)	65 %(2)	(1) % of those whose education was known (68)	
- Intermediate	18 %(1)	20 %(2)	(2) % of those whose education was known (200)	
- General	25 % (1)	15 % (2)		
- Inquiry 1998	N= 30	N= 85		
- Advanced level	90 %	86 %		
-Intermediate	10 %	14 %		
4 – NEW ZEALAND				
Data of Statistics New Zealand				
*women (total)	55 %			June 1998
	61 %			1996
*women (senior level)	Nobody			1985
*senior management team	30,3 %			1998
*average salary	n$z 33,202	n$z 40,019		July 1998
5 – ITALY				
*ISTAT total	1,091	1,073		
- management local	126	206		
- operatic level	965	867		
*Italian Soc of Statistics	290	510		
6 – MAURITIUS				
*Goverment	20	36	56	
*Universities	2	4	6	
7 – ARGENTINA				
*ISI and ISI Sections	48			
*Soc Argentina de Estadística			425	
*Colegio Graduados Estadística			221	
*INDEC	199	130	329	1999
*Carrera Estadística-UNR (graduates from 1948 to 1998)	667	153	820	1951-1999
*Reg.docentes e invest de Universidades Nacionales				

	WS	MS	Total	Date
*Société Francaise de Statistique (SFdS)	708	1,319	2,037(1)	(1)10 cases non définis sont inclus
*Société Francaise de Biométrie (SFB)	60	167	227	
*Collège statistique du Mouvement Francais pour la Qualité (MFQ) (enquete 1996)	47	287	354(2)	(2) 20 cases non définis sont inclus
*Système statistique publique(encadrements supérieurs)	36 %		1,079	
*INSEE (encadrements supérieurs)	29 %		1,384	
9 – **GREECE**				
- Greek Statistical Institute	130	423		
10 – **MALAYSIA**				
Department of Statistics				
*Professional degrees	39	56	95	
*Total number of employees	980	797	1,777	
11 – **CANADA**				
Canadian Census Data Occupation:Mathématiciens Statisticiens and Actuaries"				
*Number of full-time workers	1,515	2,760	4,275	
*Average employment income per year	$49,497	$65,025	$59,519	
*Number of part-time workers in the occupation	690	770	1460	
*Total labor force in the occupation TOTAL	2,205	3,530	5,735	
*Labor force 20 years and older(persons)	7,564,105	6,390,865	13,954,965	

Some of the LGs obtained approximate values for some of the proposed indicators. They have been included in the following table only for reference purposes.

Indicators proposed on CWS project

INDICATORS	VAR	SLOVENIA		HUNGARY		FINLAND(Personnel of SF)		EGYP
INDICATOR 1: Which is the area of studies (VAR 1) that has the highest frequency in the WS POPULATION	1	Soc Sciences	61,3 %	Economics - central office - counties	 71,7% 75,9%	Soc.Sciences	166/ 202= 82,2 %	Statistics
INDICATOR 2: Which is the area of studies (VAR 1) that has the highest frequency in the MS POPULATION	1	Soc Sciences	75,9 %	1° economics 2° agrarian diplomat 3° informatics		Soc.Sciences	158/ 191= 82,7 %	Statistics
INDICATOR 4: Which is the sector of statistical activity (VAR 2) that has the highest frequency in the MS POPULATION	2	Prod. and distr	84,4 %	————		Prod. and distribution		Prod.and distr
INDICATOR 5: Which is the level of responsibility (VAR 3) that has the highest frequency in the WS POPULATION	3	Managing and technical level	60,0 %	————		non reliable data		non responsibility
INDICATOR 6: Which is the level of responsibility (VAR 3) that has the highest frequency in the MS POPULATION	3	Managing and technical level	62,0 %	————		non reliable data		non responsibility
INDICATOR 7: Which is the interval of income (VAR 4) (according to the income distribution of the country) that has the highest frequency in the WS POPULATION	4	decil 4	11 %	————		median monthly earnings	$FIM 12.700	Middle
INDICATOR 8: Which is the interval of income (VAR 4) (according to the income distribution of the country) that has the highest frequency in the MS POPULATION	4	decil 9 and 10	12,7 %	————		median monthly earnings	$FIM 14.700	Low
INDICATOR 9: Which is the highest responsibility level (VAR 3) reached in the WS POPULATION	3	Managing and technical level	1	decition level= good possibilities		non reliable data		High

INDICATOR 10: Which is the highest responsibility level (VAR 3) reached in the MS POPULATION	3	Managing and technical level	1			non reliable data		High
INDICATOR 11: Which is the highest income level (VAR 4) (according to the distribution of income in the country) in the WS POPULATION	4	73456 $ US		----------		9th decil	1,33 (1)	--------
INDICATOR 12: Which is the highest income level (VAR 4) (according to the distribution of income in the country) in the MS POPULATION	4	40521 $ US		----------		9th decil	1,15 (2)	--------
INDICATOR 13: Number of WS who, by July 1998, would be working on the 2000 CENSUS	-	----------		- business professional	51,3 %	----------		--------
				- business c lerk	84,8 %			
INDICATOR 14: Number of MS who, by July 1998, would be working on the 2000 CENSUS	-	WS predominance over MS vith		- business professional	48,7 %	----------		--------
INDICATOR 15: Total number of women who, by July 1998, would be working on the 2000 CENSUS	-	no influence of responsibility level: 7600				----------		--------
INDICATOR 16: Total number of men who, by July 1998, would be working on the 2000 CENSUS	-	no influence of responsibility level: 4400				----------		--------

(1) highest monthly / media = 17297/12999= 1,33 earnings

(2) highest monthly / media = 20000/17543= 1,15 earnings

3.4.2. Special contributions by some LGCs

As a final remark on the work submitted by the LGs, we should mention the fact that certain national reports diverged in content from the standards indicated above.

In the first place, certain LGCs had difficulties in integrating their LGs, e.g., India and the United States.Secondly, the work done by the Senegal LGC should be commended: it was suggested that she collect information at the regional level from the following French-speaking countries– Bénin, Burkina Faso, Côte d'Ivoire, Gabon, Mali, Mauritania, Niger, République Centrale Africaine, Senegal, Tchad and Togo. According to her report, in the French-speaking African countries women statisticians.

The report from India gives a clear view of the conditions under which Indian professional WS carry on their work.

The USA report contributed very interesting material for the CWS project, also of interest to women statisticians from all countries, concerning the workings of the WS committees operating in the US and Canada.

PART 4

FINDINGS AND NEXT STEPS IN THE CWS PROJECT

-A PROPOSAL OF FUTURE TASKS-

4.1. State of the work up to July 1999

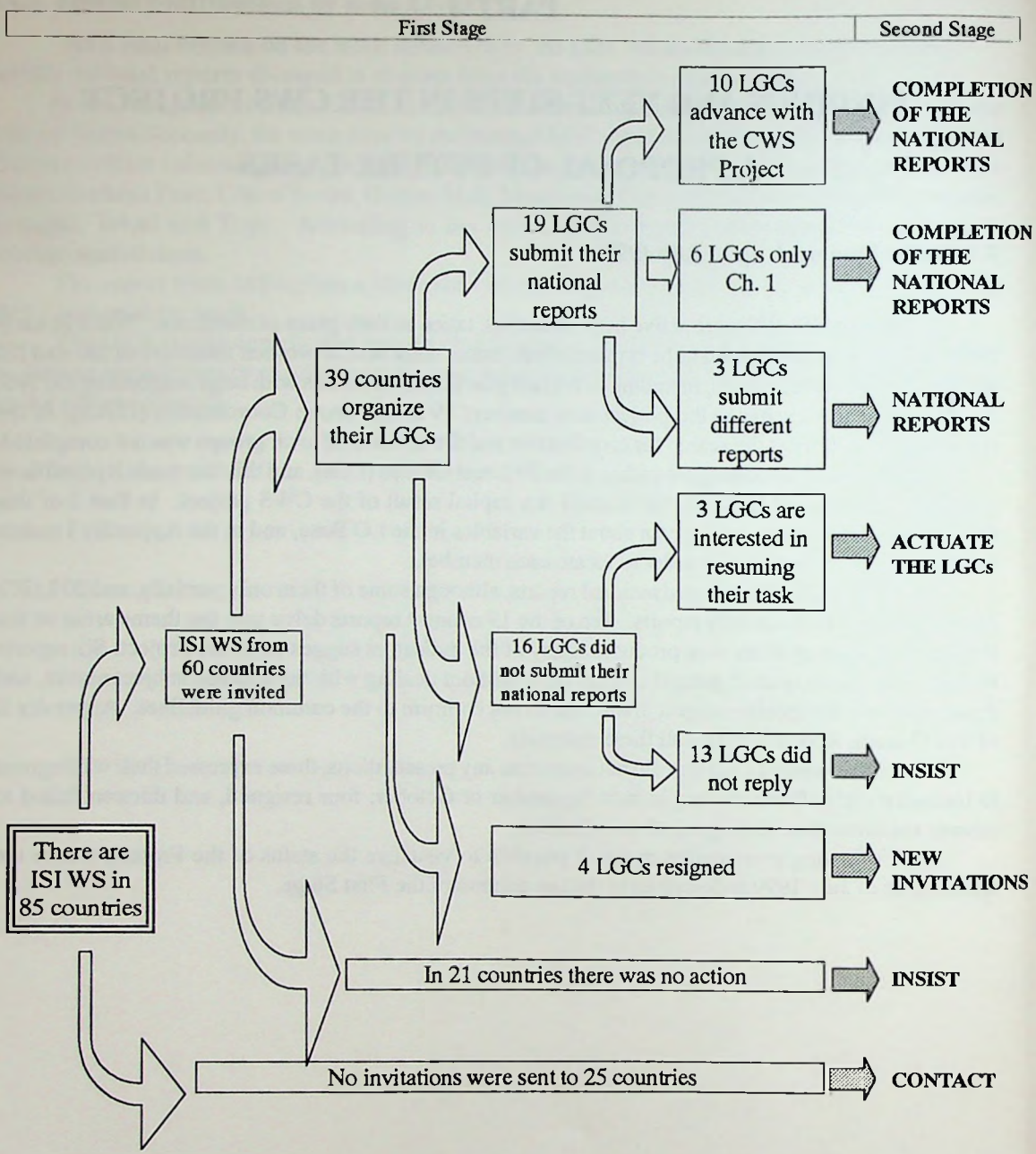
In 1998 the ISI WS were active in 85 countries, taken as their place of residence. When in early 1998 the CWS project started to be implemented, letters were sent to women members of ISI and ISI sections in some 60 countries, including in the first place those countries with large numbers of ISI WS. As a result of this exchange the project now numbers 39 Local Group Coordinators (LGCs); in the remaining 21 countries the search for coordinators and the creation of local groups was not completed.

About a hundred colleagues gather in the 39 Local Groups (LGs), and this has made it possible to compile a data base (LG Base) that in itself is a capital result of the CWS project. In Part 3 of this General Report information is given about the variables in the LG Base, and in the Appendix I names and other data are included in order to locate each member.

Of the 39 LGs, 19 submitted national reports, although some of them only partially, and 20 LGCs did not produce their country reports. Ten of the 19 country reports delve into the theme areas of the Project, and some of them even produced many of the indicators suggested in the Project. Six reports include only the chapter of general country data, without dealing with the specific subject matter, and three report on the specific subject matter but do not conform to the common guidelines. Appendix II of this General Report contains all these materials.

As for the twenty LGCs that did not contribute any presentations, three expressed their willingness to intensify their efforts starting in next September or October; four resigned, and thirteen failed to answer the entreaties of the general coordination.

The following presentation makes it possible to visualize the status of the Project, where the situation as of July 1999 is described in the last column of the First Stage.


First Stage
Second Stage
There are ISI WS in 85 countries
ISI WS from 60 countries were invited
39 countries organize their LGCs
19 LGCs submit their national reports
10 LGCs advance with the CWS Project
COMPLETION OF THE NATIONAL REPORTS
6 LGCs only Ch. 1
COMPLETION OF THE NATIONAL REPORTS
3 LGCs submit different reports
NATIONAL REPORTS
16 LGCs did not submit their national reports
3 LGCs are interested in resuming their task
ACTUATE THE LGCs
13 LGCs did not reply
INSIST
4 LGCs resigned
NEW INVITATIONS
In 21 countries there was no action
INSIST
No invitations were sent to 25 countries
CONTACT

The reports compiled by the LGs that were received as of July 1999 are represented in the following graph. Although the first partial reports were received by the general coordination towards the end of 1998, the great majority of them were received towards the end of the second quarter of 1999. For this reason, we only checked in general the formal aspects of the reports and the adequacy of their contents to the suggested subject matter, but we postponed a thorough analysis of those contents.

Therefore, the general comments on the materials thus far received cover the following aspects:

- The reports submitted by Egypt, Hungary, Slovenia, New Zealand, Finland, France and Argentina show that the CWS project is feasible, even though with different degrees of progress.
- The prompt reply obtained by the CWS project in Central and Eastern European countries such as Slovenia, Croatia, Hungary, Romania and Greece shows, in certain measure, their interest in establishing new relations and perhaps also in finding new ways of solving certain needs.
- The interest shown by the LGCs of countries with a small number of ISI WS, such as Uruguay, Malaysia, Mauritius Island, who, even though unable to integrate their LGs, managed to present a partial report on their countries.
- The favorable reception given by the LGC of Senegal to our suggestion of enlarging the scope of her task so as to cover the region of French-speaking African countries—Senegal, Central African Republic, Mauritania, Côte d'Ivoire, Niger, Gabon, Benin, Mali, Burkina Faso, Tchad and Togo.
- The support given to the CWS project by the national statistical offices in those cases where the LGCs work in official statistics.
- The cooperation of certain LGCs who, finding obstacles in creating the LG or in effectively implementing its installation, in accordance to suggestions from the general coordination submitted reports on particular points of interest to the CWS (India, the USA).
- At this point, as a conclusion, it is worthwhile remarking on the stimulating effect of the project on the colleagues from all the various participating countries, as well as on the ample variety and range of different conditions that within a single country mark the activity of professional statisticians.

As for the partially unfavorable situations that have arisen during the CWS project, we shall mention that:

a) the participation of ISI WS colleagues from certain European and non-European countries having a large number of WS could not be enlisted;
b) in spite of the possibilities afforded by the new communication technologies available throughout the world, there arose considerable problems in this field of interpersonal communications.

4.2. A Proposal of Future Activities in the CWS Project

It should be remarked that it is indispensable to count on the human and material resources necessary for carrying out the tasks indicated below. Therefore, the schedule of future activities is entirely dependent on the availability of such resources.

4.2.1. To continue the development of the CWS Project

The General Coordination's proposal for future activities is partially indicated in the last column of the above diagram showing the Project's evolution. It is proposed there to prolong the implementation stage so as to:

1. complete the presentation of national reports by the LGCs that have already submitted partial reports;
2. support the activities of the LGs in the countries that have shown interest in joining the Project;
3. explore the possibility of increasing the number of participating countries with the creation of new LGs.

4.2.2. To prepare the final report on the CWS Project

From the information compiled so far and that obtained from point A) above it is expected that the final report on the Project will be consolidated, i.e. the characterization of the WS population in a number of countries, according to the relevant recommendations decided by the CWS.

It is expected that at an advanced stage of the Project the following points will be ascertained:

1. Regions or countries with a small number of WS.
2. Regions or countries where although the number of WS is considerable, their participation in ISI and its sections is not significant.

In the former case, it will be necessary to investigate the causes of that absence so that the CWS will eventually suggest taking appropriate actions. In the latter case, it would be appropriate to motivate the WS to join ISI or its sections.

4.2.3. Implement/Actuate the WS network

In the present changing world, the possibility of linking through this network of professional women statisticians (belonging or not to ISI or its sections) will make it possible to have better access to more information on matters statistical that will contribute to their professional development. Moreover, the exchange of experiences in areas of common interest will promote a positive approach to professional development that should reflect itself in an increased participation in national and international forums.

Objectives of the WS Network:

1. to become a permanent discussion forum on the participation of women in statistics;
2. to become a channel for the expression of views and information on this subject that could eventually reach the general public;
3. to link itself to other existing WS networks;
4. to contribute to the establishment of an eventual professional (WS and MS) network for Statistics.

4.2.4. To propose a regional project for Latin America

The development of the CWS Project had an interesting motivating effect on the professional women statisticians both locally (through the meetings arranged by the LGCs among colleagues who had not previously known each other) and at a regional level, as in the case already mentioned of the French-speaking African countries. This type of motivation, if adequately channeled, might

be a possible and effective way of improving the weak representation in the ISI family of the women statisticians living and working in certain parts of the world.

The general coordination adopts the suggestions of the Argentine LG about the benefits of preparing a regional project for Latin America, calling on all the women colleagues in this region, whether from countries with or without ISI WS, to discuss the bases for a regional statistical policy incorporating the professional views of women statisticians. It is important to point out that similar efforts could be initiated in other regions in view of implementing similar regional projects.

APPENDIX I

LG Database
Members of Local Groups

APPENDIX 1 – LG Database – Members of Local Groups

Member	Family name	First name	Prof.degr.post	ISI/sections	Telephone	Fax	e-mail
GENERAL COORDINATION GROUP							
ARGENTINA							
GCG	BOERI de CERVETTO	Lelia	Statistician	ISI/IASS	54 11 4 775-2632	54 11 4 775-2632	notes@indec.mecon.ar
	MASAUTIS	Alicia	Statistician	IASS / IAOS	54 11 4 811-6104	54 11 4 811-2812	masautis@ds.mcye.gov.ar
	CURTI	Celina	Statistician	IASS	54 11 4 813-4638	54 11 4 813-4638	ccurti@spu.edu.ar
LOCAL GROUPS							
AFRICA							
EGYPT							
LGC	MAKARY	Nadia		ISI	5253481	3557565	nmakary@arvcegypt.edu
2	KHALIFA	Mona	Ph.Demography	no	3780697	4183075	
3	ILIAS	Sawsan		no	2912651		
4	BOTHAINA	El Deep	Ph.Demography	no	2707166	5062797	
SENEGAL AND FRENCH SPEAKING AFRICAN COUNTRIES							
LGC	THIONGANE	Awa		ISI/ IASS		251 1 51 46 82	thiongane@un.org
MAURITIUS							
LGC	POCHUN	Malati J.		IASS		230 465-6184	mpochun@dove.uom.ac.mu
ZIMBABWE AND ENGLISH SPEAKING AFRICAN COUNTRIES							
LGC	KEOGH	Erica		ISI / IAOS			keogh@maths.uz.zw
2	CANHAO	Jane					
3	MASHAYA	Memory					
4	MUNGATE	T.					
5	KANGAI	Josephine					
AMERICA							
ARGENTINA							
LGC	VERON	Mirta	Statistician	no	54 11 4 343-5404	54 11 4 345-7760	mveron@sfp.gov.ar
2	GARCIA	Nieves	Statistician	no	54 11 4 951-6902		
CANADA							
LGC	RUBIN-BLEUER	Susana		IASS			
2	GENTLEMAN	Jane		IASC			

COSTA RICA							
LGC	RIOS HERNANDEZ	Mayra		no			
MEXICO							
LGC	SAAVEDRA SALINAS	Norma Adriana	Lic. Sociología	no	(01-49) 18-14-16	(01-49) 180396	nsaavedra@cpv.inegi.gob.
2	VELASCO OCAMPO	Ma. Guadalupe	Lic.Sociología	no	(01-49)18-14-33	(01-49)153888	
3	LOZANO HUBE	Anita Estela	Lic. Mathematics	IASS	(01-49)78-60-93	(01-49)786986	ialfaro@ceconomi.inegi.g
4	PEREZ CADENA	Susana	Lic.Actuaria	no	(01-49)18-13-28	(01-49)181328	
PANAMA							
LGC	SEGURA	Gladys		IASE / IASS			
2	CASTRO	Marquela		no			
TRINIDAD TOBAGO							
LGC	HEWITT	Linda		IASS			
UNITED STATES OF AMERICA							
LGC	BILOTTI-ALIAGA	Martha	Associate Prof.	IASE	734 995 5691	734 763 4676	aliaga@umich.edu
2	MARKOTOU	Marianthi	Ph D.	no		212 663 2454	markat@stat.columbia.edu
3	GRAY	Mary	Ph D.	no		202 885 3155	mgray@american.edu
4	MARGOSCHES	Elizabeth	Ph D.	no		202 260 1279	margosches.elizabeth@epan
5	UTTS	Jessica		no			
URUGUAY							
LGC	BELTRAMI	Monica	Ing.Agr.Mast. Est.	no	598 2 902 7303 Int110	598 2 903 2881	mcarter@ine.gub.uy
ASIA							
INDIA							
LGC	CHINNAPPA	Nanjamma		ISI / IASS		011-91 80 341 4664	nach@blr.vsnl.net.in
2	BOSE	Mausumi	PhD. Statistics			011-91 33 577 6680	mausumi@isical.ac.in
MALAYSIA							
LGC	WANG	Ann -Lee	PhD	BERNOULLI/IASE	603-7594321(O)	603-7566343	j2wang@umcsd.um.edu.my
2	MAT	Rabieyah	PhD	no	603-2922748(0)	603-2937471	jptmh@po.jaring
3	HUSIN	Salbiah	M.Phil.	no	603- 9437168(0)	603-9486799	salbiah@mardi.
4	LOW	Heng-Chin	PhD.	no	604-8603657(0)	604-6570910	hclow@cssun.cs
PAKISTAN							
LGC	TABASSUM	Fazia		ISI			
	PHILIPPINES						

RUSSIAN FED.							
LGC	ELISSEEVA	Irina		ISI/ IASE		812-110-5674	
2	FROLOVA	Helena					
3	PARIK	Ilona	PhD				
4	TEMOSHENKO	Olga					
5	GRIVOBA	Helena					
6	MIKHAILOVA	Tatyana	PhD.				
7	POKLONOVA	Helena	PhD.				
8	KUBINA	Natalia	PhD.				
9	EFIMOVA	Marina					
10	ERINA	Antonina					
11	SLOKA	Biruta	PhD.				
THAILAND							
LGC	MOOKDA	Manmin		no			
TURKEY							
LGC	GURLER	Ulku	PhD.	ISI	90-312-2664000	90-312-2664126	ulku@bilkent.edu.tr
2	SELCUK	Ayse Sevtap	PhD.	no	90-312-2105326	90-312-210128	sselcuk@rorqual.cc.metu.edu
3	ERGUN	Gul	PhD.	no	90-312-2352500	90-312-467403	gul@eti.cc.hun.edu.tr
4	DIKBAYIR	Gulfer	MS.in gender	IASS	90-312-4176400	90-312-417422	gulfer.dikbayir@die.gov.tr
5	YARATIM	Deniz		no	90-312-4176400	90-312-417422	deniz.yaratim@die.gov.tr
	VIETNAM						
LGC	HANG	Phan Vu Diem		BERNOULLI			

EUROPE

ALBANIA							
LGC	EKONOMI	Milva		ISI			
BULGARIA							
LGC	BONEVA	Liliana		ISI			
CROATIA							
LGC	HLJUZ DOBRIC	Vesna	B.Sc. Mat.-M.Sc.C	IASC	385 1 616 55 97	385 1 616 55 91	vesna.dobric@srce.hr
2	SIMIC	Diana	B.Sc. Mat.-MScMat	no	385 1 467 31 88	385 1 467 33 03	diana.simic@imi.hr
3	GLIGOROVA	Lidija	B.Sc.Mathematics	IASS	385 1 480 62 12	385 1 481 76 66	igligor@dzs.hr
FINLAND							
LGC	VEIKKOLA	Eeva-Sisko		no			eeva-siskoveikkola@stat.fi

2	LANKINEN	Leila	Senior Act.Mas.So	SCORUS/ IAOS		358 09 1693185	leila.lankinen@tike.hel.fi
3	HIETANIEMI	Leana	Lic. Social Scie				leana.hietaniemi@stat.fi
4	SIERIMO	Carolina	Lic. Social Scie	no		358 09 191886	carolina.sierimo@helsinki.fi
5	WICKSTRAND	Anna-Leena	Senior Stat.MastNa	no			anna-leenawickstrand@stst.f
GREECE							
LGC	PANGE	Jenny	Assist Prof.-MSc Stat	IASE/ IASC	30-651-98778	30-651-98779	jpagge@cc.uoi.gr
FRANCE							
LGC	FOUQUET	Annie		ISI			
2	DUBY	Camille		ISI			
3	AFFICHARD	Joelle		ISI			
4	PADIEU	Claudine		IAOS			
GERMANY							
LGC	GATHER	Ursula		ISI			
HUNGARY							
LGC	TUU	Stefania		ISI			
2	KOLLANYI	Margit	Economist	IAOS	36 1 345-6319	36 1 345-6683	
3	KOVACSICS	Katherine		ISI / IASE	36 1 266-5945	36 1 266-5945	kovnk31@huden
4	VASS	Lucia	Economist-Dr Law	IASE	36 24 489-058	36 1 266-5945	alex01@hudens.
5	HAJNAL	Bela	Economist-PhD	IAOS	36 42 407-032	36 42 407-030	bela.hajnal@szab
ITALY							
LGC	GIAIMO	Rosa	Econom-Prof Stat	ISI / IAOS	39 091 6626236	39 091 485726	giaimo@unipa.it
2	SALVINI	Silvana	Associate Prof.	no	39 055 4237211	39 055 422356	salvini@ds.unifufi.i
3	MILITO	Anna Maria	Econ.-Assoc.Prof	IASE	39 91 6626300	39 91 0485726	milito@unipa.it
4	SABBADINI	Laura Linda		no	39 06 549000274	39 06 5943011	
NETHERLANDS							
LGC	DE LEEUW	Edith		IASS			
PORTUGAL							
LGC	BACELAR-NICOLAU	Helena		ISI			
ROMANIA							
LGC	DUMITRESCU	Monica		ISI/ BERNOULLI			hdmitre@pcnet.ro
2	ION	Cristina	BSC Mathematics	no			
3	CARACONCEA	Izabell Teodor	BSC Mathematics	no			
4	ANDREI	Liliana	BSC Economy	no			

SLOVENIA							
LGC	KRIZMAN	Irena		ISI/ IAOS			
2	SMREKAR	Tomaz					
3	VERTOT	Nelka					
4	ZNIDARSIZ	Erika					
5	ZAVBI	Miran					
SPAIN							
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2	BERMUDEZ GOMEZ	Rosa Maria	Lic.Filosof_a	IASS	5 83 93 67	5 83 95 20	rbermudez@ine.es
3	BRAVO TUDELA	Luisa	Lic. Mathematics	no	908 22 47 25		jlcervera@ine.es
4	JIMENEZ GAMERO	Dolores	Dr Mathematics	no	95 4 55 79 27	95 4 62 28 00	dolores@pop.cica.es
5	ROMERA AYLLON	Ma.Rosario	Dr Mathematics	BERNOULLI	6 49 98 48	6 24 98 49	mrromera@elrond.ac3m.es
6	MARTINEZ GASTEY	Josefina	Lic.Psicologia y	no			gastey@nova.es
SWEDEN							
LGC	SVENSSON	Elizabeth					

OCEANIA

NEW ZEALAND							
LGC	FORBES	Sharleen	MSc(hons)	IAOS/IASE/IASS	64 4 495 4687	64 4 494 4757	sdforbes@stats.govt.nz
2	McBETH	Nancy	BSc (Mat)MA(Pol)	IASE	64 4 495 4687	64 4 495 4757	nancy_mcbeth@stats.govt.nz
3	CLARK	Megan	BSc-MSc	IASE	64 4 472 1000	64 4 495 5045	megan.clark@vuw.ac.nz

APPENDIX II

National Reports:

- **AFRICA**
- **AMERICA**
- **ASIA**
- **EUROPE**
- **OCEANIA**

AFRICA

- **EGYPT**
- **FRENCH-SPEAKING AFRICAN COUNTRIES**
- **MAURITIUS**

EGYPT

CHAPTER 1

1. General Data:

1.1. Total surface:

Total area	997738.4 km²
Inhabited area	335188.5 km²

1.2 Density of population:

For the whole area	59.4 indiv./km²
For the inhabited area	1684.4 indiv./km²

1.3 Population of the 5 most populated cities:

City	Total	Female
Cairo	6789479	3308481
Alexandria	3328168	1626044
Giza	2221868	1083859
Port-Said	469533	228714
Suez	417610	203319

1.4 GDP per capita:

in 1994/95: 3461.3 L.E.

in 1990/91: 2278.0 L.E.

(The exchange rate in September 1998: 1$=3.39 L.E.)

2. Population in 1996 Census:

2.1 Population:

Total:	59272382
Women:	28941578
Men:	30330804

2.2 Active population (age 12-64):

Total:	153443
Women:	29485
Men:	123958

3. High Education Centers of Statistical Formation:

Higher education in Egypt is offered through 12 national universities and El-Azhar University, in addition to the American University in Cairo and the other 4 new private universities (they started accepting students in 1996/97). The data given here refer only to the 12 national universities. The other universities do not offer degrees in Statistics.

Each of the national universities is composed of several faculties (or schools) of Science and Humanities. Each faculty has different scientific departments and offers either B.C of BA in different specializations (or majors) in addition to the post graduate degrees (Ph.D.,M.Sc.,M.A, and Diplomas).

The B.Sc. in statistics is offered by the department of Statistics, Faculty of Economics and Political Science (Cairo University), the departments of Mathematics, Faculties of Science (seven

universities), and the departments of Mathematics, Statistics, and Insurance, Faculties of Commerce (six universities).

Most of these departments offer the higher degrees of M.Sc. and Ph.D. in Statistics. The Institute of Statistical Research and Studies, Cairo University also offers these degrees in addition to specialized Diplomas in Statistics which are offered to the holders of B.Sc. or B.A degrees majoring in any field of study other than statistics.

Level of the degree	Total of university centers	Total of graduates		Percentage of female graduates	
		92/93-96/97	97/98	92/93-96/97	97/98
Graduate	14	636	460	46	48
Post Graduate	15	646	662	N.A.	32

N.A.: Not available, yet in 1996/97 the total number of post-graduate graduals was 126 with 27% female.

4. Synthesis about the national statistical system:

The organisation of the official statistical activity is a combination of a centralized and decentralized agency.

The Central Agency for Public Mobilization and Statistics (CAPMAS) was created in 1964 to be responsible for producing and disseminating statistical data at both national and regional levels. It has three technical sectors:

A- The statistical sector, which is responsible for:

- compiling statistical data from its original sources (government, business public sector, private sector) and inspecting and technically supervising the statistical work in these sources.
- preparing, periodically, the statistics related to different activities and constructing the economic indicators at the national and sectorial levels.
- conducting censuses (population, housing,...) and disseminating their data.
- conducting population studies and research.
- training those working in the fields of statistics.

B- The computing sector which is responsible for all Electronic Data Processing operations of CAPMAS in addition to the National Bank for Data and Information and the Geographic Information System (GIS).

C- The public mobilization sector which is responsible for compiling, evaluating and following up the statistics on the human and productive resources, in case of emergency, in addition to providing the different sectors of the state with the necessary data and studies.The main office of CAPMAS is located in Cairo, and it has 26 branches one in each governorate.In 1997,the total number of personnel working at CAPMAS was 4700 out of which there are 53% female.

In addition to CAPMAS, there are statistical units in the different ministries, agencies, institutions, universities, and research centres. These units are responsible for obtaining and compiling statistical data related to their activities, circulating them within their agencies, and forwarding them to CAPMAS for publication.

The different companies and organizations in the private sector have their own statistical units responsible for data collection and analysis within their organizations.

5. Income distribution of the country:

Table 2. Income, distribution and poverty in 1994/95

GDP per capita (LE)	3461.3	
Income share of lowest 40%:	Total	21.9
	Rural	25.7
Ratio of highest 20% to lowest 20%:	Total	4.4
	Rural	3.1
Gini coefficient %:	Total	31.6
	Rural	24.0

(The exchange rate in September 1998: 1$=3.39 L.E.)

6.Structure of the economically active population

Table 3. The Relative Distribution of Economically Active Population in 1984 and 1995

	1984-1995					
Profession	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Professional	9.8	17.6	11.3	14.8	24.72	16.7
Administrative	2.7	1.8	2.5	1.17	.97	1.13
Clerical	7.5	13	8.5	7.7	17.33	9.55
Trade	6.1	5.5	6	8.36	5.84	7.88
Services	8.1	2.7	7.1	8.54	2.7	7.42
Agriculture	36.6	41.4	37.5	31.31	41.57	33.28
Production	24.6	6.5	21.2	28.12	6.88	24.04
Unspecified	4.6	11.4	5.9	0	0	0
Total	100	100	100	100	100	100

Table 4. Unemployment in 1995

Unemployment rate %	Total	11.3
	Female	24.1
	Adults	29.2
Urban/rural unemployment rate %	Urban	11.9
	Rural	10.7
Unemployment rate by education 15-64: %	Below secondary	0.7
	Secondary	31.5
	University	11.8

Bibliographical references and interviews:

- Central Agency for Public Mobillization and Statistics (CAPMAS), Preliminary Results of 1996 Census,May 1997.
- Institute of National Planning at Cairo, Human Development Report, 1996 and 1994.
- CAPMAS, Labour Force Sample Survey, September 1996.
- Meetings with Mr.Rasmy Noose and Mrs.Tagreed El-Basha, the Supreme Council of Universities, Cairo.
- Meetings with Mr.Ahab Olwy, President of CAPMAS ; and Mr.Mostafa Gafar, Vice President of CAPMAS.

CHAPTER 2

Sectors Making up the Statistical Activity in Egypt

Sector 1: Production and distribution of statistical information

1. Official statistics

National statistics: the collection of national statistics is the responsibility of the Central Agency for Public Mobilization and Statistics (CAPMAS) as well as the different Ministries.

1.1. CAPMAS: The agency has the responsibility for producing and disseminating statistical data at both national and regional levels for the process of planning and decision making. CAPMAS consists of the following sectors:

1.1.1. The Statistical Sector:
This sector is responsible for all statistics that Egypt needs according to set five-year programs.

1.1.2. The computing Sector:
This sector is responsible for all E.D.P operations of CAPMAS and various administrations in Egypt.

1.1.3. The Public Mobilization Sector:
This sector responsible for compiling, evaluating, and follow up of statistics on the human and productive resources, in addition to providing the necessary data and studies that the different sectors need.

1.1.4. Financial, Administrative, and Follow Up Sector:
Carries out all administrative, budgetary, and legal instruction for CAPMAS.

1.1.5. The Central Administration for CAPMAS President Office:
It is considered the link between CAPMAS presidency and its different units as well as between CAPMAS and the national and international organizations.

The agency collects information on population, labor force and other public statistics. *The national population and housing census* is done every ten years and is the main source of population statistics in Egypt. Information is collected on the size, distribution and characteristics of the population. The characteristics of the population include demographic and socioeconomic characteristics. Information is also collected on the number of families, households and the types

and characteristics of the houses. These statistics are collected at the village level and is presented for each governorate separately (urban, rural) and for the total population.

The labor force survey includes all persons who are exercising works connected to production and services, also persons who have the ability to work, they desire and search for work, but cannot find it. It collects data for urban and rural population six years and over, in and out of the labor force, the distribution by major groups of occupation, employment status. Labor force estimates are classified by educational status and sex. Unemployment statistics are classified in the same way.

The data on education consists of the numbers of schools; classes and students enrolled in general education, according to educational level, those who passed general examinations. The same information is provided for technical schools and university education both for humanities and for sciences by faculty.

The data on transportation and communication consists of data on railway passengers, by type of travel and occupancy rates, number of post offices and Suez Canal traffic such as numbers of vessels, passengers, cargo and income. Also, data are presented for Egyptian ports capacity, Egyptian commercial fleet, domestic air traffic: number of passenger arrival, departure and transit by airport, number of telephones by customer groups.

Health social services statistics include number of beds in hospitals, by type of hospital, number of medical treatment units and beds by type of unit, number of maternity and infant care centers, number of social units by area served and number of insured employees and their value of participation.

In the area of information and tourism, CAPMAS provides data on daily average broadcasting hours by type of program, daily average television transmission hours by channel, number of tourist nights in Egypt by nationality and number of tourists visiting Egypt by nationality.

In agriculture, CAPMAS disseminates data about cropping area by season, cultivated area of main winter and summer crops by type of crop, agricultural production, number of slaughtered livestock, poultry estimates, eggs, hives and honey and wax production.

Data on industry and petrol include the value of industrial output at current price by sector, mining and quarrying production and production of food industries by product. It also includes chemical industry production by product, spinning and weaving production, petroleum production, metal industries, electrical industry and value and quantity of distributed electricity by sector and construction material industry production by product.

Economic data include estimates of balance of payment, total of issued currency by denomination and total of savings. Also, governmental general expenditure, governmental general revenues, foreign trade by region, exports of principal commodities by commodity, imports of principal commodities by commodity, index of whole sale prices by major group, consumer price index in urban and in rural regions.

All types of statistics collected by the Ministries (both at the central or provincial levels) are reported to CAPMAS which is responsible for its distribution. CAPMAS produces several publications containing information, whether collected by CAPMAS or others, and is responsible for the dissemination of information on the national and international levels.

- **Ministries:** In each of Egypt's ministries there is a department of statistics responsible for data collection. The Ministry of Health and Population collects vital statistics i.e. births and deaths. It collects service statistics for the preventive and curative aspects. Data are collected about the number of hospitals, health centers, rural health units, numbers of hospital beds. The numbers of service providers are recorded including numbers of physicians, nurses, midwives and technicians. Records of the number of vaccinations, number of patients to the governmental hospitals and centers are recorded. The Ministry of Agriculture is responsible for the collection of data on the cultivated areas for specific crops, the agricultural production and the statistics of the inputs for agricultural production such as water, seeds and fertilizers. The Ministry of Social

- Affairs collects data on the numbers of families receiving pension and those using social assistance. It also deals with statistics of NGOs, which includes their numbers, activities and locations. The Ministry of Education collects information on the number and characteristics of the students. Information is also collected about the teachers and the numbers and types of schools. The Ministry of Economics collects data on the imports and exports of Egypt by commodity. The other Ministries such as Tourism, Mass Media, Law and Industry collect other types of data. All of the collected information is passed to the Central Agency for Public Mobilization and Statistics.
- **Provincial Statistics:** In each of Egypt's twenty-six governorates, the Ministries have offices, which collect the relevant information at the governorate level. The collected data are reported to the center in Cairo where it is aggregated in a single report.

2. Private enterprises and societies

Recently, several private enterprises have been involved in data collection. These enterprises are mainly concerned with consultancy work. Marketing studies and feasibility studies are becoming common. Some surveys are being conducted regularly. Societies are less common are not active in production and distribution of statistical information. All private enterprises are required to get the permission of the Central Agency for Public Mobilization and Statistics before embarking on activities of data collection and surveys.

3. Other institutions

There are other institutions involved in data collection. A major institution in this area is the National Population Council. The council has offices in each of the governorates, which collect information regarding the distribution of family planning methods and other population data.

Sector 2: University and higher teaching, and statistical research

1. ***Higher teaching of statistics in grade studies:*** All Egyptian Universities offer courses in statistics to graduate and post graduate students. A few of the faculties offer a degree in Statistics such as the faculty of Economics and Political Science. Many offer statistics course to students of agriculture, medicine and commerce.
2. ***Higher teaching of statistics in postgraduate studies***: Postgraduate students are offered Masters and Doctorate courses in Statistics in some universities. Other Higher Institutes offer statistics courses as well.
3. ***Basic statistical research:*** The theoretical developments in statistics are carried out in the universities. Most of the departments of statistics that are responsible for offering specialized degrees in statistics courses are also concerned with research in the theory of statistics.
4. ***Applied statistical research and model application***: Applied research is carried out in the universities and in the research institutions. Also, research centers situated inside the universities play a role in the statistical analysis for applied research. These centers offer training in statistical analysis as well as carrying out the analysis for the applied research. These centers although affiliated to universities are run as private businesses and they offer their services to governmental institutions as well as to private businesses and institutions.

Sector 3: Statistical consultancy

From the above discussion it is clear that statistical consultation is carried out by the private enterprises and by the research centers affiliated with the universities. These firms are required to seek approval of the Central Agency for Public Mobilization and Statistics for the collection of data.

CHAPTER 4

WS and MS distribution in Egypt according to the 4 selected variables

This chapter presents the data about WS and MS in Egypt in both sector 1 (collection and distribution of statistical information) and sector 2 (university and higher teaching and statistical research) only. No data are given for sector 3 (statistical consultancy) or sector 4 (other activities) in order to avoid repetition, since all those who in these two sectors belong also either to sector 1 or sector 2.

The data included in the tables do not represent a complete enumeration of the WS and MS in Egypt. In fact they refer only to those statistical units that were reachable during the allowed time of data collection. Most of these units are bocated in Cairo and represent the central levels only. No data about the provinces were collected and therefor they not included in the tables.

Sector 1: Collection and Distribution of Statistical Information

The data is given in three successive tables. The first (table 4.1.1) shows the distribution of those whose main statistical activity is either data collection or data distribution or both, according to the field of study. It differentiates between those who have a university degree (or higher) in statistical and those who have their degrees in any other fields of study. No detcaled information about these "other" fields of the study are included.

The second table (table 4.1.2) shows the distribution of those working in sector 1 according to the level of administrative responsibilities. It considers three levels of responsibilities: the high level of administrative and technical responsibilities, the middle level such responsibilities and operational level where no such responsibilities are assumed.

The third table (table 4.1.3) shows the distribution of WS and MS in sector 1 according to three levels of income: high, middle, and low.

Sector 2: University and Higher Teaching and Statistical Research

The data given here refer to the faculty nemliess and their assistances in the Institute of Statistical Studies and Research (ISSR) and the deportment of statistical at the Faculty of Economics and Political Science (FEPS) at Cairo University, as well as the departments of statistics of the faculties of commerce in the other national universities. No data about research centers are included.

Since all faculty members and their assistants have degrees in statistics the first table (table 4.2.1) refers to their distribution according to the scientific rating (professor, associate professor, assistant professor, teaching assistant, and researchers).

The levels if administrative responsibilities for this type of activity are basically: "Dean or Vice-dean" or "Department head" or "no administrative responsibilities". This distribution is given in the second table (table 4.2.2).

The last table (table 4.2.3) shows the distribution of WS and MS working in sector 2 according to the three levels of income: high (professions), middle (associate and assistant professors), and low (teaching and research assistants).

Distribution of WS and MS in sector 1(According to the field of study)

Statistical Units	Total		Holding degrees in statistics		Others	
	WS	MS	WS	MS	WS	MS
CAPMS (1)	984	730	530	465	454	265
Some National Universities (2)	32	14	17	7	15	7
Some National Centers and authorities (3)	31	31	26	30	5	1
Some ministries (central level) (4)	32	22	17	14	15	8
Total	1079	797	590	516	489	281

(1) Central Agency for public mobilization and statistics
(2) Includes: Supreme Counsel of University, Cairo Univ., Suiz-canal University, Assuit University and El-azhar University.
(3) Includes: National Center for Social and Gimonolayical studies, National Authority Mail and Giza governorate.
(4) Includes: ministry of planning, ministry of higher education, ministry of international cooperation and ministry of health and population.

Distribution of WS and MS in Sector 1 (in Egypt)(According to the level of administrative responsibilities)

Statistical Units	Total		High		Middle		Operational	
	WS	MS	WS	MS	WS	MS	WS	MS
CAPMS (1)	984	730	7	45	341	215	636	470
Some National Universities (2)	32	14	5	3	9	3	18	8
Some National Centers and authorities (3)	31	31	6	2	9	7	16	22
Some ministries (central level) (4)	32	22	2	2	5	9	25	11
Total	1079	797	20	52	364	234	695	511

(1),.....(4): see previous table

Distribution of WS and MS in Sector 1 (in Egypt)According to the level of income

Statistical Units	Total		High		Middle		Operational	
	WS	MS	WS	MS	WS	MS	WS	MS
CAPMS (1)	984	730	205	195	470	252	309	283
Some National Universities (2)	32	14	10	0	14	8	8	6
Some National Centers and authorities (3)	31	31	4	2	2	4	25	25
Some ministries (central level) (4)	32	22	0	1	6	4	26	17
Total	1079	797	219	198	492	268	368	331

(1),.....(4): see previous table

The Distribution of WS and MS in sector 2 (in Egypt)

(i) Faculty members(According to Scientific Ratings)

Department of Statistics	Total		Professor		Assoc. prof.		Assoc. prof.	
	WS	MS	WS	MS	WS	MS	WS	MS
ISSR (1)	15	44	5	18	3	11	7	15
FEPS (2)	24	18	4	5	6	7	14	6
Faculties of commerce (3)	24	49	6	17	4	13	14	19
Total	63	111	15	40	13	31	35	40

(ii) Assistants

Department of Statistics	Total		Teaching Assistant		Research Assistant	
	WS	MS	WS	MS		WS
ISSR (1)	8	28	7	23	1	5
FEPS (2)	15	8	9	6	6	2
Faculties of commerce (3)	42	50	16	17	26	33
Total	65	86	32	46	33	40

(1) Institute of Statistical Studies and Research, Cairo University.
(2) Faculty of Economics and Politics SC, Cairo University.
(3) Faculty of Commerce at the National University, other than Cairo University

The Distribution of WS and MS in sector 2 (in Egypt)- According to the level of administrative responsibilities.

Department of Statistics.	Total		Dean and Vice dean		Dep. Head		Administrates	
	WS	MS	WS	MS	WS	MS	WS	MS
ISSR (1)	23	72	1	2	1	4	21	66
FEPS (2)	39	26	0	0	1	0	38	26
Faculties of commerce (3)	66	99	0	0	1	10	62	89
Total	128	197	1	2	3	14	124	181

(1), (2), (3): see previous table

The Distribution of WS and MS in sector 2 (in Egypt)- According to the level of income.

Department of Statistics	Total		High		Middle		Low	
	WS	MS	WS	MS	WS	MS	WS	MS
ISSR (1)	23	72	5	18	10	26	8	28
FEPS (2)	39	26	4	5	20	13	15	8
Faculties of commerce (3)	66	99	6	17	18	32	42	50
Total	128	197	15	40	48	71	65	86

(1), (2), (3): see previous table

CHAPTER 5

SELECTED INDICATORS IN EGYPT

Indication reported in this chapter are competed from the frequencies given in the tables of chapter 4.

Indication 1 and 2 (about VAR1):

Since no information is reported about the fields of study other than "statistics" these indications refer to the relative frequencies of WS (or MS) having degrees in statistics to the tables TWS (or TMS):

Indicator 1 = 59.5 %

Indicator 2 = 71.7 %

(Note: since there relative frequencies are more than 50%, then they do represent the maximum as well)

Indicators 3 and 4 (about VAR2):

The relative frequency of WS working in sector to TWS is 89.4%. The rest (10.6%) refers to sector 2 since these are the only two sectors taken in consideration.

The conesponding relative frequencies for MS are 80.2% and 19.8% for sectors 1 and 2 respectively.

Therefor:

Indicator 3 = 89.4%

Indicator 4 = 80.2%

Both of them refer to sector 1

Indicators 5 and 6 (about VAR3):

As for the level of administrative responsibilities, the relative frequencies of WS in "High", "Middle", and no responsibilities" to TWS are: 107%, 30.4%, and 67.9% respectively; with 67.9% as a maximum canesponding to the level "no responsibilities". The comparable relative frequencies of MS to TMS are: 5.4%, 24.9%, and 69.6% ; with 69.6% as a maximum conesponding to the level of "no responsibilities"

These results show that both indicators 5 and 6 refer to the lowest level of administrative responsibilities (isn't this way it should be?. These indicators table the values:

Indicator 5 = 67.9%

Indicator 6 = 69.6%

Indicators 7 and 8 (about VAR4):

- The three levels of income:"Highly", "Middle", and "Low" have the following relative frequencies:
- For WS: 19.4%, 44.7%, and 35.9% ; with the maximum of 44.7% at the "Middle" level of income.
- For MS: 23.9%, 34.1% and 42.0%; with maximum of 42.0% at the "Low" level of income.

Therefor:

Indicator 7 = 44.7% comesponding to "Middle" level of income.
Indicator 8 = 42.0% comesponding to "Low" level income.

Indicators 9 and 10:

The highest level of administrative responsibilities is the same for both WS and MS, which is "High".

Indicators 11 and 12:

The highest level of income is the same for the both WS and MS, which is "High".

Indicators 13, 14, 15 and 16:

No available data about the share of WS in the 2000 world population and Housing Census Program.

FRENCH-SPEAKING AFRICAN COUNTRIES

Senegal	**Gabon**
R.C.A. (Rep. Central Africane)	**Benin**
Mauritania	**Mali**
Côte D'Ivoire	**Tchad**
Burkina Faso	**Togo**
Niger	

To: Ms. Lelia Boeri de Cervetto
General Coordination Group of CWS Project
Argentina

From: Ms. Awa Thiongane
UNECA/DISD
P.O. Box 3005
Addis Ababa – Ethiopia

Dear colleague,

I was committed to join your project and try to get information, for you, about women statisticians in Francophone African countries.

I sent questionnaire after your first letter almost one year ago. At that time, your asked to collect information only about women. I got some information through my colleagues, Directors of Statistical Offices of the Francophone countries. Unfortunately, their answers took so long time to reach me that I was not encourage to ask additional information about men statisticians. Therefore I will try to do so even if this information would not be included in the 1999 report.

The second problem I faced was the lack of translation facilities. As I may know, I am Francophone and I have not translation facilities for carrying out unofficial assignments. Also, as a regional adviser I have to travel often and this doesn't let me much time for extra work. I wanted to process this data and translate the report but I really did not find any time for that. That is the reason why I sent you the information I collected by ordinary mail. Having said that, I nevertheless apologize for the delay in transmitting available information for you.

I will find women who will be pleased to do the work in some countries and forward it to you.

Sincerely yours,

Awa Thiongane

Information on women working in National Statistical Services

1- Field of studies

Countries	Women	Statistics	Computing	Social	No information
TOTAL	101	85	1	1	14
Senegal	25	11	1	1	12
R.C.A.	6	6			
Mauritania	1	1			
Côte D'Ivoire	26	25			1
Burkina Faso	6	6			
Niger	10	10			
Gabon	10	10			
Benin	6	6			
Mali	2	2			
Tchad	2	1			1
Togo	7	7			

2. Sector of statistical activity

Sector	Number of Women
TOTAL	101
Sector 1	66
Sector 2	3
Sector 3	2
Sector 4	-
Without Information	30

3. Responsibility level

Level	Number of Women
TOTAL	101
1. Operator	22
2. Direction	50
3. Without Information	29

MAURITIUS

CHAPTER 1

WOMEN STATISTICIANS IN MAURITIUS, 1998

Institution/Post	Total	No. of women	Women as % of Total
Government	56	20	35.7
Director	1	-	-
Deputy Director	1	-	-
Principal Statistician	3	1	33.3
Senior Statistician	1	-	-
Statistician	19	6	31.6
Senior Statistical Assistant	31	13	41.9
University	6	2	33.3
Associate Professor	2	1	50.0
Senior Lecturer	1	-	-
Lecturer	3	1	33.3

Women constitute around one third of the statisticians in most post, except the post of Director and Deputy Director, which have so far not been occupied by women. Their share in government can be seen to be the highest at the Senior Statistical Assistant level, being a little over 40 percent (see attached table).

Most women statistician in Government have professional qualifications from the Royal Statistical Society (UK), ranging from Chartered Statistician for the Principal Statistician and Graduate Diploma in Statistics for the Statisticians, to Stage 1, Higher Certificate in Statistics or Preliminary in the case of Statistical Assistants. Their level of education is comparable with the level of education of men statisticians in similar posts. The number os Statistical Assistants and women´s share in it is not available at the moment. Women Statistician in the University have postgraduate degrees in Statistics.

It seems that very few statisticians, men or women, are employed in the private sector. However, both their number and women´s share in it is not available at the moment.

AMERICA

- **ARGENTINA**
- **MEXICO**
- **UNITED STATES OF AMERICA**
- **URUGUAY**

ARGENTINA

CHAPTER 1

COUNTRY DATA

1. General data on Argentina

Argentina is located on the Atlantic coast of the southern tip of the Western Hemisphere. Its total area is detailed in the following table.

A- Total Area

Area	Km^2
Total	**3,761,274**
Continental (South American)	2,791,810
Continental (Antarctica) and South Atlantic Islands	969,464

Source: Instituto Geográfico Militar

The portion of Argentine territory on the South American continent stretches along 3700 kilometers between latitudes 22° and 55° S. This vast expanse enjoys a wide variety of climates ranging from subtropical in the North to cold in Patagonia, while temperate climates prevail in the rest of the country.

Argentina is bounded on the North by Bolivia, on the Northeast by Paraguay, on the East by Brazil, Uruguay and the Atlantic Ocean, and on the West by Chile. The Atlantic coast stretches uninterrupted from the mouth of the River Plate to Tierra del Fuego, whose capital is the world's southernmost town, Ushuaia.

Spanish is Argentina's official language.

B- Population Density

According to the last National Census of Population and Housing (1991), Argentina's total population figures are as follows:

Total population	Area in Km^2	Population density Pop./Km^2
32,615,528	2,780,400 (*)	11.7

(*) Excluding the Antarctic Sector, the South Atlantic islands and the Malvinas. Source: INDEC

The country's total estimated population for 1998 is 36,1 millions.

Argentina is a federal republic comprising 23 provinces and a Federal Capital established in the city of Buenos Aires.

The form of government prescribed by the Constitution (1853) and its amendments (the last was approved in 1994) is "representative, republican and federal", with three branches—executive, legislative and judiciary.

Each province, as well as the Federal Capital, has its own constitution in accordance with the republican and federal principles of the National Constitution and its declaration of rights and freedom safeguards.

C. Population of the country's five largest cities

Urban conglomerates (*)	Population
Greater Buenos Aires	11,295,555
Greater Córdoba	1,208,713
Greater Rosario	1,118,984
Greater Mendoza	773,113
Greater La Plata	642,979

(*) The word "Greater" preceding a city's name indicates an urban conglomerate, i.e. an urban area made up of two or more adjoining cities or townships belonging to different administrative jurisdictions.

Source: INDEC, Censo Nacional de Población y Vivienda [National Census of Population and Housing], 1991.

D. GDP at current prices

Year	GDP (in millions of pesos)
1993	257,570
1994	281,645
1995	279,543
1996	297,359
1997	321,384

The present currency equivalency since 1991 is: 1peso = 1 U.S. dollar

The per capita GDP for 1997 was US$ 9066, and the estimated projections for 1998 and 1999 are US$ 9329 and US$ 9476, respectively.

Source: [National] Ministry of Economy and Public Works

2. Argentine population according to the national census of 1991

A. *Total population*

Total	%	Females	%	Males	%	Male/Female rate
32,615,528	**100**	16.677.548	**51.1**	15.937.980	**48.9**	**95.6**

B. *Economically active population*

Total	%	Females	%	Males	%
13,202,200	**100**	4,778,813	**36.2**	8,423,387	**63.8**

C. *Projected total population for the year 2000*

Total	%	Females	%	Males	%
37,031,802	**100**	18,868,309	**51.0**	18,163,493	**49.0**

3. University centers of statistical training

Degree Courses	University
M.Sc. ("licenciatura") in Statistics	National University of Rosario
Professor in Statistics	National University of Rosario
M.Sc. ("licenciatura") in Statistics	Argentine Catholic University of La Plata
University Technician in Statistics and Programming	University of the Salvador
M.Sc. ("licenciatura") in Statistics	National University of Tres de Febrero

Sources: Secretary of University Policies, National Ministry of Culture and Education.
National University of Tres de Febrero.

It should be mentioned that in Argentina there were formerly other tertiary degree courses in Statistics both in national and private universities of the Federal Capital and other cities, which are no longer available. At the National University of Rosario there was a Doctorate in Statistics between the late sixties and the mid seventies, from which six men and five women graduated.

By mid-year 1998, the specialty Applied Statistics was created at the National University of Tres de Febrero with a current enrolment of 13 female and 10 male students.

A particular mention should be made of the courses for a degree in Statistics initiated in 1948 at the School of Economics of the National University of the Litoral [provinces], now the National University of Rosario, from where 820 professional statisticians graduated, the largest number from a single institution in the country, as shown in the following table.

Period	Total	%	Females	Males
TOTAL	**820**	**100.0**	**667**	**153**
1950-1954	34	4.1	23	11
1955-1959	43	5.2	29	14
1960-1964	69	8.4	61	8
1965-1969	173	21.1	132	41
1970-1974	224	27.3	192	32
1975-1979	101	12.3	79	22
1980-1984	81	9.9	74	7
1985-1989	56	6.8	49	7
1990-1994	33	4.0	25	8
1995-1998	6	0.4	3	3

The creation of this specialty at that point coincided with a period of significant changes in the country, with the nationalization of the economy and the adoption of central planning by the national government. Its insertion in the School of Economics was an additional promotional factor because the enrolment at this school enjoyed sustained growth until the mid-seventies, as did the number of graduates.

The largest number of graduates in Statistics was recorded between 1961 and 1975, which coincided with a period of intense planning for development in the country's economy. However, the specialty did not become consolidated, with professionals from other fields competing for positions, and thus the above table shows a marked decline in the number of graduates in the last two decades.

4. Summary description of the National Statistical System (SEN)

The National Statistical System (SEN is the Spanish acronym) was created in 1968 by the Law No. 17622. It is headed by the National Institute of Statistics and Censuses (INDEC) which is responsible for Argentina's official statistics under the principles of centralized regulations and decentralized operations.

The National Statistical System is made up of:

a) the National Institute of Statistics and Censuses (INDEC);

b) the central statistical agencies in national ministries and secretariats, etc.;

c) the peripheral statistical agencies, i.e. the 23 provincial statistical agencies and the statistical agency of the city of Buenos Aires.

5. Income distribution in Argentina

The available data have been obtained from the Permanent Household Survey (EPH), which is carried out periodically by the INDEC and the provincial statistical agencies in a number of urban centers throughout the country, but it does not provide total absolute figures for the entire nation.

6. Structure of the economically active population of Argentina

Table 1. Economically active population by gender and employment conditions

Economically active population	Total	%	Employed	%	Unemployed	%
Total	**13,202,200**	**100**	**12,368,328**	**94.0**	**833,872**	**6.0**
Female	4,778,813	36	4,392,429	35.5	386,384	46.3
Male	8,423,387	64	7,975,899	64.5	447,488	53.7

Table 2. Employed population by gender, employment category and branch of activity

Employment category	Total employed population	Females	Males
Total	12,368,328	4,392,429	7,975,899
Blue or white collar worker	7,980,139	3,120,906	4,859,233
Public sector	2,221,329	941,140	1,280,189
Private sector	4,874,757	1,314,508	3,560,249
Household aid	884,053	865,258	18,795
Self-employed worker	2,825,303	715,086	2,110,217
Employer	872,944	178,948	693,996
Worker relative without definite pay	665,402	366,034	299,368
Unknown	24,540	11,455	13,085

Source: INDEC, National Census of Population and Housing, 1991.

Chapter II

AREAS OF STATISTICAL ACTIVITY

Sector 1

Production and dissemination of statistical information

a) *Official statistics*

The production and dissemination of official statistics is essentially the responsibility of the National Statistical System (SEN), consisting of the National Institute of Statistics and Censuses (INDEC), which originates centralized guidelines, the national ministries and the peripheral agencies (the Provincial Statistical Offices).

There are two basic types of official statistics:

social, demographic and economic information gathered from censuses, surveys and records;

current indexes and short-term indicators.

There are also special studies [reports] for diagnosis purposes and decision-making, such as research modules on specific subjects, as well as nomenclators and classifications.

The national censuses and the most important surveys are carried out under the direction of the INDEC with the significant cooperation of each Provincial Statistical Office and of the statistical agencies of the national ministries.

In a similar manner, various indexes and indicators are regularly compiled and published by the INDEC, such as the Consumer Prices Index, the Construction Costs Index, the Index System of Wholesale Prices, and the Argentine Foreign Trade indicators.

It should be mentioned that the INDEC supports the recommendations of the Economic Commission for Europe (ECE) included in the "Fundamental Principles of Official Statistics".

In addition, both the Provincial Statistical Offices and the national ministries produce statistical information required firstly by the provincial governments and secondly by their specific activities.

b) *Statistics of the private sector*

The activity of the private sector in the production and dissemination of statistics is also important, especially for consultants, marketing, opinion polls, election polls, and other purposes. However, it is not easy to establish the boundary between production and analysis with decision-making purposes. In any case, there is no SEN supervision of the methods used in gathering and processing such data and information.

Sector 2

University teaching, academic work and statistical research

In addition to the undergraduate and graduate courses described in the Annex I, in practically all the universities in Argentina there are different modules of theoretical and applied courses on Statistical Methods.

It is worth mentioning that in a recent reform of the elementary school curricula it was decided to include basic statistical notions, which had been gradually integrated already into high school math curricula.

Chapter III

THE WS AND MS POPULATIONS

Scheme 1.a: Distribution of the "WS universe" and "MS universe" by sector of statistical activity

SECTORS OF STATISTICAL ACTIVITY	TOTAL		WS		MS	
TOTAL	852	100%	578	67.8%	32.2%	
SECTOR 1 Production and dissemination of statistical information	308	100%	202	65.6%	106	34.4%
SECTOR 2 University teaching and research	396	100%	275	69.4%	121	30.6%
SECTOR 3 Statistical consultants	35	100%	21	60.0%	14	40.0%
SECTOR 4 Other activities	1	100%	--	---	1	100%
Unspecified (*)	112	100%	80	71.4%	32	28.6%

(*) In these cases the data base information is incomplete, and the usual alternatives are:

1. Only name, gender and profession.
2. Only name, gender and inclusion in some of the information sources used to compile the data base.

Scheme 1.b: Distribution of the "WS universe" and "MS universe" of graduate and post-graduate statisticians, by sector of the statistical activity they carry out.

SECTORS OF STATISTICAL ACTIVITY	TOTAL		WS		MS	
TOTAL	358	100%	253	70.7%	105	29.3%
SECTOR 1 Production and dissemination of statistical information	142	100%	95	66.9%	47	33.1%
SECTOR 2 University teaching and research	121	100%	93	76.8%	28	23.2%
SECTOR 3 Statistical consultants	31	100%	20	64.5%	11	35.5%
SECTOR 4 Other activities	1	100%	--	---	1	100%
Unspecified (*)	63	100%	45	71.4%	18	28.6%

Scheme 1.c: Distribution of the "WS universe" and "MS universe" by areas of knowledge according to their training (excluding the graduate and post-graduate statisticians in the previous table).

AREAS OF KNOWLEDGE	TOTAL		WS		MS	
TOTAL	494	100%	328	100%	166	100%
Natural sciences and exact sciences	169	100%	132	78%	37	22%
Engineering and technology	27	100%	7	26%	20	74%
Medical sciences	---		---		---	
Agricultural sciences	20	100%	8	40%	12	60%
Social sciences	144	100%	88	61%	56	39%
Humanities	9	100%	8	89%	1	11%
Unspecified	125	100%	85	68%	40	32%

SOURCES OF INFORMATION USED

a) Basic sources

These include member listings and records of associations connected to statistical activities, whether they are professional statisticians or professionals in other fields

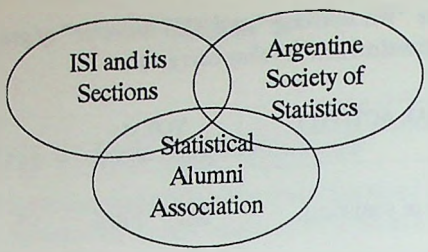
In the initial stage the following information was used:

1) Listing of ISI members and of the ISI Sections' members resident in Argentina (with the following data: family name, given names, and gender).
2) Listing of members of the Argentine Society of Statistics (SAE) (with the following data: family name, given names, gender, professional degrees, place of work).
3) Listing of members of the Statistical Alumni Association ("Colegio de Graduados en Estadística"), with the following data: last name, given names, gender, place of work.

It should be pointed out that the coverage of information of points 2 and 3 is only partial.

The following figure shows the fusion of basic information (the first data base of WS and MS obtained for the project in Argentina).

ISI and its sections



a) **Other sources of information used:**

1. Records of the Argentine Civil Service
2. Records of the National Statistical System (SEN).
3. Records of faculty members and researchers in the national universities.
4. Records of faculty members in private universities.
5. Records of graduates from the statistical courses (graduate and post-graduate) at the National University of Rosario.

These lists made it possible to include professionals doing statistical work who were not included in the basic sources, and, in addition, to complete the personal data in certain cases. Thus the data base was established with information about professional statisticians and other professionals doing statistical work in various fields.

At this stage, it is important to point out the following:

- The size of the compiled base is quite significant.
- The larger part includes professionals carrying out their activity in the field of official statistics.
- Sector 2 (university teaching and research) is probably overestimated due mostly to the typw of information in the records consulted.
- Lastly, a concrete reference cannot be made about what is the ratio of the base to the total WS and MS universe in the country.

CHAPTER IV

SCIENTIFIC AND TECHNOLOGICAL AREAS (OCDE 1993)

Given the characteristics of the information on WS and MS, the suggested classification followed in general the actual situation. However, in the area of Medical Sciences it was not possible to determine the inclusion of professionals.

CHAPTER V

THE SELECTED INDICATORS

The indicators given in this chapter, referring to the WS and MS populations in Argentina, **are only an approximation** because they have been calculated from the information base whose coverage is not total, as explained in Chapter III.

Indicator 1: Area i of Var 1 maximizing [WS(area j)/TWS] x 100. It answers the question, Which is the most frequent study area in the WS universe?

The most frequent study area in the WS universe is a degree or post-graduate work in Statistics, 44%.

Indicator 2: Area i of Var 1 maximizing [MS(area j)/TMS] x 100. It answers the question, Which is the most frequent study area in the MS universe?

The most frequent study area in the MS universe is a degree or post-graduate work in Statistics, 38.3%.

Indicator 3: Sector i of Var 2 maximizing [WS(sector j)/TWS] x 100. It answers the question, Which is the most frequent sector of statistical activity in the WS universe?

The most frequent sector of statistical activity in the WS universe is Sector 2 (University teaching and research), 47.6 %.

Indicator 4: Sector i of Var 2 maximizing [MS(sector j)/TWS] x 100. It answers the question, Which is the most frequent sector of statistical activity in the MS universe?

The most frequent sector of statistical activity in the MS universe is Sector 2 (University teaching and research), 44.2 %.

CHAPTER VI

CONCLUSIONS

As we processed the information obtained, certain weaknesses were perceived in the inclusion of professionals in the sectors of statistical activity considered. These problems might be traceable to various reasons:

- Any classification or classification frame requires clear definitions of its scope, and such definitions are usually derived from a thorough analysis and successive applications whose results make it possible to introduce the necessary corrections.
- Sector 1 is extremely comprehensive and so the corresponding data have a high level of aggregation. Thus, its definition should be revised in order to obtain more detailed information answering some of the project questions.
- Lack of information in some of the records used concerning the description of the activities carried out by the included professionals.

  Concerning Sector 2, more accurate information is needed in order to achieve a clearer integration of professionals in it. This means actually finding out if the statistical activity

they carry out is their chief occupation. It is quite likely that a number of professionals included in this sector should actually be included in other sector.

Moreover, it should be pointed out that a line of work to follow should take into consideration a detailed analysis of the various definitions in the project's methodology and of its clearest limits. For instance, how to determine if a professional (in statistics or in other fields) is chiefly dedicated to statistical activity.

SOME CONSIDERATIONS

From the information obtained and keeping in view the goals of the Characterization of the WS project, we consider it necessary to:

a) Revise the methodology used in compiling the WS and MS bases.
b) Improve the analysis of the available information.
c) Complete the information profiting from the results of item a).

With these elements we shall have a starting point for a more defined characterization.

Now that ISI has created the Committee on Women in Statistics, and taking in consideration its main objectives, "Promotion and strengthening of the representativity of women statisticians in the ISI and its sections", we ask the following question, Wouldn't it be important to find out if the environment where WS (both members and non-members of ISI and its sections) carry on their activities does offer them possibilities for training and participating in international forums? These and other situations should generate actions aimed at repositioning WS in their professional development.

MEXICO

CHAPTER 1

WOMEN IN STATISTICS

1. General data of the country

1.1. Total area: 1,953,162 Km²

1.2. Population density: 47 Inhab/Km²

1.3. Population of the five most populated cities in 1995:

México D.F.	8,489,007
Guadalajara	1,633,053
Monterrey	1,088,143
Puebla	1,222,569
León	1,042,132

1.4. Total of inhabitants: **13,474,894**

Gross national product per capita (most recent data and of five or ten years before)

Year	Total annual product (millions of new pesos)		Population (thousands of inhabitants) [1]	Annual product per inhabitant (new pesos)	
	Current prices in 1993			Current	1993
1990	676,067	1,049,064	81,250	8,321	13,072
1995	1,678,835	1,131,753	91,158	18,417	12,415
1997	2,922,035	1,273,383	94,275	30,995	13,507

[1] Estimated figure by Demography Latinamerican Center (CELADE).

2. Population of the country, 1995

2.1. Total population:

Women	46,257,791
Men	44,900,499
Total	**91,158,290**

2.2. ECONOMICALLY ACTIVE POPULATION (1997)

Women	13,004,485
Men	25,340,173
Total	**38,344,658**

3. Statistical formation university centers

Bachelor Level (6) CINE [1/]	Number of College Centres	Completed 1996	Number of Graduates 1990-1996	Students 1996	Students Females
Statistics	2	17	12	223	30
Informatics and Statistics	1	63	..	312	49
Actuary	8	560	243	2998	47
Financing Actuary	2	..	2/	52	46
Applied Math and	6	221	84	2383	35
computers					
TOTAL	15 [3/]	861	339	5,968	

[1/] International Classification of teaching.

[2/] New career

[3/] One same institution teaches 2 careers or more at level 6th.

Postgraduate Level (7) CINE [1/]	Number of College Centres	Number of: Graduated 1990-1996	Number of: Students 1996	% of Female Students
Population studies	1	8	..	
Demography	2	11	9	67
Experimental Statistic	1	3	13	2
Quality and Applied Statistic for Industry	1	23	..	
Estadística e investigación de operaciones				
Estadística aplicada	4	13	96	35
Estadística	3	3	40	25
Ciencias actuariales aplicadas al riesgo	1	5	..	
Estudios demográficos	1	..	5	40
Métodos estadísticos	1	7	12	42
TOTAL	16 [2/]	73	175	

[1/] Clasificación Internacional Normalizada de la Enseñanza.

4. Summary reference about statistic national system

1) ORGANIZATION TYPES OF THE OFICIAL STATISTICAL ACTIVITY

Statistical Information Mexican System is a mixed system.

And it is a centralizer organism that embodies statistical departments in Government Offices and State governments.

There is a government centralizer organism, Statistics, Geography and Informatics National Institute (Instituto Nacional de Estadística, Geografía e Informática (INEGI)), that exists as a State related to national statistics:

a) To obtain, from different statistic departments, in National Offices and Government authorities in each state, the information they capture and it is necessary to carry out National Accounts, as well as to publish National and State Statistic Annuaries and special studies.

This activity is performed through agreements and contracts and they guarantee reliability and comparability information conditions, as well as, if necessary, the collection of information as an answer to any of either part requirements.

b) To capture national information by:

- Housing and Population Census, every 10 years
- Economic Census, every 5 years
- Agricultural Census, every 10 years
- Monthly surveys:
  - Urban Employment
  - Industrial
  - Commercial
  - Services
- Household Expenditure and Income Bi-Annual Survey
- Special Surveys
- Controls to registration level the vital statistics and admites monthly information about different states, such as hospitals, movie theatres, museums, courts, etcetera.

It is to mention that this institute is in charge of the National Cartography and that makes easier to manage the relationship between statistical data and its geographic location.

In addition, it regulates and coordinates the Federal Governement informatics development, and facilitate the generation of advanced informatics systems to manage and propagation of statistics.

In regards to sectorial statistics, each government institution and state have their own Statistics Office or Department regulated by Statistics and Geographic Information National Law, particularly according to their specific needs. They recibe technical support from INEGI when they ask for it. Also they send information when it is required. Most of the State Offices and Departments and Federal Organisms have statistical representatives in each region or state.

It must be remembered that México is a federation with 31 soberane states -federative entities- and one Federal District, therefore the statistics offices in each state work more independently of INEGI than those pertaining to federal governement sector.

In each state there are districts or municipalities, some of them have Statistics Office.

Locally, there are no formal subsystems, but the bigger cities have Statistic Offices to satisfy their own needs and generally they are supported by and support to INEGI.

Total of personnel working at INEGI by sex

YEAR: 1999		YEAR: 1994	
Women	16,672	Women	10,196
Men	24,807	Men	19,666
Total	41,479	Total	29,862

Total of college professionals working at INEGI by sex

YEAR: 1994	
Women	2,551
Men	
Total[1/]	

1/ Currently, data about men are not available.

5. Country income distribution

Employed Population classified by sex, according to individual total income, 1997

Employed Population		Minimum Wage Ranges [1/]							
		Less than 1 M.W.	From 1 to 2 M.W.	More than 2 to 3 M.W.	More than 3 to 5 M.W.	More than 5 to 10 M.W.	More than 10 M.W.	No Income[2/]	Not Specified
Women:	12,409,489	3,401,486	3,154,724	1,469,486	1,086,392	479,842	107,006	2,348,950	361,603
Men:	24,633,628	4,370,121	7,709,823	3,709,387	2,444,996	1,515,699	649,391	3,247,827	986,384
Total:	37,043,117	7,771,607	10,864,547	5,178,873	3,531,388	1,995,541	756,397	5,596,777	1,347,987

1/ The general minimum wage (M.W.), in 1997 was $729,00 pesos, that means $90.78 dollars.
2/ Includes employed population that earns only no monetary income (autoconsumption)

6. Economically active population structure of the country, 1997

Population of 12 years of age and over by sex and formal instruction level, and by employment status

Sex and Level of Instruction	Population of 12 years and over	Employment Status	
		P.E.A	P.E.I
Women	**35,325,235**	**13,004,485**	**22,320,750**
No instruction	4,127,439	1,238,403	2,889,036
1 to 3 years element. school	4,408,356	1,386,918	3,021,438
4 to 5 years element. school	3,049,459	819,122	2,230,337
6 years element. school	8,052,169	2,646,150	5,406,019
1 to 2 years Jr. High	2,595,345	565,143	2,030,202
3 years Jr. High	4,449,940	1,804,554	2,645,386
Subprofessional	3,192,339	1,826,035	1,366,304
1 to 3 years High School	2,526,007	940,427	1,585,580
Professional medium level	392,878	213,657	179,221
Superior Professional	2,520,834	1,558,558	962,276
Not specified	10,469	5,518	4,951
Men	**32,376,767**	**25,340,173**	**7,036,594**
No instruction	2,834,412	2,228,277	606,135
1 to 3 years element. school	4,054,001	3,396,608	657,393
4 to 5 years element. school	2,705,868	1,733,459	972,409
6 years element. school	6,579,360	5,307,551	1,271,809
1 to 2 years Jr. High	3,053,786	1,687,847	1,365,939
3 years Jr. High	4,936,292	4,302,722	633,570
Subprofessional	1,230,252	1,081,550	148,702
1 to 3 years High School	3,088,241	2,266,231	822,010
Professional medium level	378,854	340,689	38,165
Superior Professional	3,510,324	2,990,570	519,754
Not specified	5,377	4,669	708
Total	**67,702,002**	**38,344,658**	**29,357,344**
No instruction	6,961,851	3,466,680	3,495,171
1 to 3 years element. school	8,462,357	4,783,526	3,678,831
4 to 5 years element. school	5,755,327	2,552,581	3,202,746
6 years element. school	14,631,529	7,953,701	6,677,828
1 to 2 years Jr. High	5,649,131	2,252,990	3,396,141
3 years Jr. High	9,386,232	6,107,276	3,278,956
Subprofessional	4,422,591	2,907,585	1,515,006
1 to 3 years High School	5,614,248	3,206,658	2,407,590
Professional medium level	771,732	554,346	217,386
Superior Professional	6,031,158	4,549,128	1,482,030
Not specified	15,846	10,187	5,659

[1/] Includes population of 12 years of age and over that have had further training after elementary school.

Households and current quarterly total income. National level by minimum wage multiple according to deciles of households, 1996[a]

General Multiples of Minimum Wages [b]	Total	Household Deciles [c]	Household Deciles								
		I	II	III	IV	V	VI	VII	VIII	IX	X
Total current											
Household income	28,467,038	2,046,704	2,046,704	2,046,704	2,046,704	2,046,704	2,046,704	2,046,704	2,046,704	2,046,704	2,046,702
Ingreso	226,260,549	4,041,375	6,793,176	8,922,314	11,085,085	13,505,481	16,570,712	20,268,092	25,994,644	36,276,537	82,803,133
0.0 a 0.50											
Households	97,408	97,408	0	0	0	0	0	0	0	0	0
Income	61,673	61,673	0	0	0	0	0	0	0	0	0
0.51 a 1.00											
Households	511,928	511,928	0	0	0	0	0	0	0	0	0
Income	703,290	703,290	0	0	0	0	0	0	0	0	0
1.01 a 1.50											
Households	1,156,843	1,121,498	35,345	0	0	0	0	0	0	0	0
Income	2,541,083	2,439,002	102,081	0	0	0	0	0	0	0	0
1.51 a 2.00											
Household	1,605,061	315,870	1,251,370	37,821	0	0	0	0	0	0	0
Income	4,919,501	837,410	3,933,345	148,746	0	0	0	0	0	0	0
2.01 a 3.00											
Household	3,465,531	0	759,989	2,008,883	670,991	25,668	0	0	0	0	0
Income	15,193,079	0	2,757,750	8,773,568	3,507,820	153,941	0	0	0	0	0
3.01 a 4.00											
Household	3,184,498	0	0	0	1,375,713	1,525,867	282,918	0	0	0	0
Income	19,612,063	0	0	0	7,577,265	9,861,167	2,173,631	0	0	0	0
4.01 a 5.00											
Household	2,291,854	0	0	0	0	495,169	1,417,457	379,228	0	0	0
Income	18,440,901	0	0	0	0	3,490,373	11,382,313	3,568,215	0	0	0
5.01 a 6.00											
Household	1,739,931	0	0	0	0	0	346,329	1,218,433	175,169	0	0
Income	16,979,111	0	0	0	0	0	3,014,768	11,943,348	2,020,995	0	0
6.01 a 7.00											
Household	1,191,688	0	0	0	0	0	0	449,043	742,645	0	0
Income	13,824,067	0	0	0	0	0	0	4,756,529	9,067,538	0	0
7.01 a 8.00											
Household	990,129	0	0	0	0	0	0	0	803,756	186,373	0
Income	13,175,976	0	0	0	0	0	0	0	10,336,477	2,839,499	0
8.01 y más											
Household	4,232,167	0	0	0	0	0	0	0	325,134	1,860,331	2,046,702
Income	120,809,805	0	0	0	0	0	0	0	4,569,634	33,437,038	82,803,133

[a] In 1996 thw monthly general minimum wage was $633.00 pesos, it means $82.74 dollars.

[b] Households at national level are classified by general minimum wages multiples, according to their total quarterly current income.

[c] Households are organized by deciles according to their total quarterly current income. Households with zero total quarterly current monetary income are classified in the first decile.

UNITED STATES OF AMERICA

The **Local Group Coordinator** of this country, Prof. Martha Bilotti-Aliaga, sent to the General Coordination Project a brief description about an American Association for Women in Statistics named CAUCUS.

1. About the CAUCUS

The CAUCUS for Women in Statistics was formed in 1970 to focus on the specific problems associated with the participation of women in statistical oriented professions.

The CAUCUS is an independent association with membership open to all women and men who support its purposes and objectives.

The membership of about 350 consists of individuals from the USA and Canada.

The CAUCUS works with all statistical professional societies.

It is informally associated with the American Statistical Association and participates in its annual meeting.

The CAUCUS works closely with the Committee on Women in Statistics of theASA, as well as similar committees in other statistical organizations, to promote its purposes and objectives.

The CAUCUS fosters opportunities for the education, employment and advancement of women in statistics and the recruitment of women into the statistics profession.

The CAUCUS promotes increased participation of women in professional meetings and on governing boards and committees of statistical societies.

The CAUCUS encourages women to publish in professional journals. It stimulates professional and social contact among its members, and the interchange of concerns, ideas and information related to its objectives.

The CAUCUS strives for the elimination of sex discrimination and improvement of the status of professional women in general and female statisticians in particular.

Activities

To meet its objectives and to facilitate networking among its members and other statisticians, the principal activities sponsored by the CAUCUS are:

1) ASA/CAUCUS Gertrude M. Cox Scholarship Fund drive, to provide an annual scholarship to a female student pursuing graduate training in a statistically oriented field.

Initial awards were made during the ASA Sesquicentennial Celebration in 1989. Contributions to the scholarship may be made in conjunction with payment of membership dues.

2) Technical sessions at the annual Joint Statistical Meetings to promote and present gender-related to issues and studies.

3) Quarterly newsletter including news items, editorials, job ads, and other articles and items of interest to the membership.

4) Directory of membership.

5) Roundtable discussion groups at the annual Joint Statistical Meetings and other statistical association meetings to discuss technical issues and personal development issues.

6) Social events at statistical meetings to stimulate contacts and enhance networks.

7) Minimal cost "job wanted" advertisements in the CAUCUS newsletter for members, with an expanded job advertisement targeted to the January academic application deadlines.

CAUCUS 1999 EXECUTIVE COMMITTEE

PRESIDENT
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Membership

Membership in the CAUCUS is open to interested women and men without regard to membership in any other professional society.

The CAUCUS has three types of membership: regular, sustaining and associate (the latter available for retirees, students and unemployed). All categories of membership are available for individuals and couples. Full membership benefits apply to all dues categories, but we encourage joining as a sustaining member, to enhance support of the aims and programs of the CAUCUS.

Interesting Links with others related Associations

American Statistical Association
Association for Women in Mathematics
ISI Committee on Women in Statistics
ASA Committee on Women in Statistics
American Physical Society
National Academy of Science,
Committee on Women in Science & Engineering
Women Chemists Committee/ ACS
Association for Women in Science
Advocates for Women in Science, Engineering and Maths
Association for Women in Computing
Association for Women in Mathematics
Society of Women Engineers
Women in Cell Biology
Women in Endocrinology
Women in Engineering Program
Advocates Network
Women in Neuroscience
Women in Technology International
American Association of University Women
National Association for Women in Education
National Consortium for Graduate Degrees for Minorities in Engineering and Science, Inc.

2- About the Committee on Women in Statistics of the American Statistical Association

MISSION STATEMENT

Type: Current.

Authorization: Board of Directors, 1972 (BOD Jan. 72-10). Reviewed April 1998; charge revised; approved 1998 (BOD 98-21).

Composition: The Committee has 10 members plus the President of the CAUCUS for Women in Statistics as an ex-officio member.

Charge:

- To make members of ASA more aware of the common professional interests and problems of women members of ASA.
- To promote the status of women who are already in the statistics profession.
- To encourage women to enter the field of statistics.
- To establish contact and share ideas with other professional groups having similar goals.
- To jointly coordinate the management of the Gertrude Cox Scholarship with the CAUCUS for Women in Statistics.

URUGUAY

CHAPTER 1

COUNTRY DATA

The coordination have decided to include this report in Spanish, because the English version wasn't available at the time to print this general report

1- Datos generales del país [1]

La República Oriental del Uruguay se sitúa a la margen izquierda del Río de la Plata y margen izquierda del Río Uruguay, y tiene como países limítrofes la República Argentina y la República Federativa del Brasil.

Está situada aproximadamente entre los paralelos 30 y 35 de latitud sur y los meridianos 53 y 58 de longitud oeste.

Tiene un área territorial total de 318,413 Km^2 incluyendo áreas insulares del Río Uruguay y aguas jurisdiccionales de los ríos Uruguay y de la Plata y mar territorial. El área terrestre es de 176,215Km^2.

La capital es Montevideo.

2- Poblacion al VII censo general de poblacion, III de hogares y V de viviendas del 22 de mayo de 1996

Sigue cuadro principal de población por área y ciudades de 15.000 habitantes o más: [2]

Departamento /área	Localidad (1)	Total	Hombres	Mujeres
TOTAL DEL PAÍS		**3,163,763**	**1,532,288**	**1,631,475**
Area urbana		2,872,077	1,366,092	1,505,985
Area rural		291,686	166,196	125,490
Montevideo	**Montevideo**	1,244,850	576,468	668,382
Artigas	**Artigas**	41,622	19,650	21,972
Artigas	Bella Unión	16,801	8,345	8,456
Canelones	Las Piedras y aledaños	204,050	99,933	104,117
Canelones	Ciudad de la Costa	78,725	38,756	39,969
Canelones	**Canelones**	19,803	9,665	10,138
Canelones	Santa Lucía	16,601	7,882	8,719
Cerro Largo	**Melo**	47,664	22,436	25,228
Colonia	**Colonia**	22,142	10,866	11,276
Colonia	Carmelo	16,619	7,828	8,791
Durazno	**Durazno**	31,781	15,263	16,518
Flores	**Trinidad**	19,901	9,487	10,414
Florida	**Florida**	31,448	15,141	16,307
Lavalleja	**Lavalleja**	37,179	17,767	19,412
Maldonado	**Maldonado**	50,122	24,790	25,332

[1] Fuente : URUGUAY - Anuario Estadístico 1997. INE . Montevideo, Febrero 1998.

[2] Procesado por M.Mónica Beltrami, INE, Uruguay.

Departamento /área	Localidad (1)	Total	Hombres	Mujeres
Maldonado	San Carlos	23,999	11,607	12,392
Maldonado	Punta del Este	15,255	7,373	7,882
Paysandú	**Paysandú**	81,303	38,976	42,327
Río Negro	**Fray Bentos**	22,577	11,043	11,534
Rivera	**Rivera**	71,689	33,869	37,820
Rocha	**Rocha**	26,027	12,365	13,662
Salto	**Salto**	93,394	44,405	48,989
San José	**San José de Mayo**	34,927	16,550	18,377
San José	Delta del Tigre-Playa Pascual	19,569	9,825	9,744
Soriano	**Mercedes**	39,139	18,811	20,328
Tacuarembó	**Tacuarembó**	45,853	21,721	24,132
Treinta y Tres	**Treinta y Tres**	31,734	15,055	16,679

(1) En negrita: capitales de departamento.

Centros universitarios de formación estadística

La formación en Estadística en centros universitarios se ha llevado a cabo dentro de las distintas carreras científicas que la requieren.

Durante la década de los 80 se abrió una "carrera corta" en Estadística (Diploma de "Técnico en Estadística") dependiente de la Facultad de Ciencias Económicas y de Administración, y con una duración de tres años lectivos. Egresaron dos generaciones de técnicos en esta disciplina. Otro tipo de capacitación de nivel terciario no universitario fue provisto por el Instituto Nacional de Estadística dirigiéndose principalmente a funcionarios del Sistema Estadístico Nacional.

Durante el III Seminario Estadístico Nacional de 1991, las conclusiones y recomendaciones del grupo de trabajo en Capacitación Estadística incluyeron la necesidad de reabrir la carrera de Estadístico dentro de la Universidad de la República. A partir de esas recomendaciones se estableció una "Mención en Estadística" dentro de la Licenciatura de Matemática de la Facultad de Ciencias.

Sólo desde el año 1997, la Facultad de Ciencias Económicas volvió a reabrir la carrera de "Técnico en Estadística". Aún no hay egresados.

Sistema Estadistico Nacional

Con fecha 20/10/94 se promulgó la Ley 16.616 (llamada Ley Estadística) en la cual se describen y articulan las características del SEN.

El SEN tuvo existencia "*de facto*" desde el I Seminario Estadístico Nacional en 1971. La actividad principal del SEN es, por parte del INE, la recopilación y publicación del Anuario Estadístico Nacinal y la consecución de proyectos de investigación social o económica y la coordinación de las estadísticas oficiales.

Distribución de ingresos del país [3]

Los ingresos personales que se muestran en la siguiente tabla incluyen los ingresos por todo concepto: remuneraciones al trabajo tanto en dinero como en especie, intereses y remuneraciones al capital, jubilaciones y pensiones del país o del exterior, transferencias y percepción de haberes por alquileres o arrendamientos de bienes inmuebles, beneficios recibidos de las empresas o

[3] Fuente : INE, Encuesta Continua de Hogares, primer semestre de 1998. Procesamiento de datos: M. Mónica Beltrami. Para el nivel de salarios docentes universitarios, la fuente es la Encuesta de Salarios (para el Indice Medio de Salarios) del mismo organismo.

cooperativas de producción. No se incluye la estimación del valor locativo de la vivienda, la cual sí es tenida en consideración cuando se trata de estimar el ingreso total de los hogares.

Quintiles de ingresos personales	TOTAL (U$S)	Grandes regiones urbanas	
		Gran Montevideo	Resto urbano (1)
TOTAL	601	690	449
Quintil 1	121	122	120
Quintil 2	252	254	249
Quintil 3	403	405	400
Quintil 4	632	634	627
Quintil 5	1,600	1,663	1,381

(1) Localidades de 5.000 habitantes o más.

Respecto del nivel de salarios docentes/investigadores de la Universidad de la República, la información recogida por la Encuesta de Salarios comprende el salario mensual en base a un régimen *partime* de 20 horas semanales y es, según grados y en su equivalente en dólares norteamericanos, el siguiente:

Grado 1 (Ayudante de prácticos)	US$ 180
Grado 2 (Profesor Ayudante)	US$ 250
Grado 3 (Profesor Asistente)	US$ 324

Estos salarios no incluyen beneficios sociales ni regímenes especiales. Se pueden estimar, siguiendo la escala anterior, en US$ 450 el salario de un Grado 4 (Profesor Agregado) y en unos US$ 550 el de Grado 5 (Profesor Titular). Esta estimación también se basa en un régimen de 20 horas semanales y no incluye ni beneficios sociales, ni regímenes especiales como es de dedicación total o exclusiva (los cuales no se aplican con cargas horarias de 20 horas).

El régimen de 20 horas semanales es el promedio de dedicación de los grados declarados a la encuesta. Cuanto más alto se está en la escala de grados, el promedio de dedicación horaria aumenta. Generalmente, un Grado 4 tiene una dedicación base de 24 horas semanales. Un Profesor Titular tiene muy frecuentemente un tiempo completo de 40 horas, más dedicación exclusiva. El régimen de dedicación exclusiva (o total) implicó (según diversas legislaciones y reglamentaciones) un aumento de entre un 50% a un 100% del salario base.

Poblacion economicamente activa

Para la definición de Población Económicamente Activa, Tasa de Actividad, Tasa de Ocupación y Tasa de Desocupación se siguen las definiciones recomendadas por la OIT. El límite inferior de la edad para el cálculo de la PEA es de 14 años.

Sigue cuadro correspondiente al primer semestre de 1998 de la ECH. La población objetivo (al igual que la del título anterior) es la de centros poblados (localidades) de 5.000 habitantes o más.

Variable	Total país urbano	Grandes regiones urbanas	
		Gran Montevideo	Resto urbano
Tasa de Actividad % (1)	60.3 ± 0.8	61.6 ± 1.0	58.2 ± 1.4
Tasa de Empleo % (1)	54.3 ± 0.8	55.2 ± 1.0	52.9 ± 1.4
Tasa de Desocupación % (2)	10.0 ± 0.6	10.4 ± 0.8	9.2 ± 1.0

(1) Cantidad de activos / ocupados dividido por la cantidad de personas de 14 años o más.

(2) Cantidad de desocupados dividido por la cantidad de activos.

ASIA

- **INDIA**
- **MALASIA**

INDIA

A NOTE ON THE REASONS FOR THE LOW PARTICIPATION OF PROFESSIONAL INDIAN WOMEN STATISTICIANS IN THE ISI AND ITS SECTIONS

Background information

Despite the large number of statisticians in India, with a strong tradition of important names and work in statistics - both of which have influenced the history of statistics, relatively few Indians are members of the ISI and its sections. This is true of both men and women statisticians.

For example in 1997 in the ISI, of a total of 2147 members only 87 were from India, and of these, less than 5 were women (guess based on first names). In one of the largest sections of the ISI, the IASS, of a total of 1160 membersin 1997, only 23 were from India and none of them women. Unlike the ISI where membership is only by election, and an annual membership fee costs about US$100, in the IASS (as in other sections of the ISI), membership is available on application. The annual IASS membership fee is US$11 (or about Rs. 500) for Indians, since India is a developing country.

There may be many reasons for the low representation of women (and men) statisticians from India in the ISI and its sections. It is certainly not due to a lack of women statisticians in India. It is interesting to note that, in general, discrimination against women in India appears to be at the basic level of access to education, mainly because of lack of money to educate and societal pressures that women should stay at home and take care of the family after marriage. But this has changed, especially with the urban middle class, where girls are now getting educated as boys are. Once they are educated, there does not appear to be any overt bias against women in terms of opportunities or promotions. If anything, more women are now being educated and so there are more women in good positions in the work force. We do not have the numbers, but there is a sizeable number of women statisticians in the Indian work force, although not as large as the number of men statisticians.

We looked at a few hypotheses:

1. There is not enough publicity about the ISI and its sections and the benefits from membership in these associations.
2. The benefits are not attractive enough.
3. The annual fees are too high.
4. Women are too busy juggling two careers (office and home) and do not have the time for such activities.
5. Only men tend to be nominated and encouraged for such things, if at all.
6. Indian women statisticians are generally young, and are starting their professional life in lower level categories. Hence they are not encouraged or do not want to become members of ISI or its sections.
7. Many of them go abroad to better their opportunities, in which case, even if they become members of the ISI or its sections, they may not count as members from India.

Based on discussions of these hypotheses with a few women statisticians, we conclude that the most important reason for women statisticians from India not participating in the ISI and its sections is hypothesis # 4 above, followed by 1, 2 and 5. 3, 6 and 7 did not feature in the discussions as important reasons. The reasons that emerged in the discussions are elaborated in the following:

A. Women statisticians are so pressed for time working full time both at home and at the office that they have little time for anything else. Of the small number of women statisticians, the number who can actively participate in honorary work in organisations such as the ISI, after balancing their home and work commitments is very small. This will not change unless our society changes and men in all families take at least an equal share of the responsibilities and work at home, as is happening more and more in the West. (Women are the ones who have to go home early after work to attend to household chores and the children. Women are the ones who take leave if the children are ill, etc.) Women statisticians from the Western world cannot perhaps imagine how much effort Indian women statisticians put in to get to wherever they are in their work places.

B. There is not enough publicity about the memberships of the ISI and its sections and their benefits, if any. We believe that at least some women statisticians would have liked to become members had they known of the benefits of such memberships.

C. The maximum benefit from membership in professional associations perhaps comes from attending conferences and meetings outside the home-town. This invariably requires arranging for someone to take over the woman's responsibilities in the house when she is away - child-care and house-work. This is getting to be more and more difficult these days. Hence membership in these associations is not aspired for.

D. There is a subtle discrimination against women imposed by Indian society. Even if there is no discrimination against women while they are being educated or at the workplace, there is some discrimination which Indiansocietal/family values impose on women. Often women themselves setboundaries to what they can do, perhaps fearing criticism from family members and others. Some persist against odds but others give up easily.

E. Young professional women have to take long intervals of time off from their careers to look after their children. They therefore tend to miss out on opportunities to participate in associations such as the ISI early in their careers and to then get actively involved in them when they have had sufficient experience.

F. Some officers believe that if women are recommended for additional work, they may not be able to do it, not because they are incapable but because they will not find the time for it. Some women are partly to be blamed for this belief as they tend to shirk additional responsibilities on flimsy excuses. This results in a general lack of trust in women's abilities to carry additional responsibilities. Unless a woman proves that she is capable of handling such responsibilities, she may not be recommended for membership in the ISI.

However, we believe that things are changing and can be changed. We do have capable women statisticians in India who are committed to their work and could be convinced of the benefits of membership in the ISI and its sections. Yet, many of them are not aware of the ISI or its sections. Perhaps the best way to remedy this situation initially would be to publicize these memberships better and make the benefits more attractive. We believe then that some women statisticians in India will respond positively and become members of these associations, contributing to them and enriching them.

MALAYSIA

CHAPTER 1

DATA CONCERNING MALAYSIA

Location:

Malaysia is situated in South East Asia. Our neighbouring countries are Thailand, Singapore, Brunei and Indonesia. Malaysia consists of two parts: West Malaysia or Peninsular Malaysia and East Malaysia. East Malaysia is on the island of Broneo. There are three different countries on the island of Broneo. These countries are: East Malaysia, Brunei and part of Indonesia.

1. General Data:

a) Total surface area: 329,758 sq. km.

b) Density of population: National average: 66 per sq. km.

c) Population of the five most populous cities/towns: Census 1991

1. City: Kuala Lumpur Population: 1,145,342
2. Town: Ipoh Population: 382,853
3. Town ; Johore Bahru Population: 328,436
4. Town: Petaling Jaya Population: 254,350
5. Town: Klang Population: 243,355

d) GNP per capita:

1. The latest available figure: (1996) RM11,239 at current prices) (≅ US$2,675.95)
2. Five years ago: (1991) RM6,752 at current prices) (≅ US$1,607.62)
3. Ten years ago ; (1986) RM4,156 at current prices) (≅ US$989.52)

The Malaysian dollar is called the Ringgit Malaysia and is written in short as RM. The exchange rate used here is US$1.00 ≅ RM4.20. Prior to the present economic crises the exchange rate was US$1.00 ≅ RM2.50

2. Population in the 1991 Census (the most recent national census)

A	Total population:	17,563,420
	Number of females:	8,686,591
	Number of males:	8,876,829
B	Economically active population(15 - 64 years):	5,997,600
	Number of females:	1,924,267
	Number of males:	4,073,333

3. Students in universities:

The number of students enrolled in 1995: 97,103

The percentage (%) of female students: 50.12%

4. Department of Statistics Malaysia:

a). A brief description of the department:

The Department of Statistics Malaysia is a centralized government agency headed by the Chief Statistician. It operates under the provisions of the Statistics Act 1995 (Revised-1989). The main functions of the Department are the collection, interpretation and dissemination of statistics for the purpose of formulating policies for national development, planning and administration. It has branches in all the states of Malaysia. The branches carry out the activities as directed by the Department's headquarter in Kuala Lumpur.

b).Total number of personnels: 1,777
Number of females: 980
Number of males: 797

c).Total number of personnels with degrees: 95
Number of females: 39
Number of males: 56

5. Incomes distribution in Malaysia:

The following table is taken form the Seventh Malaysia Plan.

Mean monthly gross household income for 1990 and 1995.

Group	In Current Prices (RM), (≈ US$) 1990	In Current Prices (RM), (≈ US$) 1995	Average Annual Growth Rate, (%) 1990 - 1995
Malaysia	1,167 (277.86)	2,007 (477.86)	9.5
Citizens	1,169 (278.33)	2,020 (480.95)	9.5
Non-citizens	1,105 (262.10)	1,719 (409.29)	7.6
Urban	1,617 (385.00)	2,596 (618.10)	8.2
Citizens	1,606 (382.38)	2,593 (617.38)	8.3
Non-citizens	2,006 (477.62)	2,686 (639.52)	5.0
Rural	951 (226.43)	1,300 (309.52)	5.3
Citizens	957 (227.86)	1,319 (314.05)	5.5
Non-citizens	783 (186.43)	985 (234.52)	3.9

Source: Department of Statistics Malaysia: In brief, 1996.

6. Structure of economically active population in Malaysia

The following three tables are taken from Labour Force Survey 1996. Not all the details in the original tables are given below.

Number of employed persons (in thousands) by industry and sex in Malaysia in 1996.

Industry	Total	Male	Female
Total	**8,399.3**	**5,514.2**	**2,885.0**
Agriculture, forestry, livestock and fishing	1,626.2	1,134.9	491.0
Mining and quarrying	35.0	31.2	3.8
Manufacturing	1,912.1	1,115.5	796.6
Electricity, gas and water	44.1	39.1	5.0
Construction	716.5	668.2	48.3
Wholesale and retail trade, restaurants and hotels	1,566.7	944.3	622.4
Transport, storage and communication	400.7	352.4	48.3
Finance, insurance, real estate and business services	412.0	242.9	169.0
Community, social and personal services	1,686.0	985.7	700.3

Number of employed persons (in thousands) by occupations and sex in Malaysia in 1996.

Occupation	Total	Male	Female
Total	**8,399.3**	**5,514.2**	**2,885.0**
Professional, technical and related workers	838.1	477.6	360.4
Administrative and managerial workers	298.2	250.3	47.9
Clerical and related workers	905.8	393.0	512.8
Sales workers	935.7	591.3	344.4
Service workers	943.1	499.8	443.3
Agriculture, animal husbandry and forestry workers, fishermen and hunters	1,644.8	1,157.4	487.4
Production and related workers, transport equipment operators and labourers	2,833.6	2,144.8	688.8

Number of employed persons (in thousands) by employment status and sex in Malaysia in 1996.

Employment status	Total	Male	Female
Total	**8,399.3**	**5,514.2**	**2,885.0**
Employer	251.1	226.9	24.2
Employee	6,071.4	4,000.2	2,071.2
Self-employed worker	1,514.2	1,124.5	389.7
Unpaid family worker	562.6	162.7	399.9

References:

- Publications of the Department of Statistics Malaysia:
- Department of Statisitcs Malaysia: In brief, 1996.
- Labour Force Survey, 1996.
- Malaysia: Seventh Malaysia Plan, 1996-2000, Percetakan Nasional Malaysia, 1996, Kuala Lumpur.

EUROPE

- **CROATIA**
- **FINLAND**
- **FRANCE**
- **GREECE**
- **HUNGARY**
- **ITALIA**
- **ROMANIA**
- **SLOVENIA**
- **SPAIN**

CROATIA

CHAPTER 1

DATA CONCERNING THE COUNTRY

The Republic of Croatia declared independence from the former Yugoslavia in May 1990. In 1991 its independence was recognized by the international community. In retaliation the Yugoslav army and Serbia started the war against Croatia, which lasted from 1991-1995.

1- General data on the country

A. Total surface:

Land-registry surface:	56,542 km²
Coastal sea:	31,067 km²
Total:	87,609 km²

B. Density of population (Census 1991): 84.6 per km²

C. Population of the 5 most populous cities (Census 1991):

Zagreb (the capital)	706,770
Split	189,388
Rijeka	167,964
Osijek	104,761
Zadar	76,343

D. GDP per capita in US$

1997 (estimate)	4267.1
1996 (preliminary)	4392.1
1995 (de facto)	4028.9
1994 (de facto)	3138.6
1993 (de facto)	2342.3
1992 (de facto)	2291.0
1991 (de facto)	4027.5
1990 (de jure)	5185.9

Sources of data: [SLJH-98], [CBSRH-99a].

For the year 1990, GDP estimate in current prices was made by conversion of the principal macroeconomic aggregates calculated according to the Material Product System of Accounts, using other available data from statistics or authorized institutions. The estimate does not include army and police activities, since the Croatian army was still in constitution.

2- Population in 1991 census

A. Total population

	Within Croatia	Total[1]
Total population	4,499,049	4,784,265
Total of women	2,336,894	2,465,642
Total of men	2,162,155	2,318,623

[1] Includes persons working abroad and family members living with them.

B. Active population

Total population	**2,039,833**
Total of women	874,105
Total of men	1,165,728

Source of data: [SLJH-98].

3- Universities centers of studies in statistics

There are no Universities in Croatia offering undergraduate or graduate degrees in statistics as such. Of the four Croatian Universities (Zagreb, Split, Rijeka, and Osijek), only the University of Zagreb offers some statistical contents within the Mathematics Department: during 1979-1993 major in Mathematical informatics and statistics, since 1993 major in Mathematical statistics and computer science. These majors comprise a thorough course in Probability and Measure theory and an introductory level course in Mathematical statistics.

We had not succeeded in collecting data on the number of graduates in these majors. However, the undergraduate study of mathematics at the University of Zagreb offers majors in Math. Education and Math. Engineering. Among the majors in Math. Engineering most students (more than 90%) take the major including the above mentioned statistics course. Graduate degrees (M.Sc. and Ph.D.) in Mathematics are also offered at the Mathematics Department of the University of Zagreb. These are not classified in majors, and there is no way of knowing how many are related to statistics. We have included in the following table only undergraduate students taking major in Math. Engineering and all graduate students of Mathematics.

Levels of degrees	Number of university centers	Total number (number females | % females)		
		Graduates		Students
		1990	1991-1997	1997/98
B.Sc.	1	36 (18 | 50.0%)	356 (229 | 64.3%)	299 (178 | 59.5%)[1]
M.Sc.	1	14 (7 | 50.0%)	57 (26 | 45.6%)	34 (21 | 61.8%)[2]
Ph.D.	1	7 (3 | 42.9%)	35 (8 | 22.9%)	12 (6 | 50.0%)[3]

Source of data: Students' Administration of the Mathematics Department, Faculty of Natural Sciences and Mathematics, University of Zagreb and [Kucan-96].

[1] Mathematics students choose between the education and engineering major after the first year. Total number of engineering students was calculated as the number of engineering students in the second to fourth year of study during the academic year 1997/98, increased by the number of students on the first year of study during 1997/98, who have chosen the engineering major in 1998/99.

[2] Graduate study of mathematics leading to the M.Sc. degree has two years of coursework. Number of students includes only those attending the courses during the 1997/98 academic year. Students who have finished coursework and are still working on the thesis are not included.

[3] There are no formal coursework requirements for the Ph.D. degree. Number of Ph.D. students indicates those whose thesis topic was accepted by a Supervising committee of the Mathematics Department during the academic year 1997/98.

4 – Brief reference to the national statistical system

1. Type of organization of the official statistical activity

Organization of the official statistical activity is a combination of a centralized and decentralized type. Main statistical activity is organized within the Central Bureau of Statistics with regional statistical offices in each of 21 counties of the country. Some data are collected and analyzed by cooperating institutions: Meteorological and Hydrological Service of Croatia, Croatian Employment Service, Faculty of Science (Geographical Department), Ministry of Finance, Croatian National Bank, Institute for Payment Transactions, Croatian National Institute for Public Health, Republic Fond for Pension and Disability Insurance of Workers in Croatia, and State Directorate for Environmental Protection. Some units of local government and self-government have Statistical Departments (e.g. the city of Zagreb).

Source of data: [CBSRH-99a].

2. Total number of personnel working in the national statistical system, by sex

Total number of personnel working at the Central Bureau of Statistics in June 1999, was 367: 283 (77.1%) females and 84 (22.9%) males, excluding the regional offices.

3. Total number of personnel with university degrees working in the national statistical system, by sex

Total number of personnel with university degrees working at the Central Bureau of Statistics in June 1999, was 160: 123 (76.9%) females and 37 (23.1%) males, excluding the regional offices.

Source of data for 2. and 3.: Personnel Department of the Central Bureau of Statistics.

5 – Income distribution in the country

Average monthly net earning per person in paid employment by professional attainment at respective work places in 1996. The original data were given in Croatian currency – Kuna (HRK). US$ equivalent was computed using the average annual exchange rate in 1996: 5.43 HRK = 1 US$.

Qualification	Average monthly net earning HRK	US$
University degree	3,182	586
Non-university college degree	2,381	438
Secondary school education	1,974	364
Basic school education	1,532	282
Highly skilled	2,168	399
Skilled	1,790	330
Semi-skilled	1,540	284
Unskilled	1,394	257
Total	**2,043**	**376**

Source of data: [SLJH-98]

6 – Structure of economically active population in the country

In order to achieve comparability with previously tabulated data on income distribution, the following tables provide distributions of employed and unemployed persons in Croatia by qualification and sex. Sources of employment and unemployment data for these tables are administrative.

Persons in paid employment by professional attainment, as of March 31, 1996.

Qualification	Total	Females	Males
University degree	115,643	57,116 (49.4%)	58,527
Non-university college degree	73,518	43,136 (58.7%)	30,382
Secondary school education	290,616	171,459 (59.0%)	119,157
Basic school education	42,031	23,738 (56.5%)	18,293
Highly skilled	46,579	6,266 (13.5%)	40,313
Skilled	195,995	58,078 (29.6%)	137,917
Semi-skilled	53,731	24,511 (45.6%)	29,220
Unskilled	124,705	61,172 (49.1%)	63,533
Total	**942,818**	**445,476 (47.2%)**	**497,342**

Average number of unemployed persons by professional attainment in 1996.

Qualification	Total	Females	Males
University degree	9,820	5,522 (56.2%)	4,298
Non-university college degree	7,761	3,892 (50.1%)	3,869
Secondary school education	58,734	38,161 (65.0%)	20,573
Skilled, highly skilled	91,219	35,867 (39.3%)	55,352
Semi-skilled, basic education	38,165	18,329 (48.0%)	19,836
Unskilled	55,333	27,785 (50.2%)	27,548
Total	**261,032**	**129,556 (49.6%)**	**131,476**

Source of data: [SLJH-97].

Since 1996, the Central Bureau of Statistics carries out The Labor Force Survey (LFS) on still named "permanently unoccupied territory of the Republic of Croatia" (i.e. excluding the part of Croatia that was still occupied in 1996) according to International Labor Organization (ILO) and EUROSTAT standards. The following tables include the most recent data, i.e. the second half of 1998, from LFS.

Population by activity status and by sex

	Activity rate %	Employment/population ratio %	Unemployment rate %
Total	52.9	46.8	11.6
Males	60.6	54.2	10.7
Females	46.3	40.4	12.6

Share in the working age population (older than 15) by educational attainment and sex

Educational attainment	Persons in employment		Unemployed persons	
	Total	Females	Total	Females
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Uncompleted primary school	7.6%	9.0%	3.7%	2.8%
Primary school (8 years)	17.5%	18.9%	17.7%	19.3%
1,2 – year secondary vocational school	1.9%	1.5%	3.3%	3.2%
3 – year secondary vocational school	18.1%	12.9%	26.0%	18.1%
4 – year secondary vocational school	33.7%	34.3%	36.3%	40.0%
Grammar school	3.1%	4.6%	4.3%	5.6%
Non – university college	7.2%	7.7%	4.5%	4.9%
University and postgraduate degree	10.9%	11.1%	4.2%	6.1%

Source of data: [CBSRH-99b].

SECTORS MAKING UP THE STATISTICAL ACTIVITY IN THE COUNTRY

All sectors of statistical activities suggested in the Appendix 2 of the paper "What about women statisticians?" by Lelia Boeri de Cervetto et al. (Istanbul, 1997) are present in the Republic of Croatia.

Production and distribution of statistical information takes place in the *Central Bureau of Statistics*, as well as in Statistics Departments of county and city governments, and cooperating institutions mentioned in 4 - Brief reference to the national statistical system. There are some private enterprises offering data collection and analyses for the purpose of economics, finance and marketing studies.

University and higher teaching and statistics research take place in all four Croatian Universities (Zagreb, Split, Rijeka, Osijek). Basic statistics courses at undergraduate level are offered in many Faculties to non-statistic majors. Some Faculties offer statistical courses to graduate level non-statistic majors. For a long period of time, University Computing Centre of the University of Zagreb (SRCE), although not a degree granting institution, was a focal point of statistical research and consulting, also offering advanced extracurricular courses in applied statistics and statistical software to both students and faculty staff of the University.

Statistical consulting is offered by only few researchers at Universities and Research Institutes, as well as by several private enterprises.

Other statistical activities comprise professional societies and conferences. *Croatian Biometric Society* exists since 1989. It has 65 members (35 females). Strangely enough, there is no Croatian Statistical Society. Croatian Mathematical Society is primarily concerned with mathematical education, theoretical and applied mathematics. *University Computing Centre of the University of Zagreb (SRCE)* organizes the International Conference on Information Technology Interfaces – ITI, held annually since 1980 (www.srce.hr/iti). ITI includes sections on Data Analysis and Statistics, and on Biometrics. Since 1996 a Biometric School is held within the Conference, lectured by distinguished University professors from abroad, and cosponsored by the Croatian Biometric Society.

ON THE DISTRIBUTION OF "WS" AND "MS" UNIVERSES

We did not collect any data on number, field of study, level of responsibility and scale of income of persons involved in sectors of statistical activities. However, we can give some personal opinions of the members of the local group. Since no University in Croatia offers degrees in Statistics, we can say that there are no holders of diploma on statistics within any of the sectors of statistical activity. Possible exceptions may be a very small number of persons who have studied abroad. Teaching of statistics at the university level is carried out by mathematicians or specialists in the field of study in which statistics is applied. The similar applies to statistical consultancy.

Scale of income at the Government institutions and Universities is fixed and depends on the level of education and achievement independent of gender. We do not have data to support a hypothesis that males get promoted more easily.

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Holder of diploma on.(specify in the correct field).... Natural Sciences
Mathematics and computer sciences

a) Statistics
b) Natural Sciences
c) Engineering and Technology
d) Medical Sciences
e) Agricultural Sciences
f) Social Sciences
g) Humanity

SECTOR OF STATISTICAL ACTIVITY (VAR2): .. Sector 2
(specify the sector of major statistical activity)
Sector 1- Production and Distribution of Statistical Information
Sector 2- Statistical Research and University Teaching
Sector 3- Statistical Consultancy
Sector 4- Other activities

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b) Natural Sciences
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e) Agricultural Sciences
f) Social Sciences
g) Humanity

SECTOR OF STATISTICAL ACTIVITY (VAR2): .. Sector 3
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Sector 2- Statistical Research and University Teaching
Sector 3- Statistical Consultancy
Sector 4- Other activities

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Holder of diploma on.(specify in the correct field) .... Natural Sciences
Mathematics and computer sciences

a) Statistics
b) Natural Sciences
c) Engineering and Technology
d) Medical Sciences
e) Agricultural Sciences
f) Social Sciences
g) Humanity

SECTOR OF STATISTICAL ACTIVITY (VAR2): .. Sector 1
(specify the sector of major statistical activity)
Sector 1- Production and Distribution of Statistical Information
Sector 2- Statistical Research and University Teaching
Sector 3- Statistical Consultancy
Sector 4- Other activities

FINLAND

CHAPTER 1

DATA CONCERNING THE COUNTRY

1. General data of the country

A- *Total surface*: 338 145 km²
B- *Density of population (end-1997):* 17 inh. per km² of land
C- *Population of the 5 most populous cities (end-1997):*

Helsinki	539 363
Espoo	200 834
Tampere	188 726
Vantaa	171 297
Turku	168 772

Source: Population Statistics, Statistics Finland

D- *GDP per capita at market prices*

	FIM/inh.
1990	103,367
1991	97,905
1992	94,561
1993	95,222
1994	100,43
1995	107,647
1996*	112,570
1997*	120,242

Source: National Accounts, Statistics Finland

2. Population end-1997

A- *Total population:* 5 147 349

Total of women:	2,638,251
Total of men:	2,509,098

B- *Active population:* Employed in 1997, 1 000 persons (15-74 years)

Total:	2,169
Women:	1,027
Men:	1,142

Source:Population Statistics, Statistics Finland

3. University centers of studies in statistics

Levels of degrees (ISCED)	Number of universities centers	Total number of		% of female students
		graduates 1997	students 1997	
6 - graduate	8	31	366	34,4
7 - post-graduate	8	3	21	28,6

Source: Statistics on Education, Statistics Finland

4. A brief reference to the national statistical system.

The organisation of official statistics in Finland

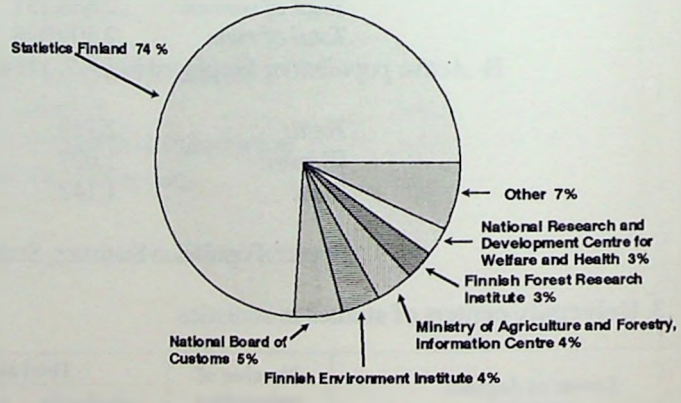
The organisation of the production of official statistics in Finland is partly decentralised. There are 19 authorities / bodies producing official statistics in Finland. However the most part of the official statistics is compiled in Statistics Finland (75% of the total expenditures of the official statistics) and Statistics Finland is the only one which has the production and distribution of statistics as its main task. Statistics production (and resources for it) in other authorities/ bodies are very small compared with Statistics Finland which has a personnel of about 800. The next biggest, calculated in the expenditures for statistics production are the National Board of Customs, the Finnish Environment Institute and the Information Centre of the Ministry of Agriculture and Forestry having a share of 5-4 % each of the total expenditures for official statistics.

Main Producers of government statistics

- Statistics Finland
- National Board of Customs
- Finnish Environment Institute
- Ministry of Agr. and Forestry Information Centre
- Finnish Forest Research Inst.
- National Research and Development Centre for Welfare and Health
- Agricultural Economics Research Institute
- Finnish Meteorological Institute
- Ministry of Labour
- Finnish Game and Fisheries Research Institute
- Finnish Maritime Administration
- Civil Aviation Administration
- National Land Survey of Finland
- Ministry of Social Affairs and Health
- VR-Group Ltd
- Ministry of Transport and Communications
- Finnish National Road Administration

Expenditure of national statistical service by government department 1997

Total expenditure
FIM 310 million



Source: Statistics Finland

The other producers of official statistics produce statistics on the activities, which they carry out as their main activity like the Ministry of Transport and Communications, the Ministry of Social Affairs and Health and the Finnish Environment Institute.

There are no provincial governments in Finland, but there are different regional governmental bodies which have special tasks. These bodies do not have the task of production of official statistics. There are about 450 municipalities. The large municipalities in Finland - Helsinki, Espoo, Vantaa, Tampere, Turku and Oulu - have permanent organisations, which compile statistics and

forecasts and conduct urban research. The number of staff and other resources as well as the number of activities and functions differ. The personnel working with statistics and research is around 60 in Helsinki and from 10 to 5 in the others.

A prominent part of the activity is publications. Each of these municipal organisations publish the statistical yearbook and have statistics and research publication series. In Helsinki the annual number of publications is around 50.

The main functions of statistics and research organisations at local level are:

- Establish and develop databases
- Analysing statistical data
- Urban studies
- Publishing and distributing statistical information
- Provide information services
- International, regional and local co-operation

Statistical services are principally intended for city decision-makers, office holders, researchers and planners as well as the business sector and ordinary city residents.

In addition to the centralised organisations statistical activities are a part of the functions in the administrational bodies like city planning, social care, health care and education.

In medium-size or small municipalities statistical and research activities are a part of other functions, they are not separate or specialised. Most often they are a part of the economic and municipal planning, city planning, or social and health care functions.

The Regional Councils (about 20 in Finland) and the Labour and Industrial Centres (about 24) have functions dealing with statistics and information services. The number of personnel working in this branch differs between 5 and 10.

The total number of persons working with the statistics in municipalities or other regional government organisations is hard to estimate. The wage structure statistics finds only 21 persons (10 women and 11 men) who have statistician as occupation.

The City of Helsinki Urban Facts Personnel (without the City Archive)

	Total	Women	Men
Personnel	63	36	27
Academic degree	38 100%	16 42%	22 58%

Sources:
City of Helsinki Urban Facts.
The Association of Municipal Research and Planning.
The Association of Finnish Local Authorities.

The estimate of the personnel working in the national statistical system calculated as full-time equivalents (staff-years) for production of the official statistics in Finland is 1 120 for 1997 (see table). There are no exact numbers, because many of the persons working for statistics in other authorities/ bodies, except Statistics Finland, have also administrative or executive tasks. The estimate was made on the basis of the questionnaire by Statistics Finland to the other producers of official statistics.

Manpower cost estimates for the production of the official statistics in Finland, 1997

	Staff number (1)	Staff costs	Full costs
NSIs (2)	852	154,165	230,395
Ministries	7	1,413	4,199
Central bank	45	12,500	18,000
Other national agencies	216	39,197	75,024
Regional Government (3)			
Total statistical activity	1,120	207,275	327,618

(1) As full-time equivalents (staff-years).
(2) Total staff number and costs for Statistics Finland, including budget funding, external financing (also EU funding) and chargeable staff and expenditures. Includes also technical assistance schemes (Phare, Taxis).
(3) A few agencies have regional organisation. Their staff and expenditures are included in the figures of the other national agencies.

Period of return 1997
Unit of currency 1000 FIM
Source: Statistics Finland.

There are no figures on the sex of this personnel as a whole. The number of the personnel of Statistics Finland was 770 (excluding interviewers) at the end of 1997, the proportion of women being 59%. The staff number including budget funding, external financing (also EU funding) and chargeable staff and expenditure, was 852, which also includes technical assistance schemes (Phare, Taxis).

No figures exist on personnel with university degrees working in the national statistical system as a whole. As an estimate could be used the figures on the personnel of Statistics Finland. The proportion of those with a graduate and postgraduate degree was 44% (393 persons) at the end of 1997. The sex distribution of the academic personnel was quite even, about half (51%) being women (202 persons).

5. Income distribution in the country

Income recipients (natural persons) in 1996

Income bracket (FIM)	Income recipients		Distribution of:		
	Women	Men	Total	Income paid	Taxes
	1 000 persons		%	%	%
-9 999	125	128	6.0	0.3	0.0
10 000 - 19 999	99	80	4.3	0.7	0.1
10 000 - 29 999	158	88	5.9	1.7	0.5
30 000 - 39 999	243	163	9.7	3.8	1.2
40 000 - 49 999	210	128	8.1	4.1	1.9
50 000 - 59 999	187	127	7.5	4.6	2.9
60 000 - 79 999	254	215	11.2	8.8	7.1
80 000 - 99 999	249	190	10.5	10.7	9.8
100 000 - 149 999	442	443	21.1	29.1	29.8
150 000 - 199 999	110	234	8.2	15.9	18.6
200 000 - 249 999	34	97	3.1	7.8	10.1
250 000 -	23	99	2.9	12.5	18.1
Other	36	25	1.5	0.0	0.0
Total	2,170	2,018	100.0	100.0	100.0

The average income in 1996 was FIM 88 553 per income recipient, FIM 74 574 for women and FIM 103,589 for men.

1996 FIM 1 = USD 0.22

Source: Statistics on Income and Property, Statistics Finland

6. Structure of economically active population in the country

Women and men in the labour market 1997 (15-74 years)

	1000 persons			Proportion (%)		
	Total	Women	Men	Total	Women	Men
Aged 15-74 years	3 862	1 945	1 917	100,0	50,4	49,6
Outside the labour force	1 379	764	614	100,0	55,4	44,6
In the labour force	2 484	1 181	1 303	100,0	47,5	52,4
* employed	2 169	1 027	1 142	100,0	47,3	52,7
* unemployed	314	154	160	100,0	49,0	51,0
Labour force rate, %	64	61	68			
Unemployment rate, %	13	13	12			
Employed	2 169	1 027	1 142	100,0	47,3	52,7
Working time						
* part-time work	238	157	80	100,0	66,2	33,8
* full-time work	1 930	869	1 061	100,0	45,0	55,0
Unknown	2	1	1	100,0	33,3	66,7
Employer						
Private sector	1 547	601	946	100,0	38,9	61,1
Public sector	618	423	195	100,0	68,4	31,6
* local government	475	357	118	100,0	75,2	24,8
* central government	143	66	77	100,0	46,0	54,0
Unknown	4	3	1	100,0	65,0	35,0
Occupational status						
Self-employed persons and unpaid family members	322	105	216	100,0	32,7	67,3
Employees	1 846	922	925	100,0	49,9	50,1
* upper salaried staff	410	174	235	100,0	42,6	57,4
* senior officials and upper management	87	21	66	100,0	24,0	76,0
* lower salaried staff	715	515	200	100,0	72,0	28,0
* wage earners	696	224	472	100,0	32,2	67,8
* unknown	26	8	17	99,6	32,2	67,5
Unknown	2		1	100,0	18,8	81,3
Industry						
Agriculture and forestry	153	50	103	100,0	32,6	67,4
Manufacture, construction	593	142	451	100,0	24,0	76,0
Services	1 416	832	584	100,0	58,8	41,2
Industry unknown	7	3	4	100,0	37,1	62,9
Actual working hours (mill.)	3 861	1 649	2 212	100,0	42,7	57,3

Source: Labour Force Survey, Statistics Finland

CHAPTER 2

THE SECTORS OF MAKING UP THE STATISTICAL ACTIVITY IN FINLAND

Sector 1. Production and distribution of statistical information

1. Official statistics

1.1. From national government

- National statistical office, Statistics Finland, is the biggest producer of the official statistics. Its expenditures are about 75% of the total expenditures of official statistics in Finland. Calculating the number of personnel in person years Statistics Finland had a personnel of about 854 in 1997.

- Other producers of government statistics: 18 authorities/ official bodies

- There are three institutes, Bank of Finland, the National Insurance Institute and the Central Pension Security Institute, also producing official statistics.

Only Statistics Finland has the task of producing and distributing official statistics as primary task. Other authorities produce and distribute statistics as a secondary/ tertiary task their primary tasks belonging to the administrative/ executive branch.

In the ministries and other official bodies there are some research personnel which also make statistical studies in connection with the preparation of the legislation. In the courts they don't produce statistics, but keep information systems/ registers on their activities. From these datasystems / registers Statistics Finland and the Ministry of Justice receive data for statistics production. For example the administrative section of the Ministry of Justice compiles administrative statistics.

1.2. Private enterprises and societies

- The insurance companies have their own research institutes which also produce statistics. In this sector statistical activities may have enterprises and societies like the medical industry, banks, media and marketing enterprises, advertising offices and big business enterprises, but there are no figures on these statistical activities.
- There are no figures on dealers in statistical information (numbers, names, activities etc.). In any case there are not many organised dealers in statistical information.
- Several societies like the central organisations of the employers and employees have research institutes or at least some resources for economics and finance studies, but there are no figures on these activities.
- Private enterprises for market studies have also some statistical/ research activities, but there are no figures on this.
- Chambers of commerce, grains, etc. may also have statistical activities but there are no figures on this.

1.3. NGO's with no purpose of profit

Fundations, professional associations, civil associations with social, religious and other purposes do have some production of statistics, but there are no data on it. NGO's with statistical

activities are for example the Population Research Institute, the Research Institute for Heart Diseases.

1.4. Other:

No information

Sector 2. University and higher teaching, and statistical research

2.1- Higher teaching of statistics in grade studies.
- universities.

2.2- Higher teaching of statistics in post-grade studies.

2.3- Basic statistical research (statistics as object of research, theoretical developments).

2.4- Applied statistical research (model application).

Higher teaching of statistics in grade studies and in post-grade studies in universities. Also much of the basic statistical research is done there, like part of the applied research, too.

Sector 3. Statistical consultancy

Statistical consultancy sector is a quite small in Finland. Here are some big, half public institutes like the Occupational Health Research Institute and the National Public Health Institute, and some private, quite small consulting enterprises. The personnel working in those private enterprises may themselves own their enterprises, but may still work mainly in another profession for another employer having consultancy as a secondary job. No statistics on the personnel working on the statistical consultancy sector is available.

Proposed indicators for Finland

Indicators 1 and 2:

Statistics can be studied in the faculties of Social Sciences, Natural Sciences, Business Schools and The School of Engineering and Technology in Finland. The highest area of studies in the WS and MS universes is a degree in Social Sciences (Statistics, Economics, Sociology etc). Unfortunately, main topics have not been included reliably in any of our data sources. The data given below concerns the personnel of Statistics Finland.

The highest area of studies in the WS and MS universes working at Statistics Finland:

	WS	MS
Total	202	191
Natural Sciences	15	20
Engineering and Technology	7	7
Medical Sciences	-	-
Agricultural Sciences	3	5
Social Sciences	166	158
Humanities	11	1

Data source: Register on the personnel of Statistics Finland.

Indicators 3 and 4:

The sector of statistical activity with highest frequency is production and distribution of statistics. This information is based on the membership list of The Finnish Statistical Society (occupation or title given when a member has joined the list, so it can be out of date) and the data on the personnel of Statistics Finland.

Indicators 5 and 6:

There is no reliable data on the level of responsibility of the work in the WS or MS universe.

Indicators 7 and 8:

The median monthly earnings for women statisticians is FIM 12.700,- and for men FIM 14.700,- . Data source: Statistics on wage structure 1995, Statistics Finland. (Exchange rate was USD/FIM = 4,298 in 1995/6).

Indicators 9 and 10:

There is no reliable data on the responsibility level of the work in WS or MS universe.

Indicators 11 and 12:

The highest monthly earnings level (9th decil) in the WS universe relative to the general distribution of earnings in Finland is: FIM 17297/12999.

The highest monthly earnings level (9th decil) in the MS universe relative to the general distribution of earnings in Finland is: FIM 20000/17543. (The exchange rate USD/FIM in 1995/6 was 4.298.) Data source: Statistics on wage structure 1995, Statistics Finland.

Indicators 13 to 16:

The 2000 Census in Finland will be compiled from the existing register data bases. No questionnaire-based data collection will be undertaken. The datum for the next Census will be 1.1. 2001. The project for the 2001 Census has not yet been set. By July 1998 there was only one person, a man, working for the Census 2001. The director of the unit for Population Statistics, a woman, has been participating the international meetings for the planning of the Census recommendations. All in all there will be about 15-20 full-time equivalent staff-years used for the Census 2001. The figures in appendix describe the use of administrative and statistical registers in the Census in Finland.

Distribution patterns of WS and MS universes

Pattern 1: Distribution of WS and MS universes by sector of statistical activity in which they participate, according to the field of studies of their university degrees.

Sector 1, Production and distribution of statistical information is the statistical activity, which is the most popular i.e. where most of the statisticians work in Finland. To this sector belong primarily work on official statistics and the statistical activities in municipalities. According to the personnel register of Statistics Finland there were 202 women and 191 men in 1997 with a diploma from the university working in Statistics Finland.

The educational background of people working on the field of statistics varies. They may have a university degree at the faculties of Social Sciences, Natural Sciences, Humanities, or at

Schools of Economics and Business or Universities of Technology. Their main subject in the university diploma may be statistics, mathematics, sociology, economics, psychology, political or other social science. They may have studied statistics as a main subject, have statistics as a minor subject in their diploma or have only had courses in statistics. However, only a minority of them has statistics as the main subject.

Sector 2, University and higher teaching and statistical research: People teaching statistics at the universities and doing statistical research there normally are holders of diplomas on statistics. The professors in statistics all are men like most of the assisting teachers in the departments of statistics in Finland. The high number of men working at departments of statistics in the universities in Finland is related to the number of hours boys are studying mathematics at school. Boys take more lessons in mathematics than girls, who are more interested in learning foreign languages.

There have been two different data sources for the study of **sectors 3 Statistics consultancy and 4 Other activities:** the membership register of the Finnish Statistical Society and preliminary results of the inquiry (Pahkinen-Sairanen,1998) to the members of Statistical Society. The inquiry is dealing with among other things the education level of the statistical experts (members of the Society). Unfortunately it was not possible to produce any cross-table from the data because of the poor quality and quantity (high non-response rate).

The members of the Finnish Statistical Society, membership register

Study level	WS			MS		
	Number	%	% [1)]	Number	%	% [2)]
Advanced	39	31	57	130	38	65
Intermediate	12	10	18	40	12	20
General	17	14	25	30	9	15
Unknown	56	45	-	143	41	-
Total	124	100	100	343	100	100

[1)] Percentage of those whose education was known. (N = 68)

[2)] Percentage of those whose education was known. (N = 200)

Inquiry (Pahkinen - Sairanen, 1998)

	WS		MS	
Study level	Number	%	Number	%
Advanced	27	90	73	86
Intermediate	3	10	12	14
Total	30	100	85	100

Advanced level = statistics as main subject in the diploma or in licentiate or doctor studies/ degree.

Intermediate level = statistics as a minor subject in the diploma at the University

General = courses in statistics

According to the **membership register** the total number of **female members** whose education was known at the time when they become members of the Society was 68 (the total number of female members is 124). 57 percent of these were holders of diplomas on statistics i.e had advanced studies in statistics and about 18 percent had intermediate studies in statistics. 58 percent of the female members whose education was known had a diploma on Social Sciences and 42 percent on Natural Sciences. About one quarter of the female members (N=68) have general studies in statistics.

According to the **inquiry** on the experts 87 percent of female answerers (N=30) had advanced studies in statistics (one of them is doctor) and about 10 percent intermediate studies.

There were three female members (membership register)working in statistics consultancy (**sector 3**) and 26 members working in the sector 'other activities' (**sector 4**).

The number of the **male members** of the Statistical Society who have announced their study level in statistics was 200 while the total number of male members was 343. When studying the **male members** of the Finnish Statistical Society we can see that 65 percent of them had advanced studies in statistics. One fifth had intermediate studies and 15 percent have general studies in statistics. If we regard more closely the men who have intermediate studies in statistics we can find out that 65 percent of them hold diploma in Social Sciences, one third hold diploma in Natural Sciences and about 2 percent Engineering and Technology as their main subject. But once again it is worth noticing that the data deals with the information given on the moment that a person became the member of the Finnish Statistical Society.

The results of the inquiry tell that 78 percent of those male statistical experts who have given the answer (N=85) have advanced studies in statistics. And 14 percent of answerers have intermediate studies and 8 percent are licenciates or doctors.

According to the register information, 3 men work in consulting (**sector3**) and if we regard that definition in a broader way (including for example senior researchers) the number is 21 and 58 men work in 'other activities' (**sector 4**).

Pattern 2: Distribution of WS and MS universes by sector of statistical activity in which they participate according to level of responsibility.

Sector 1, Production and distribution of statistics: There was no exact definition of the level of responsibility asked for the pattern 2. One possibility is that management and technical level is defined so that the personnel with an academic degree are included to it. The other possibility is that only the directors are included. The information available is only concerning Statistics Finland. According to the first definition there are 393 academic personnel, of which 202 women and 191 men. There are 377 operative personnel, of which 239 women and 138 men. This data concerns 1997.

According to the second definition there are all together 15 directors in Statistics Finland. Of these 6 are women and 9 men. There are units for Population Statistics, Social Statistics, Price and Wages Statistics, Business Structures, Business Trends, Economic Statistics, Information Services, Management Services, Information and Technology Services, the Secretariat and International Consulting. Each of these has a director. In addition to that there are Director General and the directors of Library, Marketing Services and Interview Organisation.

Highest responsibility at the Universities (sector 2) is naturally held by the Professors (management). On the operative level lecturers are mainly responsible for teaching. Somewhere between these two we may locate graduate-assistants and research assistants, who are mainly working on their thesis (research) but who are giving some exercises (lectures) as well.

Unfortunately the member register of the Finnish Statistical Society doesn't give any exact answer to the questions about level of responsibility in **statistics consultancy, sector 3** or **other activities, sector 4**. According to the inquiry the three most common occupations of female and male answerers were planner/ planning officer, researcher and senior planner/ planning officer.

Pattern 3: Distribution of WS and MS, by the sector of statistical activity in which they participate, according to their decil of scale of income

Deciles

The only data source to this pattern is wage statistics. There are two professional groups concerning statistical activities: Statisticians and statistical associate professionals (non-academic). The first decil and the ninth decil as well as the median are given for both men and women.

Structure of earnings 1995, monthly earnings, FIM

	Average		1. decil		Median		9. decil	
	Men	Women	Men	Women	Men	Women	Men	Women
Statisticians	15,432	12,996	10,541	8,887	14,737	12,786	20,000	17,297
Statistical associate professional	7,280	8,578	5,245	6,044	6,521	8,894	10,201	10,202
All employees	11,972	9,413	7,745	6,658	10,825	8,701	17,543	12,999

Classification according to ILO's ISCO-88. Data source: Structure of earnings 1995. Statistics Finland,

Average monthly earnings

There are information on the number of people and average earnings of male and female statisticians working at private sector, municipalities, central government and universities. The data in publication «Structure of Earnings 1995» (Statistics Finland) is divided to two different groups: Statisticians and statistical associate professionals as in ILO's ISCO-88. The data on the wages of university personnel is based on number of professors, lecturers, assistant professors, graduate assistants and researchers and their monthly earnings as given in a wage table. Women and man earn the same salary based on their office at the university. An additional seniority allowance is included based on working years at government offices.

Monthly average earnings of Statisticians in Finland 1995 (FIM)

Sector	Number			Monthly earnings		
	Total	Male	Female	Total	Male	Female
Private sector	244	164	80	16406	17442	14266
Municipalities	21	11	10	13301	13073	13552
Central Government	202	103	99	12204	12477	11919
Universities	84	64	20	14954	15719	12506

Exchange rate USD/FIM in 1995/6 was 4.298.

Data source: The data on university and higher teaching and statistical research is based on the administrative records of university personnel and statistics on wage structure, 1995 (Statistics Finland). Other source: Structure of Earnings 1995, (Statistics Finland).

FRANCE

I

WOMEN IN STATISTICS - THE FRENCH CASE

The coordination have decided to include this report in French, because the English version wasn't available at the time to print this general report

Les femmes et la statistique en France

Cette communication répond à la sollicitation du groupe de femmes statisticiennes qui ont lancé un appel lors du Congrès de l'IIS de 1997 à Istambul. La contribution française est composée de deux parties. La première décrit le paysage général de la statistique en France, et les difficultés de le délimiter. La seconde partie, rédigée par Joëlle Affichard, décrit avec précision un univers particulier de la statistique française, celui des anciens élèves de l'école de l'ENSAE, principal établissement d'enseignement supérieur spécialisé dans la formation à la statistique. On trouvera en annexe quelques données générales sur la France.

L'Univers de la Statistique - Un espace difficile à délimiter

Avant de chiffrer la part relative des femmes dans les métiers statistiques, il faut savoir de quel univers on parle. En France, le métier de statisticien n'existe pas en tant que tel. Il y a très peu de formation supérieure spécialisée : la formation supérieure en statistique est le plus souvent délivrée dans le cadre de cursus plus larges (mathématique, médecine, économie) (§1). C'est pourquoi on recourra aux associations professionnelles pour en tenter une approche très imparfaite (§2). Par contre l'univers de la statistique publique est plus facile à délimiter ; en revanche, tous ses personnels ne font pas exclusivement de la statistique au niveau supérieur (§3).

1. La statistique dans l'enseignement supérieur : présente mais peu visible

L'université propose quelques enseignements supérieurs spécialisés en statistique. En France seuls deux établissements sont entièrement spécialisés. La statistique est souvent un cours parmi d'autres dans des cursus scientifiques, à l'université ou dans des écoles d'ingénieurs. Compter la production de compétences élevées en statistiques est donc un exercice difficile, car il nécessite une estimation indirecte à partir d'hypothèses.

Le système d'enseignement supérieur français est composé des universités et de « grandes écoles » (publiques et privées)[1]. L'entrée dans ces écoles supérieures est très sélective sur concours nationaux ; l'entrée à l'université est un droit universel et les cours sont gratuits.

Parmi les établissements d'enseignement supérieur offrant une formation labellisée « statistique » :

Le groupe de l'ENSAE, incluse ici dans les écoles d'ingénieurs, et qui sera traitée en détail dans la contribution de Joëlle Affichard (partie II),

- et à l'Université :

quelques D.E.A. (diplôme d'enseignement approfondi) et D.E.S.S. (Diplôme d'études supérieures spécialisées) (bac +5, ISCED6) dans différentes universités.

[1] Ecoles d'ingénieurs ou de commerce, écoles normales supérieures, écoles spécialisées.

l'ISUP à Paris VI.

Une initiation à la statistique est dispensée aussi dans des cursus non spécialisés. Elle est souvent partie intégrante et non distincte des enseignements requis pour les diplômes de mathématiques, au même titre que les probabilités. On le trouve à des niveaux élevés dans les diplômes de physique, chimie, biologie ; à un niveau moins élevé dans les diplômes de sciences humaines (économie, sociologie, géographie, démographie, etc.).

Effectifs de l'enseignement supérieur, dans les spécialités où il y a des enseignements supérieurs de statistique

Niveau en statistique	Etablissements d'enseignement Supérieur	Nombre de diplômes délivrés de 1990 à 1997 inclus (dont en 1996)[2]	Nombre d'étudiants inscrits en 1997-1998[3]	% de femmes parmi les inscrits[3]
ISCED 5 (bac+3)	Ecoles de commerce	nd	46,760[2]	44.8
	Sciences (2°cycle)[4]	128 000 (23,951)[6]	122,948	36.7
	Economie, gestion, et SHS (2°cycle)[5]	nd	51,452	50.9
Ensemble			221,160	41.7
ISCED 6 (bac+5) et ISCED 7 (bac+8)	Ecoles d'ingénieurs[7]	141 967 (22,828)	79,100	22.2
	- dont ENSAE, ENSAI	(100)	-	-
	Sciences (3°cycle)[8]	58 900[10] (7,357)	45,272	33.5
	- dont DEA et DESS Statistique	(500)	-	-
	Médecine[9]	-	62,633[11]	50.7
Ensemble			**187 005**	**34.5**

Bien entendu, les personnes qui se spécialiseront dans la statistique ne sont qu'une petite fraction de cet ensemble très vaste. Il arrive souvent que les ingénieurs en début de carrière dans l'industrie ou dans la recherche soient amenés à occuper des fonctions statistiques, parfois pour s'y spécialiser, le plus souvent pour ne plus jamais y revenir. Il n'existe pas de métier « pur » de statisticien. Ceux et celles qui en font sont issus de formations diverses.

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[2] Source : Ministère de l'Education Nationale (MEN), *Repères et Références Statistiques (RERS) 1998*, p.165.

[3] Source : *Note d'information 98-08*, MEN.

[4] Le niveau bac + 4 est pris pour un niveau bac + 3 en statistiques. Sciences = sciences de la nature et de la vie, sciences et structure de la matière, sciences et techniques de l'ingénieur.

[5] SHS= sciences humaines et sociales. Le niveau bac + 4 est pris pour un niveau bac + 3 en statistiques.
Source : *Note d'information 98-08*, MEN.

[6] Source : *RERS 1998* p. 201 : le nombre de maîtrises en sciences et statistiques (1987+1991 à 1993+1996)*8/5.

[7] Ensemble des écoles d'ingénieurs publiques et privées : ENI, INSA, ENSAM, et sous la tutelle des autres ministères que le MEN. Inclut l'Ensae et l'Ensai. Source : *RERS 1998* p 163.

[8] Sciences, voir note 4. Source : *Note d'Information* 98-09, MEN, mai 1998.

[9] Médecine, odontologie, pharmacie.

[10] Source : *RERS 1998* p. 201. docteurs en médecine, pharmacie, odontologie en 1996 =7357*8

[11] Effectifs inscrits en 3ème cycle.

2. Profession « statistique » dites-vous ?

Le métier de statisticien : un univers flou

En France, la profession de statisticien n'est pas une profession reconnue en tant que telle. Le code des professions n'en fait pas état : il n'y a pas de rubrique « statisticien », alors qu'on trouve des rubriques « ingénieurs », « médecins », etc. L'activité statistique est souvent exercée par des personnes dont ce n'est pas la formation principale, et parfois comme un moment dans une carrière qui se déroule en dehors de la spécificité statistique : par exemple dans l'entreprise un ingénieur fait de la statistique quand le besoin s'en fait sentir, ou bien dans l'enseignement supérieur, un professeur de mathématique ou d'économie assure un enseignement de statistique, ou encore un sociologue quand il manipule de façon relativement élaborée des données collectées par d'autres[12].

Au total, nous avons repéré quatre façons de faire de la statistique :

les théoriciens, spécialistes, fondamentalistes dont le cœur de métier est la théorie statistique mathématique probabiliste, et qui prennent la statistique et ses *développements théoriques* comme objet de recherche ;

les producteurs de données statistiques, comme le personnel de la statistique publique dont le cœur de métier est la *qualité du chiffre* collecté ;

les « manipulateurs » de données, comme les économètres, les sociologues quantitativistes, dont le cœur de métier est de faire des études en *utilisant des données collectées par d'autres* ;

les personnes qui prennent « la statistique comme objet », dont le cœur de métier est d'analyser la façon dont la production de données statistiques dépend *du contexte social.*

L'univers des « statisticiens de métier » est ainsi impossible à définir. C'est pourquoi nous avons tenté de l'approcher de diverses manières, et d'abord à partir de ceux et celles qui adhèrent à des associations professionnelles. L'acte d'adhésion est une forme d'auto-déclaration dans le métier.

Les associations professionnelles

Camille Duby a ainsi pu recueillir l'information concernant trois « sociétés savantes » : la Société Française de Statistique (SFdS)[13], la Société Française de Biométrie (SFB)[14], le collège statistique du Mouvement pour la Qualité (MFQ)[15]. Les deux premières associations regroupent surtout des personnes de l'enseignement supérieur et de la recherche publique ou privée ; le Mouvement pour la Qualité sélectionne plutôt des personnes de l'entreprise privée.

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[12] Par ailleurs, des personnes sans formation spécifiquement statistique exercent des fonctions de collecte de données ou de chiffrement (enquêtrices, codeuses) qui participent à l'activité statistique.

[13] La *Société Française de Statistique* « a pour but de promouvoir l'utilisation de la statistique et de ses développements méthodologiques, d'assurer la représentation de ceux qui la pratiquent, l'enseignent et y effectuent de la recherche, de coopérer avec les autres organisations concernées. Elle se propose en particulier de faciliter les échanges entre les statisticiens travaillant dans les administrations, les entreprises et les établissements d'enseignement ou de recherche ».

[14] La *Société Française de Biométrie* est affilié à l'International Biometric Society. « The International Biometric Society is an international society for the avancement of biological science through the development of quantitative theories and the application, development and dissemination of effective mathematical and statistical techniques. To this end, the Society welcomes biologists,mathematicians e,d others interested in applying similar techniques.

[15] Le *Collège Statistique du Mouvement Français pour la Qualité* est de création récente (1996) . Sa mission est de promouvoir l'utilisation de la statistique dans le domaine de la qualité destiné à renforcer la qualité de la formation.

Pour les deux premières (SFdS et SFB), l'information est tirée des annuaires : la seule information disponible sur les membres est leur prénom, d'où une estimation du sex ratio. Pour la troisième (MFQ), l'information provient d'une enquête spécifique faite auprès des membres lors de la création d'un « collège statistique » en 1996 (les répondants « oui » à la question : « êtes-vous intéressé par la création d'un collège statistique au sein de ce mouvement » ?) .

La part des femmes dans des associations professionnelles de statistique

Associations professionnelles	Source	Effectif total	F	H	Non défini	% de femmes	Secteur d'activité principal
Société Française de Statistique (SFdS)	Annuaire 1997	2037	708	1319	10	35	2.1 (prod de stats publiques) et 2. (enseignement supérieur et recherche publique)
Société Française de Biométrie (SFB)	Annuaire	227	60	167	0	26	2. (enseignement supérieur et recherche publique)
Collège statistique du Mouvement Français pour la Qualité (MFQ)	Enquête de 1996 : - « oui intéressé »	230	28	192	10	12	1.2 (production et diffusion de l'information statistique dans les entreprises privées : instituts de sondages et marketing)
	- ensemble des répondants	354	47	287	20	13	
Section française de l'IIS		198	26	172	0	13	2.1 et 2

Ces données sont à comparer avec la part des femmes dans les professions de cadres (managers and professionnals) qui est de 34%[16], alors que les femmes font 45% de la population active.

Domaines et lieux d'exercice professionnel

Les sources précédentes ne donnent aucune indication sur les domaines d'exercice de la statistique.

Les 19 femmes françaises membres de l'IIS[17] que nous avions contactées en octobre 1998, forment aussi un échantillon des femmes statisticiennes en France. Pour autant qu'on les connaisse, les femmes membres de l'IIS se partagent pour moitié entre deux domaines (les mathématiques-informatiques-probabilité, et les sciences de la société : économie et sociologie). Elles travaillent massivement dans le secteur de l'enseignement et de la recherche (comme à la SFS).

[16] Dans les métiers de cadres, les femmes sont désormais majoritaires dans la catégorie « professeurs et professions scientifiques supérieures » : 54 % en 1994.

[17] Parmi lesquelles 9 ont répondu à notre courrier leur proposant de participer à la réponse collective sur la situation des femmes dans la statistique en France.

Elle est rattachée à l'INSEE (Institut National de la Statistique et des Études Économiques), principal organisme de production des statistiques officielles françaises, dont elle forme la plupart des cadres.

Les «femmes statisticiennes» décrites ici sont donc statisticiennes par leur formation, mais ce ne sont pas toutes les statisticiennes formées en France [19]. En outre, elles n'exercent pas nécessairement à l'heure actuelle un emploi dans la statistique, en raison des particularités de leur formation et des carrières auxquelles prépare l'ENSAE.

1- Le champ de l'étude : les anciens élèves de l'ENSAE

Les caractéristiques de l'ENSAE déterminent celles de la population étudiée.

1.1- Deux populations différentes y suivent à peu près les mêmes études :

– des élèves-administrateurs («fonctionnaires», i.e. agents de l'État), qui s'engagent à travailler pour l'État, au moins pendant les 10 premières années de leur vie professionnelle, en contrepartie du fait qu'ils sont payés pendant leurs études [20] ; à leur sortie de l'École, ils seront «administrateurs de l'INSEE» [21], c'est-à-dire employés à l'INSEE ou dans d'autres services statistiques officiels dans des fonctions de production statistique et/ou d'étude ; après quelques années, leurs carrières les conduisent fréquemment vers d'autres fonctions, éventuellement dans le secteur privé ;
– des élèves «libres» qui reçoivent un diplôme de statisticiens-économistes, et qui sont plutôt destinés à faire leur carrière dans le secteur privé [22].

1.2- Un recrutement original

Cette école est originale par *le recrutement de ses étudiants*. Quatre filières de formation permettent d'y être admis :

- l'École Polytechnique, qui sélectionne 2 ans après le baccalauréat des élèves ayant un niveau scientifique très élevé ; après deux années de formation dans laquelle les mathématiques occupent une place centrale, certains élèves sortant de l'École Polytechnique entrent à l'ENSAE ;
- un concours au niveau baccalauréat + 4 ans, après des études universitaires d'économie ;
- un concours «interne» pour des fonctionnaires de l'INSEE du niveau immédiatement inférieur à celui des administrateurs («attachés») ayant déjà travaillé plusieurs années ;

(ces trois premières filières permettent de devenir élève-administrateur) [23] ;

- un examen d'entrée au niveau baccalauréat + 2 ans après des études scientifiques dans les «classes préparatoires aux grandes écoles» (qui permet de devenir élève «libre»).

[19] Aux formations de l'ENSAE et de l'ISUP orientées vers la statistique appliquée à l'économie, il faut ajouter les formations universitaires doctorales en probabilités et statistiques. Selon une évaluation approximative, les élèves de l'ENSAE représentent environ le quart du total des statisticiens formés en France aux niveaux ISCED 6 et 7 (baccalauréat + 5 ans et au delà).

[20] Depuis 1965, les promotions annuelles d'élèves-administrateurs comptent entre 12 et 26 élèves, 17 en moyenne.

[21] L'INSEE, organisme public rattaché au ministère de l'Économie, produit la plus grande partie des statistiques officielles françaises, et réalise aussi à partir des enquêtes de nombreuses études dans le domaine économique et social.

[22] L'École n'a été ouverte aux élèves «libres» qu'à partir du début des années cinquante. La part de ces derniers a augmenté dans les effectifs, d'environ 70 % dans les années 60-70 à 80-85 % dans les années récentes.

[23] Parmi lesquels environ la moitié sortent de l'École Polytechnique, un quart de la filière «économie», un quart sont des anciens attachés recrutés par le concours «interne».

1.3- Une formation orientée vers l'économie

Enfin, l'ENSAE forme des *«administrateurs de l'INSEE»* et des *«statisticiens-économistes»* : une large part des enseignements est constituée par de l'économie (en particulier économie mathématique et quantitative, économétrie) ; l'enseignement de statistiques et probabilités est plutôt orienté vers les applications en économie.

1.4- La source : L'annuaire des anciens élèves

L'annuaire recense les anciens élèves de l'ENSAE depuis la promotion sortie en 1943 jusqu'à la promotion sortie en 1997 [1]. Les promotions annuelles comptaient 60 à 70 étudiants dans les années 70, elles en comptent environ cent actuellement (75 en moyenne depuis 1965). Au total, la population étudiée est composée de 2 779 individus, parmi lesquels **499 femmes** et 2 280 hommes.

Pour chaque individu les variables suivantes ont été saisies :

- sexe
- promotion (année de sortie de l'ENSAE)
- distinction entre élève-administrateur et élève «libre»
- qualité d'ancien attaché
- emploi occupé à la date d'édition de l'annuaire (1998).

Cette dernière variable n'a été étudiée que pour les anciens élèves sortis de l'ENSAE à partir de 1965. Elle souffre d'un nombre élevé de non déclarations (26,5 % des hommes, 27,5 % de femmes). La répartition dans les emplois sera donc étudiée pour une sous-population de 1 798 individus, parmi lesquels **349 femmes** et 1 449 hommes.

Elle a été chiffrée dans une *nomenclature ad hoc*, à partir d'indications assez sommaires qui figurent dans l'annuaire et qui combinent une désignation de l'emploi et le nom de l'organisme ou de l'entreprise où travaillent les personnes [2]. La nomenclature a été construite de façon à repérer plutôt les *lieux* où travaillent les anciennes élèves de l'ENSAE, en épousant les formes du «paysage» institutionnel français [3].

2- Les résultats

Une exploitation [4] de cette base de données a été réalisée avec deux objectifs :

- situer la place occupée par les femmes dans la formation d'élèves-administrateurs et de statisticiens-économistes ;
- comparer les emplois qu'elles occupent en 1998 avec ceux occupés par les hommes.

[1] À l'exception des anciens élèves qui refusent d'y figurer, ce qui suppose une démarche volontaire.

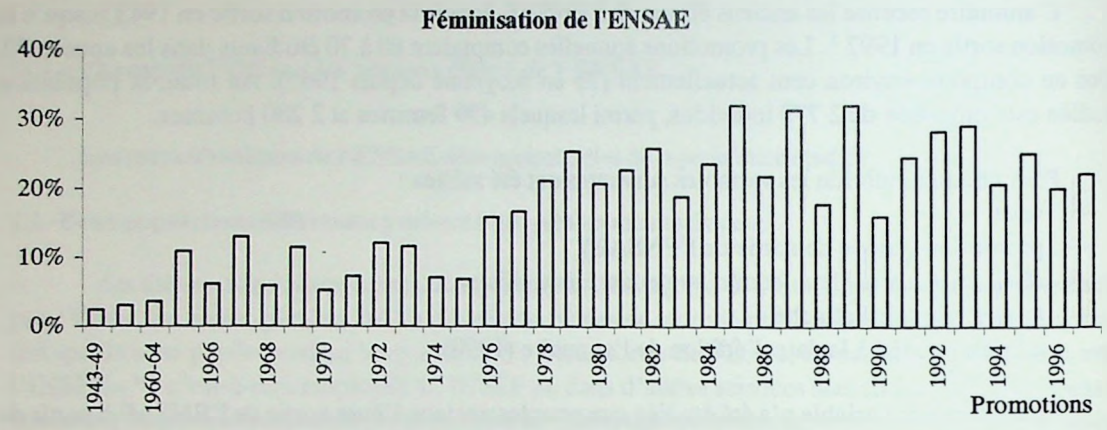
[2] L'annuaire est lui-même édité à partir des réponses faites par les individus à une enquête postale annuelle.

[3] Les désignations d'emploi sont trop imprécises pour approcher le contenu des fonctions exercées.

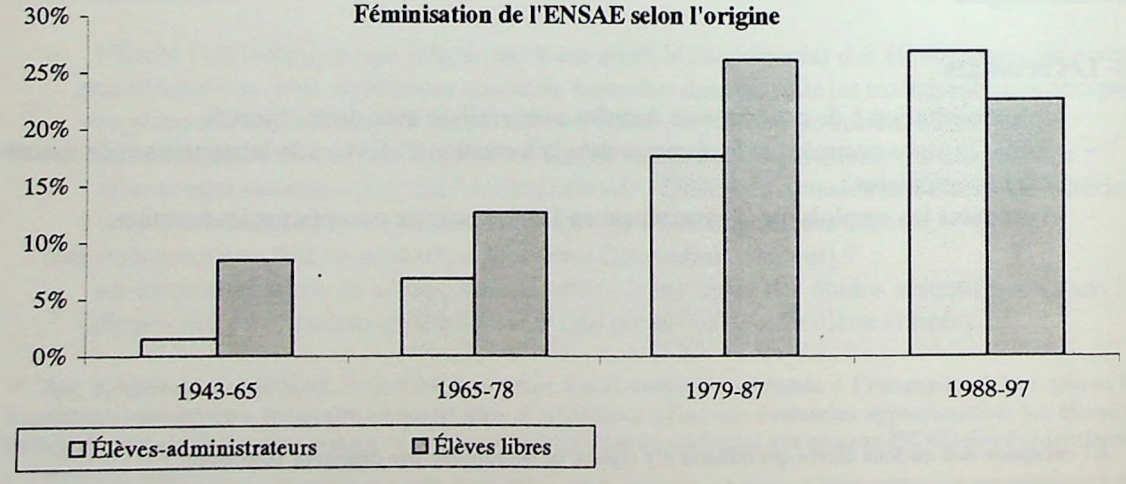
[4] Codification et saisie effectuées avec l'aide de Constance Thévenot.

2.1- Les femmes à l'ENSAE

Sur l'ensemble de la période étudiée, le taux de féminisation de l'ENSAE s'élève à 18 %. Jusqu'en 1965, les femmes étaient quasiment absentes de l'ENSAE (9 sur 279, dont seulement 2 administrateurs). Dans la période 1965 - 1975, un premier mouvement d'ouverture aux femmes se produit : le taux de féminisation est alors de 9 %. Une période de hausse rapide est notable entre 1976 et 1979. Depuis 1979, le taux moyen de féminisation est de 24 %, sans que l'on n'observe plus de tendance à la hausse .

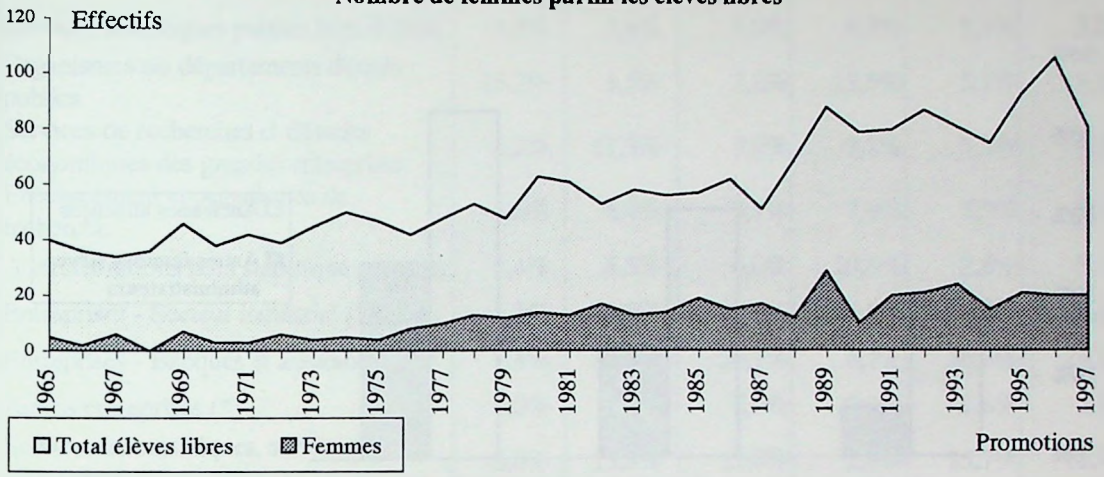


Cette évolution générale correspond à des mouvements sensiblement différents selon la filière dont sont issus les élèves.



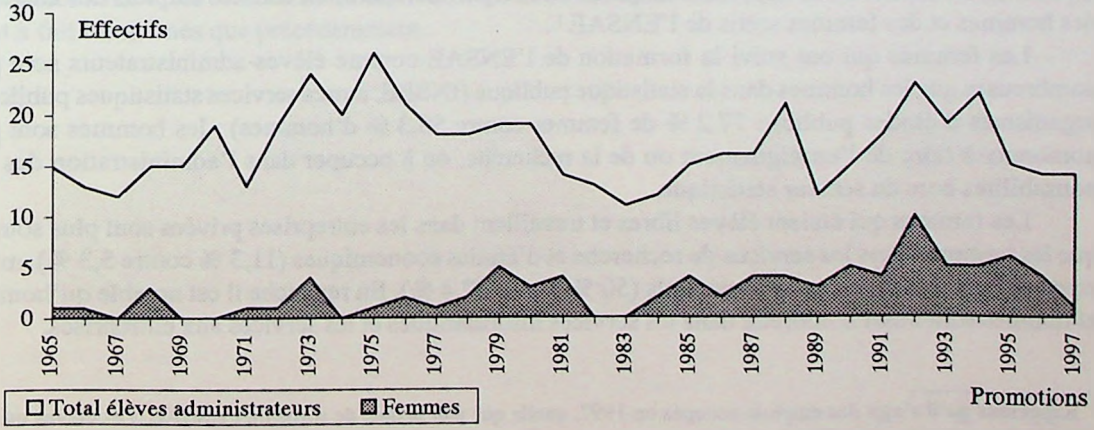
Le nombres des élèves «libres» (issus, rappelons-le, des classes préparatoires aux grandes écoles) a augmenté de façon régulière : 27 élèves en moyenne dans les années 60, 45 dans les années 70, 62 dans les années 80, 85 dans les années 90. La féminisation de ce groupe a été parallèle à ce qu'on a observé depuis une vingtaine d'années dans les filières scientifiques des classes préparatoires : elle paraît actuellement avoir atteint un plafond, et décroît même légèrement. Depuis le début des années 90, environ 20 jeunes femmes sont formées chaque année dans cette filière.

Nombre de femmes parmi les élèves libres



Le recrutement des élèves-administrateurs connaît des évolutions moins régulières (il dépend en particulier des contraintes du budget de l'État) portant sur des effectifs faibles : 13 élèves en moyenne par an dans les années 60, 20 dans les années 70, 15 dans les années 80, 17 dans les années 90, avec d'importantes fluctuations annuelles (dans un fourchette comprise entre 12 et 26). Parmi ces élèves, le nombre des femmes est faible, 2,7 par an en moyenne depuis 1965, avec là encore d'importantes variations annuelles (entre 0 et 10) ; depuis le début des années 90, environ 5 jeunes femmes sont formées chaque année dans cette filière.

Nombre de femmes parmi les élèves administrateurs

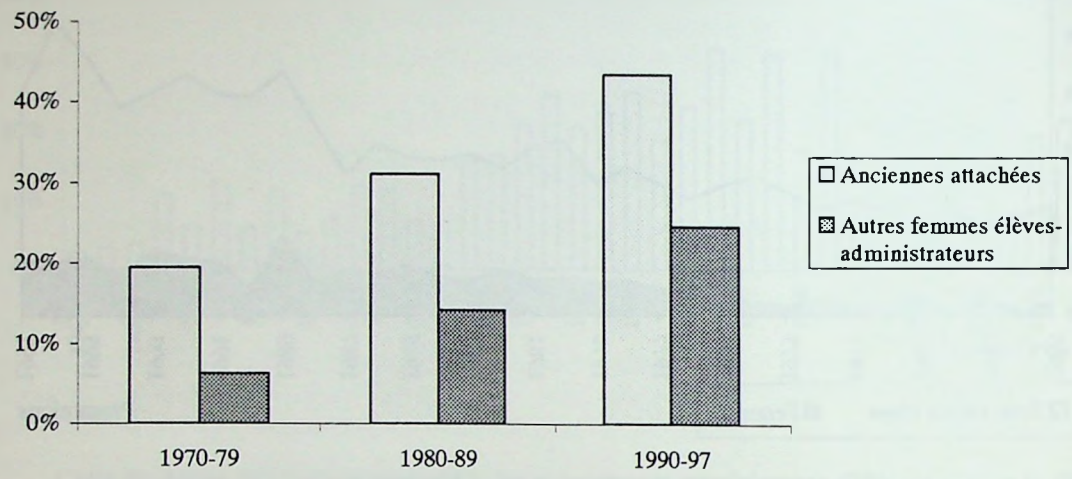


La féminisation des élèves-administrateurs a été plus tardive que celle des élèves libres : elle n'a rattrapé celle des élèves libres que dans les années quatre-vingt. Environ un quart des élèves-administrateurs sont maintenant des femmes, par suite :

–de l'ouverture aux filles de l'École Polytechnique ;

–et de surtout l'accroissement de la proportion de jeunes femmes parmi les attachés reçus au concours interne.

Féminisation des élèves-administrateurs



Ce dernier point est particulièrement intéressant à souligner. La voie du concours interne, ou formation continue, paraît être le moyen le plus efficace de féminisation de cette catégorie de hauts fonctionnaires français. Ceci malgré les difficultés que représente la préparation d'un concours et la reprise d'une formation pour des jeunes femmes qui peuvent être chargées de familles. Soulignons cependant que le concours interne ne touche en moyenne que 3,5 personnes par an : ainsi depuis le début des années 90, moins de 2 jeunes femmes sont formées chaque année par cette filière.

2.2 - Les emplois occupés par les anciennes élèves de l'ENSAE

Plusieurs différences apparaissent quand on compare la répartition dans les emplois de *l'ensemble* des hommes et des femmes sortis de l'ENSAE [1].

Les femmes qui ont suivi la formation de l'ENSAE comme élèves-administrateurs sont plus nombreuses que les hommes dans la statistique publique (INSEE, autres services statistiques publics ou organismes d'études publics : 77,2 % de femmes contre 58,3 % d'hommes) ; les hommes sont plus nombreux à faire de l'enseignement ou de la recherche, ou à occuper dans l'administration des responsabilités hors du secteur statistique.

Les femmes qui étaient élèves libres et travaillent dans les entreprises privées sont plus souvent que les hommes dans les services de recherche et d'études économiques (11,3 % contre 5,3 %), moins souvent dans des services opérationnels (50 % contre 57,4 %). En revanche il est notable qu'hommes et femmes sont aussi nombreux dans les services informatiques et les services aux entreprises.

[1] Rappelons qu'il s'agit des emplois occupés en 1997, quelle que soit la date de sortie de l'ENSAE. Les élèves qui ont suivi la formation comme élèves-administrateurs ne travaillent plus nécessairement dans l'administration, a contrario certains anciens élèves libres ont pu entrer dans des organismes publics.

Répartition des anciens élèves de l'ENSAE dans les emplois – Ensemble des anciens élèves ayant déclaré un emploi –

Emplois	Femmes			Hommes		
	Élèves administrateurs	Élèves libres	Total	Élèves administrateurs	Élèves libres	Total
INSEE	47,0%	1,5%	12,3%	36,1%	1,6%	11,9%
Services statistiques publics hors INSEE	14,5%	3,4%	6,0%	6,7%	1,7%	3,2%
Organismes ou départements d'étude publics	15,7%	4,5%	7,2%	15,5%	5,1%	8,2%
Services de recherches et d'études économiques des grandes entreprises	1,2%	11,3%	8,9%	2,1%	5,3%	4,3%
Enseignement et organismes de recherche	3,6%	6,4%	5,7%	7,9%	7,3%	7,5%
Administrations hors statistique et études	8,4%	5,3%	6,0%	10,6%	2,8%	5,1%
Entreprises - Secteur industriel (*)	1,2%	13,9%	10,9%	6,5%	16,3%	13,4%
Entreprises - Banques et assurances (*)	2,4%	33,5%	26,1%	6,7%	38,5%	29,1%
Autres entreprises (*)	0,0%	2,6%	2,0%	0,9%	2,6%	2,1%
Services informatiques, services aux entreprises	0,0%	15,8%	12,0%	2,8%	15,7%	11,9%
Organismes internationaux ou administrations étrangères	6,0%	1,9%	2,9%	4,2%	3,1%	3,5%
TOTAL	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**

(*) Hors Services de recherches et d'études économiques.

Cependant cette comparaison souffre d'un biais dû à la progressive féminisation de l'ENSAE : les femmes qui en sont sorties sont dans l'ensemble plus jeunes, et ont donc des carrières plus courtes que les hommes.

Si on compare la répartition des femmes à celle d'un échantillon d'hommes de même ancienneté professionnelle [1], les écarts sont moins accentués mais des différences sont observables. Ce ne sont pas tout à fait les mêmes que précédemment.

[1] Échantillon de même taille que la population des femmes étudiée, et contrôlé par filière (élèves-administrateurs/ élèves libres, anciens attachés/non attachés).

Répartition des anciens élèves de l'ENSAE dans les emplois – Anciens élèves de même ancienneté professionnelle –

Emplois	*Femmes*			*Hommes*		
	Élèves administrateurs	*Élèves libres*	*Total*	*Élèves administrateurs*	*Élèves libres*	*Total*
INSEE	47,0%	1,5%	12,3%	43,4%	1,1%	11,2%
Services statistiques publics hors INSEE	14,5%	3,4%	6,0%	6,0%	0,8%	2,0%
Organismes ou départements d'étude publics	15,7%	4,5%	7,2%	20,5%	3,0%	7,2%
Services de recherches et d'études économiques des grandes entreprises	1,2%	11,3%	8,9%	2,4%	7,1%	6,0%
Enseignement et organismes de recherche	3,6%	6,4%	5,7%	3,6%	7,5%	6,6%
Administrations hors statistique et études	8,4%	5,3%	6,0%	10,8%	3,4%	5,2%
Entreprises - Secteur industriel (*)	1,2%	13,9%	10,9%	2,4%	13,5%	10,9%
Entreprises - Banques et assurances (*)	2,4%	33,5%	26,1%	6,0%	47,0%	37,2%
Autres entreprises (*)	0,0%	2,6%	2,0%	0,0%	1,9%	1,4%
Services informatiques, services aux entreprises	0,0%	15,8%	12,0%	1,2%	12,8%	10,0%
Organismes internationaux ou administrations étrangères	6,0%	1,9%	2,9%	3,6%	1,9%	2,3%
TOTAL	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**

(*) Hors Services de recherches et d'études économiques.

Les femmes qui ont suivi la formation de l'ENSAE comme élèves-administrateurs restent plus nombreuses que les hommes à faire carrière dans la statistique publique (INSEE, autres services statistiques publics ou organismes d'études publics : 77,2 % de femmes contre 69,9 % d'hommes) ; les différences concernant les carrières dans l'administration hors statistique ou l'enseignement et la recherche ne sont plus significatives, mais les hommes sont plus nombreux que les femmes à partir dans les banques ou assurances.

Les femmes qui étaient élèves libres et travaillent dans les entreprises privées sont plus souvent que les hommes dans les services de recherche et d'études économiques (11,3 % contre 7,1 %), moins souvent dans des services opérationnels (50 % contre 62,4 %) ; la différence est particulièrement sensible dans les banques et assurances, qui ont recruté de nombreux jeunes diplômés dans les années récentes et ont nettement plus souvent choisi d'embaucher des hommes.

***

En conclusion, rappelons qu'à l'heure actuelle environ 25 jeunes femmes sont formées chaque année par l'ENSAE : 20 élèves "libres" qui s'orienteront plutôt vers le secteur privé, 5 élèves-administrateurs destinées à travailler, au moins en début de leur carrière, dans la statistique publique. Ces jeunes femmes représentent environ le quart des statisticiens formés par cette filière, dont la féminisation a progressé à la fin des années soixante-dix mais s'est maintenant stabilisée.

Les carrières des statisticiennes fonctionnaires sont plus concentrées que celles des hommes dans la statistique publique ; les élèves non fonctionnaires travaillent plus souvent que les hommes dans des services d'études et de recherches, tandis que le secteur des banques et assurances paraît leur être moins ouvert.

ANNEXE

CADRAGE : DONNÉES SUR LA FRANCE

1. Données générales

Source : INSEE, Tableaux de l'économie française

A. La France fait 550 milliers de km².

B. Sa densité est 107 habitants au km².

C. Quatre agglomérations font plus d'un million d'habitants :

- Paris : 9.5 millions (dont 2.3 dans la ville centre)
- Lille : 1.3 millions (dont 0.2)
- Lyon : 1.3 millions (dont 0.4)
- Marseille : 1.2 millions (dont 0.8)

viennent ensuite :

- Bordeaux : 0.7, Toulouse : 0.65, Nice : 0.51, Nantes : 0.5.

La population totale vivant dans les cinq plus grandes agglomérations (Paris, Lille, Lyon, Marseille, Bordeaux) totalise 13 millions d'habitants.

D. Le PIB (GDP) par tête est de 135 milliers de francs, soit 26 362 $ en 1996.
Il était de 21 050 $ en 1991 et 13 176 $ en 1986.
Source : Comptes nationaux de l'OCDE
Edition 99

2. Population

A. Au 1er janvier 1998, la France métropolitaine (hors territoires et départements d'Outre-Mer) compte 58.7 millions d'habitants (58.5 au 1-1-97, ou 58.6 en milieu d'année).

B. La population active est de 25.6 millions de personnes, en mars 1997 ; 14.1 millions d'hommes et 11.5 millions de femmes.

Le taux d'activité des hommes de plus de quinze ans est de 62.3% (en baisse). Celui des femmes de plus de quinze ans est de 47.2% (en hausse).

3. Emploi par branches en 1997, en %

Source : Insee, La France en bref.

Branches d'activité	Industries	Distribution of employment %	% of women
Agriculture	Agriculture	4.5	36,4
Industrie (y c bâtiment)	Goods-production industries and construction	25.3	24,4
(dont : indust. manufacturière)	(of which : manufacturing)	(15,5)	(29,0)
Services marchands	Market services	42.0	49,4
Services non marchands	Non market services	28.2	58,5
Ensemble		100	43,9

GREECE

CHAPTER 1

1. General Data of the country (1991)

Greece is an european country and is also an EEC member.

2. Population

- *Total population:* 10,250,900 (Males: 5,055,408 and females: 5,204,492)
- *Area in square Km:* 131,957
- *Density of population of Greece in 1991 (in habitant per square Km):* 77,75
- *Population of Greece by areas:*

Urban: 6,036,660 (58.8%)

Semi-urban: 1,312,774 (12.8%)

Rural: 2,910,466 (28.4%)

Population of Greece by sex and by major age groups

(Absolute numbers)

		Total	Males	Females
Age	0-14 years	1,974,867	1,014,941	959,926
	15-64 years	6,880,681	3,422,464	3,458,217
	65 & over	1,404,352	618,003	786,349

1. High Education Centers of statistical formation

All Departments of Mathematics and Schools or Departments of Statistics in all Universities in Greece are listed below:

- University of Athens
- Aristotle University of Thessaloniki
- University of Ioannina
- University of Patras
- University of Krete
- Dimokritio University of Thraki.
- Agean University
- University of Thessalia
- University of Macedonia

2. Synthesis about National Statistical System

In Greece there is the National Statistics Bureau in Athens.

3. Income distribution of the contry

6. Structure of the economically active population (1991)

	Total	Employed	Unemployed
Males	2,650,670	2,484,704	165,966
Females	1,235,487	1,087,253	148,234
Total	3,886,157	3,571,957	314,200

CHAPTER 2

1. Women Statisticians and Men Statisticians in Greece

There are 130 women statisticians and 423 men statisticians in the country. All the above are of the Greek Statistical Institute.

Those who obtained professional diploma, 1997

Field of study	Post-graduates	of which female
	persons	%
Totalof which:	7,483	3,570	47.7
Engineer economist	617	141	22.9
Professional engineer	853	218	25.6
Special economist	1,832	944	51.5
Special physician	2,484	1,273	51.2
Jurist (including lawyer's specialization)	997	474	47.5

In the recent years the Statistical Commission of the Hungarian Academy of Sciences decided to have an overview on the current situation of teaching statistics by the higher education institutes. In order to meet this demand the Chair of Statistics at the Budapest University of Economics undertook the task to collect information from the other institutions in question. According to the preliminary results of this -non obligatory- survey, the situation can be characterized as follows:

Positive answers were given by 35 higher educational institutes. These universities or colleges deal with statistical education but mostly in connection with some kind of other (compulsory) subjects. Only five universities have independent Chair of Statistics, namely the Budapest University of Economics, and four Universities of Arts and Sciences (in Budapest, Miskolc, Pecs and Szeged, respectively).

Among the answering higher educational institutes can be found 3 universities of economics, 14 colleges of economy, 8 institutes (universities or colleges) of technical or agricultural sciences, 6 institutes of law, 2 universities or colleges of Arts and Sciences (including for example theological academies) and 2 universities of medicine.

In the majority of the aforementioned institutions (apart those with independent Chairs of Statistics) the teaching of statistics belongs to the chairs dealing basically with Mathematics and goes together with calculus of probabilities.

Besides obligatory education there are optional topics, too, for example statistics of different sectors of the economy, demography or criminal statistics.

The whole number of the full-time teachers dealing totally or partly with statistics at the highest level is 123 persons. The rate of female teachers is outstandingly high at the colleges of economics (74 per cent). At technical universities male teachers represent the bulk of the staff in question.

4. The national statistical system in Hungary

A. The Hungarian statistical system belongs to the centralized types. The activity of the more than 130 years old Hungarian Central Statistical Office (HCSO) has always covered demography as well as a wide scope of economic phenomena.

In accordance with the orders of the actual Act on statistics (No. XLVI. law of 1993.) the HCSO is a professionally independent administrative organ of nation-wide authority operating under the direct supervision of the Government. The activity of the HCSO is controlled by a president. The president and the deputy presidents of the HCSO are appointed and relieved by the Prime Minister. The deputy presidents - in the scope of authority transferred by the president - direct the activities of the departments professionally arranged.

Some of the most important tasks of the HCSO are as follows:

- Compiling and presenting for government's approval the draft programme of the yearly national statistical data collection (to be realized by the official statistical service); carrying out its own data collections as well as monitoring the carrying out of the programme at the other organs of the official statistical service. (These organizations: ministries, the Hungarian National Bank, the Chief Prosecutor's Office and other administrative and judiciary organs of national authority are obliged to supply the requested information).

- Carrying out - on the basis of separate law - periodical population censuses; organizing and carrying out other national surveys. These tasks include - the planning of data surveys and the surveying processing, storage, transfer, receiving, analysis, communication, publication and protection of data.

- With the inclusion of the advisory National Statistical Council elaborating statistical methods, concepts, classifications, determining, preparing and publishing codes and introducing them into compulsory use, operating of the statistical register.

- Submitting a yearly report to the Parliament and the Government about the country's most important socio-economic and population data; supplying statistical data for the organs of the central public administration, social organizations, corporative representations, local self-governments, the population and the media as well as for international organizations;

- Participating in the statistical work of international organizations and keeping contacts with other national statistical offices;

- Maintaining and operating a scientific, professional depository library and professional archives with national tasks; supervising the activity of the HCSO Demographic Research Institute and the HCSO Institute for Economic Analysis and Informatics, respectively.

The HCSO consists of **central and regional organizational units**. The regional units are 19 County Directorates. (For the time being there is a statistical directorate in every county seat while the directorate established in the middle-situated Pest county is merged with the directorate operating in Budapest.)

The directorate is headed by the director appointed and relieved by the president of the HCSO. Responsibilities of the directorates include: performing data collections under guidance of the responsible subject-matter departments of the Central unit, specialized in given fields; carrying out local data collections based on own initiative, processing, storing and supplying data, supervision of the statistical activities of data suppliers.

B. At the beginning 1997 the **total number of personnel** working in the HCSO amounted to 1800 persons (more than 800 in the Central unit and nearly 1000 persons in the County Directorates). The rate of female colleagues was about 66 per cent in the Central unit, and that of in the Directorates ran up to 75 per cent.

During past decades to the top management of HCSO always belonged outstanding woman statisticians, too. Dr. Vera Nyitrai, professor of statistics was the president of the HCSO from 1979 to 1989. Last year two women colleagues were appointed for vice-presidents. Among the heads of departments and sections have been working several women, as well.

C. In compliance with the prescriptions of the Civil Service regulations in HCSO only persons graduated at universities or colleges can have executive officer's job. Accordingly the proportion of women possessing a diploma is fairly similar to their general rate among the staff.

5. Income distribution in Hungary

Bearing in mind the lack of data referring to earnings of statisticians, the summarized data mentioned below can be useful only in capacity of general information.

Average monthly gross earnings of employees by sex, in 1997 (HUF)

ISIC code	Industries	Total	Male	Female	F/M %
A+B	Agriculture, hunting, forestry and fishing	42,230	44,043	36,776	83.5
C	Mining and quarrying	77,263	79,651	61,417	77.1
D	Manufacturing	58,915	68,396	46,897	68.6
E	Electricity, gas, steam and water supply	75,972	81,097	61,248	75.5
F	Construction	50,439	49,683	55,662,	112.0
G	Wholesale and retail trade, repair of motor vehicles and household goods.	56,908	66,306	49,555	74.7
H	Hotels and restaurants	43,971	53,688	38,746	72.2
I	Transport, storage, post and telecommunication	63,879	65,936	59,437	90.1
J	Financial intermediation	114,311	159,419	96,844	60.7
K	Real estate, renting and business activities	64,696	66,932	61,270	91.5
L	Public administration and defence; compulsory social security	64,363	67,264	60,943	90.6
M	Education	49,469	60,754	46,325	76.3
N	Health and social work	45,352	55,799	42,087	75.4
O	Other service activities	54,939	58,561	50,440	86.1
A-O	Industries, total	58,259,	65,186	50,190	74.2

Data of full-time employees of enterprises with more than 10 employees. Data of budgetary and social security organizations are based on full-scope inquiry.

6. Structure of economically active population in Hungary

In Hungary the full – partly formal – employment ceased to exist by 1990/1991. Considerable numbers of former wage and salary earners became inactive earners (high share of them retired earlier or get disability pensions) or unemployed. During the recent years the labour force market tightened significantly. In 1990, there were 129 inactive people per hundred active earners, while in 1996 this figure was 193. The unemployment increased until 1993 by leaps and bounds, since that time it has been moderated at a slow rate. In 1997 the average rate of unemployment mounted up to 8.7 per cent of the economically active population.

A considerable part of the unemployed have been unable to find job for one year or more. At the end of 1996, the average period of seeking for a new job was as long as 16 month. Among the long-term unemployed, the share of men has far exceeded that of women. In the shrinking branches of economy (e.g. mining, metallurgy) more men lost their job than women in branches characterized by relatively high share of women employees (e.g. wholesale and retail trade, health service, education) where the scope of job opportunities was shrinking at a lower rate.

Thus Hungary belongs also now to countries with relatively high employment share of women:

Number of employed persons by industries in 1997

ISIC code	Industries	Total	Of which		Share of women
			male	female	Total = 100
		thousands			%
A+B	Agriculture, hunting, forestry and fishing	287.9	216.5	71.4	24.8
C	Mining and quarrying	27.2	23.9	3.3	12.1
D	Manufacturing	864.1	511.3	352.8	40.8
E	Electricity, gas, steam and water supply	97.4	72.2	25.2	25.9
F	Construction	219.2	200.3	18.9	8.6
G	Wholesale and retail trade, repair of motor vehicles and household goods	496.8	241.4	255.4	51.4
H	Hotels and restaurants	120.9	59.6	61.3	50.7
I	Transport, storage, post and telecommunication	310.0	228.4	81.6	26.3
J	Financial intermediation	83.3	28.1	55.2	66.3
K	Real estate, renting and business activities	146.3	77.9	68.4	46.8
L	Public administration and defence; compulsory social security	293.8	168.3	125.5	42.7
M	Education	296.9	70.9	226.0	76.1
N	Health and social work	232.1	57.4	174.7	75.3
O	Other service activities	170.4	87.3	83.1	48.8
A-O	Industries, total	3,646.3	2,043.5	1,602.8	44.0

Number of employed persons classified by status in employment and sex, in 1997

Status in employment	Total	Of which		Share of women
		male	female	Total = 100
	thousands			%
Employee	2,989.7	1,584.8	1,404.9	47.0
Member of co-operative	68.9	47.4	21,5	31.2
Member of partnership	137.4	95.7	41.7	30.3
Self-employed	373.3	265.3	108.0	28.9
Unpaid family worker	41.0	14.3,	26.7	65.1
Total	3,610.3	2,007.5	1,602.8	44.4
Out of employees and members of co-operatives:				
skilled worker	1,004.6	772.5	232.1	23.1
semi-skilled worker	533.5	287.4	246.1	46.1
unskilled worker	293.6	131.3	162.3	55.3
non-manual worker	1,226.9	441.0	785.9	64.0

Source of data: Labour force survey (for population aged 15-74).

Note: The content of data regarding unemployment is fully harmonized with the adequate definition of ILO.

Bibliographical references:

- Statistical Yearbook of Hungary, 1997.
- Hungary: Report on major processes in the society and economy, HCSO, 1997.
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- Information bulletin on the activity of the Hungarian Statistical Office, Budapest, 1997.
- Act on Statistics, No. XLVI of 1993. and Government decree No. 170/1993. (3 December) on the execution of the Act on Statistics No. XLIV of 1993.
- The higher education law, 1993.

CHAPTER 2

COMPONENT SECTORS OF THE STATISTICAL ACTIVITY IN HUNGARY

The main component sectors of the statistical activity can be specified according to different points of view. In a wider sense three important strata have to be taken into account, namely producers of statistics; users of statistics; and scientific supporters of the functional statistical activity.

A. Producers of statistics

In Hungary the most important producers of statistics collaborate within the framework of the official statistical service. In this respect the present Act on statistics (No. XLVI. Law of 1993.) regulates the task of statistical activity on the one hand and that of the participants on the other hand.

The main task of statistical activity is to give a truthful and objective picture about the state of, and changes in, the society, economy, ownership and environment to the organs of the state power and public administration as well as the organizations and members of the society. In order to fulfil these tasks statistical activity includes the surveying, processing, storage, transfer, analysis, supply, communication and publication of the data by statistical methods.

The participants of statistical activity may be natural and legal persons and organizations without legal personality performing the aforementioned phases or processes of statistical activities. The main component sectors of the Hungarian statistical activity could be specified according to the different groups of these participants.

1. Main participants of the official statistical service

In this field the Hungarian Central Statistical Office (further referred to as HCSO) plays an outstanding role. Its activity comprises all the above listed phases and processes of producing social and economic statistics.

In accordance with the present organizatorial scheme of the HCSO, departments and other units or institutes report directly to one of the four deputy presidents being responsible for economic statistics; for social statistics; for financial administration and informatics; for general cooperation and publication, respectively.

One of the most important annual tasks of the HCSO is compiling and presenting for approval by the government the National Statistical Data Collection Program. In compliance with the yearly program the HCSO carries out its own data collections and pays attention to the data collecting activity of the other organs of the official statistical service. Experience has already proved that for much of its statistical output the HCSO is also heavily dependent on the cooperation of other government organs, the National Bank and several different data supplying organizations. The quality of the statistical services they provide has a bearing on the macro-economic or social statistics the HCSO produces. Therefore – mostly in the framework of the National Statistical Council – the HCSO makes firm agreements with the organs belonging to the official statistical service to ensure that the data provided by them meet the HCSO's needs without imposing unnecessary burdens on the suppliers.

These other important participants of the official statistical service are first of all the ministries and other authorities with nationwide competence (i.e. representatives of the executive,

legislative or judicial branches). They generally have a special department for statistics (possibly together with informatics). The size of these statistical departments can substantially differ from each other depending on the volume of their own data collections. According to the evidence of the National Statistical Data Collection Program the number of these own data collections is particularly high in the field of agriculture and forestry, energy supply, environment protection, education, health and welfare.

At the same time it has to be stressed that organs and organizations carrying out data collections and data management without statistical aims do not belong to the component sectors of the statistical activity. Some examples are: customs or tax authorities, registry offices etc. although their data (mostly in summarized form) could be used also for statistical purposes.

2. Usual data suppliers

In the centrally planned period state-owned enterprises and agricultural or other cooperatives were regularly obliged to report data referring to their economic achievements. Therefore every enterprise or cooperative set up own statistical units with professional staff. The number of employed statisticians depended on the size of the enterprise in question on the one hand, and on the special conditions of the enterprise's activity on the other hand.

During the transition period this situation radically changed. The number of big enterprises with specialized statistical unit decreased to a great extent. At the same time the number of small enterprises or individual entrepreneurs soared but they usually employ such persons who perform a large scale of administrative tasks (including compilation of statistical reports, too). But due to the new, general use of sample surveys, filling in statistical questionnaires is not necessary anymore everywhere. As a consequence, nowadays is nearly impossible to make a reliable guess as far as the number of business statisticians is concerned.

B. Users of statistics

The role of statistical information is crucial for a democratic, open market system. Among others it's inevitable for the government in formulating politics, for insuring transparency and fare competition.

Statistical information plays an important role in the negotiations between the social partners (state authorities, unions of employees and workers) by providing neutral and impartial figures for everybody.

Business consultants, banks and the information services are also important users of official statistics, which in combination with other more particular sources of information allow them to offer individual firms and business consultant for the initiating market.

Official statistics play a more and more important role for the business associations in their need to analyze the situation of their industry, to compare it with the other sectors of economy and with those of the other competitor countries and economic areas.

Research institutes represent a special group among the users of statistics. Two of them which work under the supervision of the HCSO have specific position, because they not only use statistics but also carry on data collections and develop statistical methods and processes, too.

HCSO Demographic Research Institute was established in 1968. (Its predecessor: the Demographic Research Group was set up in 1963 in order to observe and study demographic phenomena in the fields belonging to the authority of the HCSO.) Nowadays it is among the responsibilities of the institute to carry out research work and examinations as well as to prepare analyses regarding vital events (fertility, mortality, marriages, migration etc.) The Institute examines the structural characteristics of the population and the demographic processes (aging, development of family and household structures, regional distribution, educational level, economic activity, special population groups) furthermore prepares population forecasts concerning the prospective changes in the population. The results of research and analysis are published in the

journal issued quarterly under the title "Demography" as well as in other series of publications (research report, newsletters etc.).

HCSO Institute for Economic Analysis and Informatics became under the supervision of the HCSO in 1997. The Institute promotes the utilization of the economic information and databases of the HCSO for performance of various types of tasks such as analysis, forecasting etc. The Institute carries on methodological research and development work, too. The results of the investigations and research work performed by the Institute besides to the state administrative organizations are made available also to other users (businesses, firms, and institutions). For the purpose the Institute has developed a whole system of user-friendly database, which provide the opportunity to satisfy special, individual requests rapidly and flexible.

C. Scientific supporters of the functional statistical activity

The Hungarian National Academy of Sciences established a Statistical Commission to take part in developing statistical methods and processes. The Commission is usually chaired by the president of the HCSO. Members of the Commission are doctors of economics or statistics and other prominent personalities with Ph.D. elected by the members. Four sub-commissions dealing with international, theoretical, mostly practical and educational topics, respectively, support the scientific work of the Commission. Mainly the sub-commissions include several women members, too.

The important role played by universities and higher teaching in the life of Hungarian statistics has been examined and detailed in Chapter 1. (See point 3.)

Among the scientific supporters of statistical development the Hungarian Statistical Association has created the most continuous and direct connection with a fairly broad stratum of statisticians. The main aims of the Association are providing forum for discussion of theoretical and practical issues of statistics; taking position in professional debates and helping better understanding between producers and users of statistics.

In these days the Association includes eight scientific sections dealing with economic and social statistics, demography, international statistics, regional statistics, historical statistics and justice statistics, respectively. The broad range of these basic fields comprises all the most important issues of the present statistical activity in Hungary. The topics selected for discussion are those which meet the interest of statisticians of various fields as well as of non-statisticians cooperating with the statistical service and users of statistics. Namely, both the memberships of the Association and the meetings are open for non-statistical professionals, too.

Nevertheless the great majority of the Association's members has been recruited from statisticians working in the framework of the official, statistical service or from teachers of statistics at different levels.

CHAPTER 3

WS AND MS POPULATION IN HUNGARY

If a study wants to describe the size and main characteristics of the population of women- (and/or men-) statisticians in a given country, the two main obstacles that have to be surmounted are as follows:

- Non-existence of an exact (or rather not strongly disputable) definition of statisticians;
- Lack of data concerning this fairly narrow sub-population.

Therefore the only possible solution may be a step by step approaching from several directions. It speaks also in favour of this process that some given types of figures, which can be obtained, relate to different categories of statisticians.

1. In accordance with the statement of the basic document (see point 3.) first of all the **women members of ISI** have to be taken into consideration. (Unfortunately, the list of members of ISI Sections has not been available.)

   On the basis of the ISI Directory 1997 (taking into account also the new members elected and one death in 1997) the number of Hungarian ISI members ran to 23 including altogether 20 male and 3 female members. The structure of the two groups (probably only by chance) is quite similar to each other: professors of statistics or those of mathematical-statistics represent about one third of the persons in both groups (7 male and 1 female.). The other ISI members belong (or used to belong) to the leading staff of the Central Statistical Office. Some of them also teach special topics of statistics at different Hungarian universities.

2. The second approaching step can be studying the composition by sex of the membership of the **Hungarian Statistical Association** (further mentioned as HSA).

According to the latest data, at the end of 1998 the total number of the HSA members mounted to 436 persons including 188 male and 248 female members. Thus the proportion of women (56.9 %) was significantly higher than that of men (43.1 %). This was emphatically true in the case of members living and working in county districts. While in Budapest (together with the county Pest situated around the capital) the rate of women-members was 52.0 %, the average rate of women-members in the other 18 counties ran up to 63.4 %.

As far as the composition of HSA members by job (or by employers) is concerned three major components can be distinguished. The great majority of the HSA membership belongs to the professional staff of the central or districts units of the Central Statistical Office.

The second, also significant part comes from universities or colleges. I can be mentioned that well-known university professors (mostly men) play very important role in the legislative and executive bodies of HSA, delivering lectures at the different conferences and actively taking part in selecting topical issues for the scientific meetings.

The third, rather mixed stratum of the HSA membership comprises the representatives of ministries and other organizations belonging to the official statistical service. This stratum also includes members working for companies or (mostly agricultural) cooperatives, for different non-profit institutions, etc.

The share of women-members does not differ significantly from each other in the three groups of HSA membership, mentioned above.

3. Other list, which gives opportunity of studying the composition of women-statisticians by sex, is the **National Register of Expert-Statisticians**. The register (published officially by the HCSO) includes persons being entitled to preside over committees examining in statistics mostly at secondary level.

   The register presently covers 18 men, 39 women, as whole 57 persons. Many of them (totally 37 persons) are at the same time members of the HSA, too. The further 20 persons work generally in secondary schools, teaching statistics mostly in bigger towns in different parts of the country. Taking into account that in Hungary the share of women among teachers is fairly high, it is not surprising that the proportion of women in this special register of experts is even higher (68.4 %) than that of the HSA members.

4. As it is mentioned above, the Central Statistical Office performs a great part of the statistical activity in Hungary. Therefore it can be considered justifiable that the **structure of the HCSO staff** (comprising more that 800 persons in the central unit and nearly 1000 persons in the county directorates) may provide additional (and otherwise missing) aspects. First of all as far as the distribution according to the field of study and that of the level of responsibility are concerned. (See Chapter 4.)

5. The last approaching step takes into consideration some data relating to definite occupations. The results of the 1996 Microcensus furnish some useful starting points for this purpose. (Data sources for the microcensus were the up-dated data –i.e. addresses – of the population census 1990. The sample included 2 % of the population and was grossed-up to national level.)

Naturally, reliable data referred to the number and main characteristics of statisticians could not be obtained by a 2 % sample survey. The nearest broad category of occupations with data available were as follows:

1. Business professionals

This broad category – besides statisticians with diploma – includes the following occupations: economists; tax advisors; consultants; financial and credit organizers; auditors; plant economists; management organizers; foreign trade organizers; internal auditors; marketing researchers; commercial sales representatives; personnel organizers; business professionals n.e.c.

2. Business clerks (without diploma)

This broad category – besides statistical clerks – includes the following occupations: general secretaries; administrative, personnel, wage and social security accounting, finance, accounting, planning, investment, post office and communications, real estate maintenance (care-taking) and other clerks.

Bearing in mind that beside using of statistics, many times processes of producing statistics may belong to the tasks of the aforementioned professionals or clerks, in our opinion, data relating to these two broad categories of statistical and related occupations can also supply some useful, additional information, at least as a special national contribution.

One feature, which emerges very forcible from the data, is that there are substantial differences between the position and the inner distribution by sex of these two broad categories of occupations. In 1996 the proportion of women within business professionals was only slightly higher than that of men. At the same time women's majority within business clerks (without diploma) proved to be overwhelming:

Numbers and proportions by sex

	Male	Female	Total	Male (%)	Female (%)	Total (%)
Business professionals	22,520	23,754	46,274	48.7	51.3	100.0
Business clerks	14,046	78,357	92,403	15.2	84.8	100.0

Although number of persons by sex is at disposal only about total figures of the occupations, some components that very probable have significant impact on the structure by sex, can be studied from various point of views.

As far as the proportions by industries are concerned, it can be stated that – in proportion to the total of industries – **business professionals** are employed mostly by manufacturing (17.0 %), wholesale and retail trade (22.0 %), financial intermediation (18.3 %), real estate, renting and business activities (9.5 %) or public administration, defense and compulsory social security (17.3 %). In the case of **business clerks** only public administration, defense and compulsory social security plays an outstanding role (31.0%). The shares of employment by other industries are around or below 10 % (manufacturing 11.2 %, wholesale an retail trade 5.2 %, transport, storage, post and telecommunication 12.7 %, financial intermediation 8.6 %, real estate, renting and business activities 6.4 %, education 9.4 %.) thus the distribution of women's jobs corresponds to the presumption that women' employment is higher in industries with relatively low earnings.

CHAPTER 4

WS AND MS DISTRIBUTION OF HUNGARY ACCORDING TO SELECTED VARIABLES

In accordance with the basic intention of the CWS project, from a great number of theoretically possible quantitative and qualitative variables, first of all the following four variables were chosen to characterize different aspects of WS and MS universe, respectively:

- field of study
- sector of statistical activity
- level of responsibility
- income scale

Unfortunately, in practice, the possibilities of such kind of investigation turned out to be very limited due to the lack of adequate numerical information.

The only accessible information that may deserve merit related to the **distribution of the leading and executive staff of the HCSO by gender.** The number of persons in question (referring to the beginning of 1998) was distinguished according to the field of study. At the same time the fact itself that they had been divided into two groups (leaders or executives) conveyed some information about the **level of responsibility.**

The data mentioned above referred to 238 persons belonging to ten professional departments in the central unit and to 244 persons working in the different county directorates. Some significant findings of the investigation can be summarized as follows:

A very high proportion of women is characteristic of the group of executives. The average share of women-statisticians was as high as 70.1 % in the central unit and 71.2 % in the county directorates.

The figures relating to the group of leaders (covering the positions of head of sections and above them) do not reveal similarly great differences. Nevertheless, it is a remarkable and even

noteworthy fact that the average share of women was also higher in this group than that of the men colleagues: 58.8 % in the central unit and 54.3 % in the county directorates.

As far as the **field of study** is concerned, the great majority of diploma holders graduated from universities or colleges of economy. The total rate of them was 66.8 % in the central unit and 45.9 % in the county directorates (but the adequate rate among women mounted to 71.7 % and 75.9 %, respectively). The difference can be attributed to the relatively high share of agrarian diploma holders (mostly men) working generally in county directorates. After the two aforementioned fields of study, the third place belonged to diplomas in informatics with average proportion of 7.1 % and 13.9 %, respectively.

One of the most important aims of this CWS research is to analyze the access of women to senior, decision-making positions. In my opinion it seems justified to say that in Hungary women-statisticians have fairly good possibilities in their professional career, at least as far as public administration is concerned.

CHAPTER 6

SOME CONCLUSIONS

Conclusion that can be drawn from this international project dealing with women-statisticians is two-fold. First, it can give a brief account of the situation of women-statisticians in the given country; second, it can supply some ideas for a possible further CWS investigation.

1. Summarizing the findings of this paper from the point of view of the **Hungarian situation**, it seems to be proved that at least in this field the principle of equal opportunities of women and men has been reassuringly enforced.

   Generally speaking the skills, knowledge and motivation of the women-statisticians are in harmony with those of their men-colleagues. The relatively high proportion of women among the leaders e.g. in the Hungarian Central Statistical Office attests that principally management policy aimed at improving staff potential does not differentiate by sex as far as employment and career development are concerned.

   But it can be presumed that – if there were sufficient and reliable data about earnings of statisticians – distribution of salaries would not show such equality by sex due to general women's drawback in connection with their widespread employment in relatively low-paid jobs. Training opportunities and connected career advancement may be more often limited for women, taking into account their heavier burdens due to mother-craft or other serious home responsibilities.

2. In my opinion **a further international investigation** could be more successful if it focused a well-chosen, more homogeneous group of women-statisticians and their male contrast group. (For example university and college teachers of statistics.)

A questionnaire of voluntary character, based on harmonized content and definitions might also give opportunity of deeper analyses, taking into account e.g. impact of professional degree, age and working practice, continuity of employment (unchanged or different workplaces, average working time, family conditions, personal motivation, scientific achievements, publications etc.

Naturally, in order to get adequate and useful answers, sustaining confidence of persons in question by protecting their answers from revealing is a must.

APPENDIX

SPECIALLY INTERVIEWED PERSONALITIES

- *Dr. Vera Nyitrai former president of the HCSO.*
- Dr. Gyorgy Szilagyi president of the Hungarian Statistical Association, deputy head of Dissemination Department.
- Dr. Gabriella Vukovich deputy president (in 1998, at the date of the interview: head of Population Census Department)
- Dr. Miklos Lakatos deputy head of Population Census Department.
- Dr. Judit Lakatos head of Living Standard and Human Resources Statistics Department.
- Mrs Jasper, Dr. Maria Darvas deputy head of Presidential Department, head of Media and Marketing Section.
- Peter Friss deputy head of Dissemination Department, head of Analysis Section.
- Zsuzsanna Hanto head of Human Resources, Management and Training Section.
- Zsuzsanna Plank senior statistician, Labour Statistics Section.
- Dr. Andras Sugar university lecturer, Budapest University of Economy.

BRIEF INFORMATION ABOUT THE 2000 WORLD POPULATION AND HOUSING PROGRAMME

(in connection with basic document point 7)

In Hungary the next population and housing programme has been envisaged to be carried out at the beginning of 2001.

For the time being the preparation work is in progress within the usual capacity of the Population Census Department. This means approximately 50-60 persons, with a light surplus of women statisticians.

But as far as the real execution of the census is concerned – in accordance with the earlier Hungarian practice – fellow workers of local governments' offices and those of HCSO County Directorates will be asked for collaboration. Among them the share of women is relatively high.

Presuming that one census-taker will deal with approximately 300 persons on the average, the total number of persons participating in carrying out the census 2001 and its checking processes, can be roughly guessed about 45-50000 persons including fairly high share of women.

ITALY

CHAPTER 1

ITALY IN FIGURES

1 – General data of the country

Territorial extent

Italy, with its land surface of 301,000 km², is the third-largest country in the EU as regards size after France (552,000 km²), Spain (505,000 km²) and Germany (249,000 km²).

Mountain 106,109km², Hill 125,431 km² Plain 69,777 km²; Total Surface 301, 318 km² (01/01/97).

It is composed of a complex, geographical-administrative mosaic which includes 20 regions, 102 provinces and 8,101 municipalities. The largest region is Sicily (nearly 25,707 km² or 8.5% of the national territory), the smallest is Valle d'Aosta (just 3,263 km² or 1.1% of the overall land surface), whilst the region of Lombardy is considered more fragmented (with 1,546 municipalities compared with 74 in Valle d'Aosta).

Territorial divisions - Geographical areas

	The north	Centre	South & islands
Regions	Piemonte	Toscana	Abruzzo
	Valle d'Aosta	Umbria	Molise
	Lombardia	Marche	Campania
	Liguria	Lazio	Puglia
	Trentino-Alto Adige		Basilicata
	Veneto		Calabria
	Friuli-Venezia Giulia		Sicilia
	Emilia-Romagna		Sardegna

Territorial area by geographical extent

Geographical area	Number of municipalities	Territorial area (Km²)	
		Total	%
Italy	8,101	301,308.13	100.0
North-centre	5,545	178,247.25	59.2
South	2,556	123,060.88	40.8

Source: ISTAT data, 1997

Population density

Italy has a population density of 190 inhabitants per km², with a maximum value of 425 inhabitants in **Campania** and a minimum of 37 in **Valle d'Aosta**.

Inhabitants per km² (01.01.1997)

Geographical area	Population density
Italy	190
North-centre	204
South	169

SOURCE: ISTAT data, 1997

The five most-populated municipalities

The five most-populated municipalities are **Rome, Milan, Naples, Turin** and **Palermo** (31/12/97):

City	Population (inhabitants)
Rome	2,653,245
Milan	1,302,808
Naples	1,035,835
Turin	914,818
Palermo	688,369

Per capita GDP

Gdp at market prices, data in thousands of millions of lire

Year	Value in current prices		Value in 1990 prices	
	Total	Per inhabitant in thousands of lire	Total	Per inhabitant in thousands of lire
1990	1.310.659	22,730	1,310,659	22,730
1991	1,427,571	24,711	1,325,582	22,945
1992	1,502,493		1,333,072	
1993	1,550,296	26,685	1,317,668	
1994	1,638,666		1,346,267	
1995	1,771,018	30,929	1,385,830	
1996	1,873,494	32,629	1,395,408	
1997	1,950,680	33,921	1,416,055	
1998				

2. The population according to data from the 13th Population and Residency Census, October 1991

Total male and female population

Italians numbered 56,778,000 at the last population census (October 1991), that is less than the Germans (62,000,000) and the British (57,000,000) and approximately the same as the French (just over 56,000,000), As confirmed by the census, **women** were more numerous than **men** (29,220,068 as opposed to 27,557,963),

The most populated region was **Lombardy** (8,900,000 inhabitants) while the least populated was **Valle d'Aosta** (116,000 inhabitants).

Resident population according to the 13th population census of 20/10/1991

	Resident population		
	Male	Female	Total
Italy	27,557,963	29,220,068	56,778,031
North-centre	17,517,219	18,723,328	36,240,547
South	10,040,744	10,496,740	20,537,484

Source: ISTAT data, 1997

- Total active population at census 1991: 23,935,451
- Men: 15,126,485
- Women: 8,808,966

Resident population in the five most-populated municipalities – 13th population and residency census, october 1991

	Resident population			Density inhab/ km²	Current population
	Male	Female	Total		
Rome	1,325,590	1,449,660	2,775,250	1,852	2,819,232
Milan	640,311	728,920	1,369,231	7,541	1,377,490
Naples	513,860	553,505	1,067,365	9,102	1,073,129
Turin	460,188	502,319	962,507	7,394	964,020
Palermo	339,363	359,193	698,556	4,397	704,245

SOURCE: ISTAT data, 1997

3. Universities centers of studies in Statistics

Table 7 universities offering courses in statistics

Level of degree (isced)	Number of universities	Total number of		% of female students
		Graduates	Students	
	1995/96	1990-96	1995/1996	
6 – graduate	11	3,583	4,880	2,428
7 - post-graduate				

Students registered for degree courses by sex for the acadaemic year 1996-1997 (ISCED 6)

Degree course	Absolute values	category %	
		M	F
Demographic and social statistical science	322	53.4	46.6
Actuarial and statistical science	444	49.3	50.7
Statistic and economic science	793	51.3	48.7
Statistics and Information Technology of the firm	130	57.7	42.3

SOURCE: ISTAT data, 1997

Registered students for university diplomas (shortened degrees) by sex for the acadaemic year 1996-1997 (ISCED 6)

Degree course	Absolute value	Category %	
		M	F
Statistics	652	51.0	49.0
Statistics and Information Technology in company management	466	51.0	49.0
Statistics and Information Technology in public administration	63	51.0	49.0

SOURCE: ISTAT data, 1997

4. Brief reference to the national Statistical system

	N°	Female Managers in the office
ISTAT- National Institute of Statistics	1	-
SISTAN Internal Secretary	1	-
ISTAT Regional Offices	18	4
Central State Administrations	19	5
Institutions	19	3
Statistical Institutions	4	1
REGIONS		
Regional Offices	14	4
Prefects' Offices	97	47
Chamber of Commerce offices	101	41
Provincial Offices	64	22
Main municipalities offices	101	28
Secondary municipalities offices	2,603	-

Information regarding ISTAT can be found at: *http://www.istat.it*

	WS	MS
Total	1,091	1,073
Management Level	126	206
Operative Level	965	867

Note: The number of women and men who belong to the SIS (The Italian Society of Statistics) is:

Women: 290

Men: 510

5. Income distribution in the country

Structure of economically active population in the country

Breakdown of the economically-active population - Survey of the workforce (in thousands) for the period 1994-1997

	1994		1995		1996		1997	
	Total	Fem	Total	Fem	Total	Fem	Total	Fem
Total workforce	22,680	8,373	22,734	8,490	22,851	8,615	22,891	8,685
Employed	20,119	7,063	20,010	7,077	20,088	7,187	20,086	7,229
Looking for work1	2,561	1,310	2,725	1,414	2,763	1,428	2,805	1,457
Unemployed	983	390	1,005	408	1,011	417	1,031	424
Looking for first job	1,048	496	1,150	551	1,204	574	1,225	592
Others looking for work	529	424	570	455	548	436	548	440
Activity rate	47.4	33.7	47.4	34.1	47.6	34.6	47.5	34,8

	1994	1995	1996	1997
Non-workforce	33,859	33,905	33,895	33,976
15-70 years	19,897	19,884	19,852	19,357
Looking for a job	971	994	1,012	1,225
Willing to work according to certain conditions	1,994	2,183	2,287	2,442
Not willing to work	16,932	16,707	16,554	16,456
Not of working age	13,962	14,021	14,043	14,096
Current population	56,540	56,640	56,746	56,867

Unemployment rate of the population by sex and territorial division, 1994-1996

	1994			1995			1996		
	TOT.	M	F	TOT.	M	F	TOT.	M	F
North-west	7.3	5,1	10.7	7.4	5.0	11.0	7.3	4.8	11.1
North-east	6.1	4.2	9.2	5.9	3.6	9.3	5.6	3.3	8.9
Centre	9.6	6.7	14.3	10.3	7.4	15.0	10.3	7.5	14.6
South	19.2	15.4	27.0	21.0	16.8	29.7	21.7	17.5	30.2
ITALY	11.3	8.7	15.6	12.0	9.2	16.7	12.1	9.4	16.6

SOURCE: ISTAT census data

DEFINITIONS

This data has been processed using the same indicators which were used in **ISTAT** publications (the National Statistical Institute). The data in the tables refers to **current population** or to the resident population of the family, excluding those persons who have temporally emigrated abroad and permanently cohabiting members.

- **Work force:**
  Including employed persons and those seeking work;
- **The employed:**

[1] Work actively sought within the last 30 days

Including persons aged 15 and over who, regarding their professional status, declare that:

a) they are employed even if they have not actually performed this work during the week in question (they are declared to be employed).

b) they are currently not working but they have performed at least one hour of work during the week in question (other persons who work).

- **Work:**

There include persons who are 15 or over who declare that:

a) they have been dismissed from a previous job, a temporary job has finished or they have resigned (unemployed);

b) they have never worked. they have been self-employed or they voluntarily stopped working for a period not least than a
year (those seeking their first job);

c) to be in a non-working category (i.e. housewife, student, the retired) but, in subsequent questions during the same interview, they declared that they were seeking work (other persons seeking work).

Categories a). b) and c) above showed the following characteristics:

I. They declare that they are temporarily employed and that they have not worked in the week when the survey was carried out;

II. they declare that they are currently seeking work;

III. they declare that they have made at least one attempt to look for a job in a 30-day period preceding the survey;

IV. they declare to be immediately available (that is, within 2 weeks) to accept a job, whatever it may be.

- **Non-work force:**

This includes those who have declared themselves as non-professionals (students. housewifes. the retired) and who have neither undertaken any work nor have they looked for work in that week. if such persons have sought work, it is not according to the definition of persons seeking work. these persons include the disabled, conscripts or soldiers employed in services for the community and those who are 14 years or under.

- **Activity rate:**

This includes the workforce and the current population.

- **Unemployment rate:**

This includes those seeking work and the workforce.

CHAPTER 2

Graduates in Statistics in the differents degrees per Public University (Academic year 1995 -.1996)

		Women	*Men*
Degree in Statistical and Demographic Sciences	University of Padova	16	8
	University of Bologna	12	10
	University of Roma (la Sapienza)	28	19
	University of Messina	29	27
Degree in Statistical, Demographics and Social Sciences	University of Bologna	31	18
	University of Messina	1	5
Degree in Statistical and Actuarian Sciences	University of Trieste	9	10
	University of Firenze	10	12
	University of Roma (la Sapienza)	20	19
	University of Benevento (Salerno)	6	-
	University of Cosenza (Calabria)	3	7
Degree in Statistical and Economic Sciences	University of Padova	66	65
	University of Bologna	70	72
	University of Siena	15	9
	University of Roma (la Sapienza)	88	85
	University of Bari	26	22
	University of Palermo	17	25

ROMANIA

CHAPTER 1

DATA CONCERNING THE COUNTRY

Bibliographical source: ROMANIAN STATISTICAL YEARBOOK 1997

1- General data of the country

A- *Total Surface:* 238391km²

B- *Density of population:* 95.7 Inhabitants/km² by census figures-January 1992.

C- *Population of the 5 most populous cities:*

Bucuresti	2,037,278
Constanta	346,830
Iasi	346,613
Cluj -Napoca	332,297
Timisoara	332,277

D- *GDP per capita (in international dollars) calculated on the basis of the purchasing power parity:*

1993	1994	1995
3643	3980	4360

2- Population in 1992 census

A- *Total population:*	22,810,035
Total of women:	11,596,272
Total of men:	11,213,763
B- *Active population:*	11,387,019
Total employment:	10,458,000
Total registered unemployed:	929,019
Total of women:	563,065
Total of men:	365,954

3- Universities centres (in general) in 1996/1997

102 Higher education institutions
485 Faculties
354,488 Students enrolled

4- Brief reference to the national statistical system

4.1-.Type of organisation of the official statistical activity:

The National Commission for Statistics (NCS) is a strongly centralised system, whose components are totally decentralised.

The president of NCS has a position of under-secretary of State.

The National Commission of Statistics works together with 41 County Boards for Statistics (CBS).

Some of the Ministries have there own Centres for Statistics.

4.2- Total number of personnel working in the national statistical system, By sex. (Data from 12.31.1997):

	NCS	CBS
women	512	1,324
men	159	371
Total	**671**	**1,695**

4.3- Total number of personnel with university degree working in the national statistical system, by sex.

Professional structure

	NCS	CBS
Leadership positions (higher education)	109	245
Execution positions (higher education)	273	522
Leadership positions (secondary school)	222	758
Other professions	67	170

5. Income distribution in the country

Total incomes of households(lei-monthly by household)

Households of:	1995	1996
Employees	530,236	765,829
Employers	1,078,969	1,453,104
Peasants	354,149	540,984
Unemployed	291,091	408,091
Retired	310,887	466,209
Total households	408,363	593,653

6-Structure of economically active population

Employment by activities of national economy(thousands of persons).

	1995	1996
Agriculture	3,187	3,249
Forestry and hunting	78	71
Industry	2,714	2,741
Construction	479	475
Trade	865	772
Hotels and restaurants	123	116
Transport	458	448
Post and telecommunications	98	99
Financial, banking and insurance	71	71
Real estate and other services	324	257
Public administration and defence; compulsory social assistance.	131	125
Education	437	441
Health and social assistance	333	337
Other activities	195	177
TOTAL	**94,93**	**9,379**

SLOVENIA

PROJECT ON CHARACTERISATION OF WS

Statistical Office of the Republic of Slovenia

Co-ordinated by Ms Irena Kri•man (deputy director) and Mr Toma• Smrekar (head, labour statistics department)

Prepared by Mr Toma Smrekar, Ms Nelka Vertot (head, demographic statistics department), Ms Erika Nidarši (head, level of living statistics department), Mr Miran avbi (trainee, labour statistics department)

All data in the paper except data on WS and MS have been published in different publications published by Statistical office.

Introduction

Let us first present you some methodological aspects of the project on WS and MS characterisation. They have significant impact on data and we should have them in mind interpreting the results of the project.

There are three data sources used for this study. The most important is Statistical register of employment maintained by Statistical Office of the Republic of Slovenia. The register is maintained with data on persons entering compulsory health and pension insurance. By personal identification number it is linked with Population register and Business register. Entry form was designed with cooperation with Statistical Office and therefore for every employed person in Slovenia it contains variables like sex, age, education attainment, occupation, place of living, place of work, economic activity of the employer, etc. It is therefore very rich source of data for analysing labour market and is frequently used by national and international labour market experts.

Second source used is personal evidence of Ministry of education for teachers of statistics.

Third data source is tax records register for the analyses of income.

It was not much discussion about choosing these data sources for the project on WS and MS characterisation because it is the only adequate and relatively easy to use data source in this field research. But of course it has some limitations and we will highline them for better understanding of the results.

For every person in Statistical register of employment we have data on occupation and we took these data to define our population. The version of occupational classification used has two occupations for statisticians. One is on technical level and the other one on operative level. There are consequences for our pilot study. We have two levels of responsibility as desired in the pilot but on management and technical level we have only technical level because we are not able to provide management in statistics.

We are not able to provide data on different sectors of statistical activity. We derived this data from classification of activities and are able to provide only production and distribution of statistical information. For example teachers of statistics do not have the occupation statistician but the occupation teacher and because of this we were not able to get them. In the universe of teachers we do not know which subject they are teaching. We got data from Ministry of education but aggregated on the level of education and gender.

It is by our law on data protection not to provide any nonanonimious data to any group of users. Because of this we were not been able to provide you with the list of names of statisticians.

CHAPTER 1

General fact and figures

Slovenia is a small country as regards its area as well as the number of its population. It is only slightly bigger than 20,000 sq km. At the last population census in 1991 slightly less than two million people (1,965,986) lived in 5,946 settlements and 640,195 households (averaging 3.1 members) on this picturesque piece of Central Europe.

Surface area, land cover and land use, 1993

Categories of land cover and classes of land use								
	Share in total surface area (%)							
Surface area km^2	forest	agricultural land	water	bare rocks	built-up	roads	railways	undefined
20273	56,5	38,0	0,6	1,8	2,5	0,4	0,1	0,1

First reliable data on the number of population in Slovenia come from 1857, when the then Austria carried out the first «modern» population enumeration and 1,101,854 people lived on the present-day territory of the Republic of Slovenia.

Basically, the demographic development of Slovenian population followed that in developed European countries. Fertility and mortality have been constantly decreasing and are already threatening the natural increase of population. In 1993 it was negative for the first time and since then it has been around 0.

At the end of December 1995 1,990,266 people lived in Slovenia, i.e. 97 per sq km. In the last 139 years Slovenian population increased by 81%, which is less than in the rest of Europe.

One fifth of Slovenian population live in settlements with more than 20,000 inhabitants; 64% of those or about 300,000 in Ljubljana, the capital. Great dispersion of settlement is the result of landscape, history and the policy of polycentric development, which in the last thirty years, with the maintenance of traffic connections and investment in economic development of less developed regions, rendered the concentration of population impossible.

Although the present-day territory of the Republic of Slovenia in the past belonged to various political entities (Austro-Hungarian Empire, Italy, Socialist Federal Republic of Yugoslavia), nationally it remained fairly unified. At the 1991 census only 12% of population declared themselves non-Slovenians; among them 1.4% Hungarians and 0.2% Italians, which are autochthon inhabitants of the north-east and south-west parts of the country respectively. Other inhabitants of non-Slovenian nationality migrated to

Slovenia mainly after World War II when Slovenia became interesting for inhabitants of other parts of the former Yugoslavia. At the 1991 census 2.8% of Slovenian population were Croats, 2.5% Serbs and 1.4% Muslims. After Slovenia became an independent state their share decreased because some immigrants returned to other parts of the former Yugoslavia and in 1991 Slovenia had a negative migration increase. Although in 1992 the increase was again positive, its values were considerably lower than in the eighties.

The result of the constant decrease of the value of natural and migration increase in Slovenia is that the number of population is almost at a standstill and that the process of aging of population is becoming problematic. The average age of population has already surpassed 36 years.

Area, households and population according to 1921 - 1991 censuses

	Surface area [km^2]	Households	Population			Density of population per km^2	Average number of members per household	Women per 1000 men	Share of agricultural population in total population %
			total	women	men				
1921	20255	-	1304800	682632	622168	64,4	-	1097	-
1931	20255	287228	1397650	724402	673248	69,0	4,9	1076	58,8
1948	20255	380950	1439800	764447	675353	71,1	3,8	1132	48,9
1953	20255	410976	1504427	792393	712034	74,3	3,7	1113	41,1
1961	20255	458853	1591523	830753	760770	78,6	3,5	1092	31,6
1971	20255	515531	1727137	891139	835998	85,3	3,4	1066	20,4
1981	20256	594571	1891864	973098	918766	93,4	3,2	1059	9,2
1991	20256	640195	1965986	1013375	952611	97,1	3,1	1064	7,6

Population of the five most popular cities, 31/12/1997

	Total
Ljubljana	260388
Maribor	100576
Celje	38904
Kranj	35772
Koper	23746

Gross domestic product per capita, 1989 - 1997

	Per capita(U$S)
1989	6058
1990	8699
1991	6331
1992	6275
1993	6366
1994	7233
1995	9431
1996	9471
1997	9161

The consequences of immigration to Slovenia are evident also in the data on religion of population. At the 1991 census the majority of inhabitants (71.4%) declared themselves Roman Catholics, 2.2% Orthodox, 1.5% Muslims and only 0.9% Protestants.

The education structure of Slovenian population is relatively low. At the 1991 census 17% of inhabitants older than 14 did not even finish primary school, 29.9% finished primary school, 42.8%

of persons finished secondary school and only 8.8% obtained non-university or university education.

University centers of studies in statistics

There is no study field in Slovenia in statistics as such, but in the great number of secondary educational programmes you learn statistics and also in the great majority of university programmes there is a subject called statistics. A short description of higher education follows.

The legal basis for the existing higher education system is set out in the Constitution, which recognises the right of universities and other higher education institutions to act autonomously within the limits set by the law (Higher Education Act, 1993). Higher education is provided in Slovenia at:

- state universities which are divided into: faculties, art academies and higher professional institutions;
- free-standing higher education institutions[1)]:
- public higher professional institutions can also be organised outside the universities
- private faculties and higher professional institutions; according to the law it is also allowed to establish private universities and free-standing art academies.

There has been a greater flow from secondary to higher education in recent years, and as a result the number of students and graduates has increased along with the number of students in part-time and postgraduate courses. New freestanding higher education institution is being set up.

The responsibility to secure minimum standards (ex-ante control) in higher education lies with the Council for Higher education of the Republic of Slovenia, which is a consultative body of the Government and consists of the representatives of universities and freestanding higher education institutions and of other experts. It is authorised to accredit new HE institutions, to evaluate new study programmes of universities and to issue opinions on them, to accredit state-approved programmes of freestanding higher education institutions. University study and research programmes are approved by the senates of university member institutions upon previous consent of the university senate.

The Council of HE forms commissions and independent groups of experts for individual fields of its activities. Among them there is the Teacher Education and Training Commission.

The Higher Education Quality Assessment Commission (HEQAC) is to monitor and assess the quality and effectiveness of teaching, research, art and professional activities of HE institutions and reports once a year to the senates of HE institutions, the Council for HE and to Council for Research and Technology of the Republic of Slovenia. The HEQAC is composed of representatives of all scientific and art disciplines and professional fields and also obtain the advice of students.

In 1998, there were 2 universities (the University of Ljubljana, which consists of 20 faculties, 3 higher professional education institutions and 3 art academies, and the University of Maribor, which consist of 9 faculties, and 1 higher professional education institution), and 8 freestanding higher education institutions, of which 7 are private (2 faculties and 5 higher professional education institutions). The Higher Professional school of Police and Security Studies is affiliated to the University of Ljubljana. It is a State-founded higher education institution financed by the Ministry of the Interior. The two new private institutions have already been set up and plan to start work in academic year 1998-1999.

Higher education has a twin-track structure: academically oriented university studies and higher professional studies. Universities (and freestanding faculties established as private institutions) may offer through its members both types of courses, while higher professional education institutions offer only professional courses. The courses are organised at two levels: at

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[1)] higher education institution which is not a member of university

undergraduate level students receive a diploma leading to a first university degree or leading to a first professional degree, while at graduate level students receive either the second professional degree of *specializacija* or the academic degree of *magisterij* or *doktorat.*

Institutions of higher education carry out basic and applied research, development and other projects in compliance with the Act regulating research.

National statistical system

From the history of Slovenian official statistics

The first independent statistical service which covered most of Slovenia was established in Vienna in 1863 as the Central Statistical Commission. It did not cover Prekmurje, which belonged under the Central Statistical Office in Budapest.

After the disintegration of the Austro-Hungarian Empire Slovenia became part of the Kingdom of Serbs, Croats and Slovenes. The central statistical service of this state was the General National Statistics in Belgrade. Within its framework a special statistical section for Slovenia was established in 1919. Statistics for the territories of Istria, Slovenian littoral and Benecija were kept by the Central Statistical Office in Rome, and statistics for the territory of Slovenian Carinthia were kept by the Central Statistical Office in Vienna.

During World War 2 there were no conditions for regular and systematic statistical work. Statistics developed out of necessity, more or less spontaneously, as the daily needs dictated. On 16 June 1945 the Statistical Office of Slovenia was established (after a decree on organising the Federal Statistical Office of Yugoslavia was adopted in December 1944), whose task was to collect, process and disseminate all general and special statistics from the territory of the then Slovenia - one of the Yugoslav republics. In further development, statistics as a distinctly professional-administrative service was adapting its organisation and content of work to the needs of and changes in the state administration. In the first postwar period the statistical service was highly centralised. In 1953 the Statistical Office of Slovenia - later on renamed Office for Recording and Statistics of the People's Republic of Slovenia - for the first time after the war became an independent administrative body, a new institution as regards organisation, methods of work and tasks.

In 1956 the Statistical Office of the People's Republic of Slovenia became legally authorised for matters of statistics, to organise or perform collection and processing of data important for the state (Federal People's Republic of Yugoslavia) and republic, to professionally co-ordinate the statistical activities in Slovenia and to perform, in accordance with annual programmes of statistical surveys, other administrative matters within the competence of the republic in this field.

Every year the Statistical Office carried out on the territory of Slovenia the programme of statistical surveys important for the whole state, as well as, on the basis of a special law and programme, the annual programme of statistical surveys important for the republic. This work covered data collecting, processing and disseminating as well as methodological tasks. Statistics as part of the social information system in the then Socialist Republic of Slovenia was developing rapidly within the framework of legal regulations and technological possibilities.

At the beginning of the 1970s Slovenian statistics started its active international co-operation with the help of OECD's TECO (Technical Co-operation) project. With Germany, i.e. with the regional statistics of Nordrhein-Westfalen, we started co-operating in the field of databanks and training of statisticians in statistical methods. At the same time, we started to co-operate with the Nordic countries, above all with Denmark and Sweden in connection with setting up basic administrative registers. After 1981 a group of methodologists visited the Nordic countries several times to study the system of economic statistics in a market economy, mainly because of preparations for transition to calculating macroeconomic aggregates by the international methodology of the System of National Accounts. Timely preparations for adaptation of Slovenian statistics to international standards in the field of national accounts and classification of activity

importantly influenced further course of harmonisation and inclusion of Slovenian statistics in international environment after we won independence.

National statistics in independent Slovenia - Legal bases

After Slovenia won independence in 1991, one of the first tasks of the Statistical Office was to prepare a new legal basis for operation of national statistics. With the adoption of the Law on National Statistics in August 1995, the Statistical Office became a professionally independent institution whose position is defined by the Law on Government of the Republic of Slovenia and the Law on National Statistics. With the adoption of the Law on National Statistics, the Statistical Office also changed its name in the Slovene language. Following the law, the Statistical Office of the Republic of Slovenia established the Statistical Council of the Republic of Slovenia, a professional advisory body in charge of strategic, methodological and development questions of national statistics. Within the Statistical Council there are more than 20 statistical advisory committees for wider fields of statistics. They were established already in 1982, but with the mentioned law they became a legal form of co-operation.

Fields of work

Statistical Office of the Republic of Slovenia carries out activities of national statistics, which ensure to public administration, economy and the general public data on the situation and trends in the fields of demography, society, economy, environment and natural resources. Legal bases for data collection, processing and dissemination are the Law on National Statistics and the National Programme of Statistical Surveys, which was adopted by the National Assembly on 30 October 1997.

The National Programme of Statistical Surveys defines important elements for carrying out statistical surveys, such as: contents, purpose and periodicity of surveys, observation period or the critical date, who has to provide data and when, date of data publication and titles of surveys. Statistical surveys carried out by the Statistical Office cover fields of national accounts, business statistics, demography and social statistics, and environment and natural resources statistics. Observation units are persons, business entities and space, while data providers or observed statistical units are individuals, enterprises (legal entities) and organisations responsible for keeping official records, registers and databases. Data are collected with questionnaires (paper or electronic), personal interviews, computer assisted telephone interviews and from administrative sources.

In addition to the Statistical Office, the tasks of national statistics are implemented also by other authorised performers: Bank of Slovenia, Institute for Pension and Disability Insurance, National Employment Office, Agency for Payments, Institute of Public Health and Institute for Health Insurance.

Dissemination of statistical data

In the field of data dissemination the Statistical Office strives to become a user-friendly institution. Statistical data are an important element of informing a democratic society since they assure the data basis for studying and planning the development in all spheres of human activity. The number of users of statistical data has been constantly increasing, mainly the number of users accessing our data via the Internet.

Printed publications

Printed publications continue to be one of the principal means of disseminating statistical data. They are published - depending on the contents and purpose - in different time intervals. Ever more publications are bilingual, i.e. Slovene-English. Our Catalogue of Statistical Publications lists

all our publications: Rapid Reports, Rapid Reports - First Release, Some Important Data of the Republic of Slovenia, Monthly Statistical Review, Results of Surveys, Methodological Material, Slovenia in Figures, Statistical Yearbook of the Republic of Slovenia, Development Questions of Statistics, Special publications and CESTAT Statistical Bulletin.

Databases

They comprise long time series of macrodata (about 30 million data items). Some reach back as far as 1952 (e.g. prices). The Office is constantly improving the present system, which already contains some metadata; the final objective is to provide statistical data together with corresponding metadata in user-friendly databases.

Internet: http://www.sigov.si/zrs

In the last few years the Statistical Office has had its own homepage on the Internet, where users have free access to general information on the Office, short-term indicators and the following publications: Rapid Reports - First Release, Statistical Yearbook, Slovenia in Figures, Standard Classification of Occupations and Catalogue of Statistical Publications.

Geographical Information System, GIS-STAT

Based on geocoded locations of observed statistical units (enterprises, population), it enables users to present and analyse the data in geographical dimension. It also contains data on physical properties of the territory obtained by remote sensing (satellite observation).

Releasing statistics to the news media

General public is informed directly via the news media and via reporters who participate in regular monthly press conferences.

Information Centre

Users can visit it in person or obtain the desired data via mail (classic and electronic), fax, telephone or the automatic answering machine.

Part of the Information Centre is the library, which obtains, processes and keeps statistical literature, and is an active member of the COBISS/OPAC association: www.izum.si/COBISS/.

Slovenian statistics and international co-operation

Slovenia as a country in transition to the market economy and with a clear goal of active inclusion into European integrations needs a modern statistical service and data comparable to other European countries and the rest of the world. Therefore, the priority tasks of national statistics in Slovenia are Europeanisation of statistics and adaptation to new requirements of the market economy. This means transition to internationally harmonised standards in the fields of classifications, definitions, methodological approaches and further development of the register-based statistical system. This is based on three basic registers (Business Register of Slovenia, Central Population Register and Register of Territorial Units with geocoded addresses), on the use of unique identifications, on common statistical classifications as general standards, and on a legally regulated influence of national statistics on data collection important for the whole country. Europeanisation of statistics also means meeting the needs of users of statistical data by contents and by means customary in market economies, covering the needs of the public and the private sector, and fulfilling international obligations of the state regarding data dissemination and exchange.

International co-operation of Slovenian statistics:

In May 1993 (after Slovenia became a member of UN) the Statistical Office became a member of the Conference of European Statisticians, which is part of the Economic Commission for Europe. On 21 March 1994 a common declaration on co-operation in the field of statistics between the Statistical Office of the Republic of Slovenia and Eurostat was signed in Ljubljana. Statistical Office of the Republic of Slovenia co-operates also with other important international institutions: FAO, ILO, WTO, WHO, UNIDO, UNESCO, IMF, OECD. Especially important is co-operation and exchange of knowledge with statistical offices of EU Member States, and EFTA and CEFTA countries.

Harmonisation with European statistical standards and compliance with statistical requirements set by "acquis communautaire".

In April 1998 Slovenia started formal negotiations on our future membership in EU. In connection with statistical obligations of full membership in EU, two main components are especially important: full compliance with the statistical requirements set by the European Union, and strengthening of institutional capacity in order to ensure that achieved level of the development of statistical system will be maintained in the future.

The following common accession priority areas for improvement of methods and practices have been selected as priority for the near future: macroeconomic statistics (national accounts, public balances and the balance of payments, monetary indicators, price statistics, regional statistics, short-term indicators), external trade statistics, agriculture statistics, and migration statistics (international migration, population censuses). National priority areas are business statistics and regional statistics.

Development of Slovenian statistics for the 21st century

Slovenia is faced with similar trends and the problem of the statistical paradox as statistics in the rest of the world. While the need for data is growing, their explanatory power is decreasing. We are faced with the problem of measuring intangible products and services in general.

Globalisation and growing deregulation gradually do away with the present administrative sources available to national statistics. Changes in statistics demand relatively longer periods of time. It is exceptionally important to anticipate future needs for statistical data, which is a very demanding job, to be able e.g. in 2003 to support decision-making already at the level of established time series since 1999.

Because of requests for greater timeliness and quality of data and at the same time reducing the costs of data collection, new information technologies and relatively demanding analytical instruments are rapidly being introduced. One of the many development tasks important for the future of national statistics in Slovenia is also the project Modernisation of National Statistics, which is linked with the harmonisation with international standards as well as with internal harmonisation and use of modern client/server technology.

Rapid development of information technology gives new opportunities for lessing the burden of data providers, of data users and of national statistics. Very important is further development of register orientation of the Statistical Office, which in a relatively standardised information environment on the one hand enables reduction of costs, and on the other hand enables the increase of quality, flexibility and timeliness. Final objectives of the project Modernisation of National Statistics are: Statistical Office is a user-friendly organisation, standardisation of contents, technological and methodological standardisation, transition to user-friendly client/server environment, use of efficient statistical methods, better quality of all phases in the process, and rational organisation of input and output.

Distribution of household income

In order to look into the income distribution of Slovenian households we took the data from the Household Budget Survey. According to the UN guidelines all the receipts which are of a current nature or are regular are considered as income. In the survey the concept of a net income is used.

A part of household income includes also non-monetary element. This is a value of own production consumed in the household. Goods produced (by farming, through vegetable garden, fishing, etc.) and consumed by household equally increase the well-being of the household, so they are evaluated and considered as part of the income.

Let us first look at the different sources of household income in the table below that shows distribution of households according to the main source of household income.

Distribution of households according to the main source of income in Slovenia, 1994-1996 [%]

	1994	1995	1996
Main source of income			
Income from employment	56,8	56,4	52,9
Income from self-employment	10,2	9,9	12,8
Pensions	29,9	31,8	30,5
Other social benefits	2,7	1,0	3,6
Income from property	0,1	0,2	0,0
Other current income and transfers	0,2	0,6	0,2
All households	**100,0**	**100,0**	**100,0**

Source: Household Budget Survey

As we can see the majority of households have income from employment as their main source of income. If we compare 1996 to the previous years, we can observe that the share of households with this kind of main source decreased from 56.8% in 1994 to 52.9% in 1996. At the same time the share of households with social benefits as their main source of income increased from 2.7% in 1994 to 3.6% in 1996. The other noticeable change is also seen in the case of income from self-employment, where we register the increase from 10.2% to 12.8%.

The previos table shows how households were distributed across different main sources of income. But the structure of income can be better seen from the next table. We divided households into four quartiles and compared the structure of income in the bottom and top 25% of households.

Structure of household income[%] in the bottom and top quartiles*, Republic of Slovenia, 1996

	Bottom	Top
Income from employment	34,8	65,1
Income from self-employment	3,3	14,0
Pensions	39,1	12,9
Other social benefits	11,9	2,6
Income from property	0,1	0,0
Other current income and transfers	0,7	0,9
Value of own production	10,2	4,6

Source: Household Budget Survey

**Income per adult equivalent is used for ranking the households into four quartiles (OECD modified scale: 1 for the first adult, 0.5 for other persons 14 or more years old, 0.3 for children under 14).*

In the first quartile the biggest share belongs to pensions (39.1%). Income from employment represents 34.8% of all income but it is much lower compared to the top 25% of households where income from employment is in the first place with 65.1%. We can see that among household with lower income the share of income of a social character (pensions and other social benefits) is much higher than in the top quartile. This is also true for the value of own production, which contributes more to the income of the bottom 25% of households. The second place in the top quartile belongs to the income from self-employment (14.0%), while its share among «poorer» households is much lower (3.3%).

It is also very important to know how the income is concentred in different parts of income distribution. Table 3 shows what share of total household income belongs to the bottom and the top 25% of households.

Share of income received by the bottom and top quartile of households*, Slovenia, 1994 - 1996 [%]

	1994	1995	1996
bottom 25%	12,0	11,7	11,3
top 25%	39,9	38,9	40,7

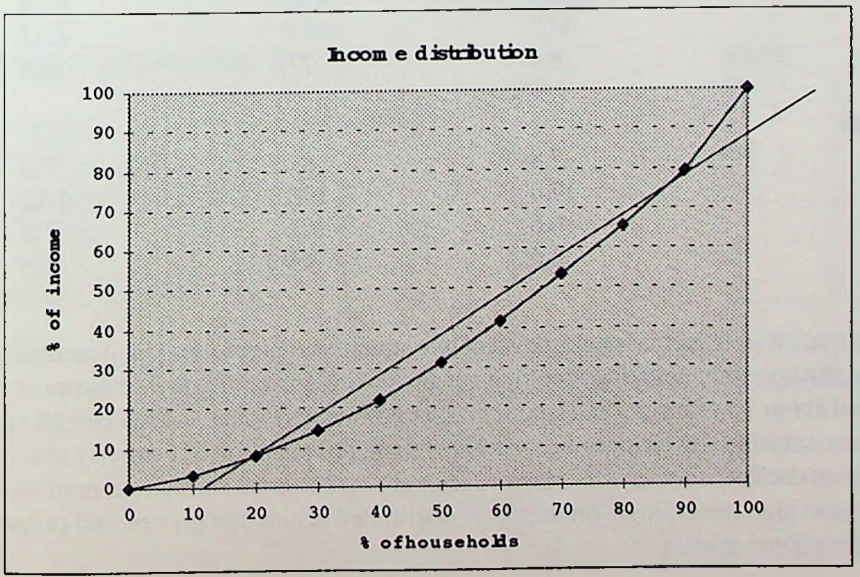
Source: Household Budget Survey

**Income per adult equivalent is used for ranking the households into four quartiles (OECD modified scale: 1 for the first adult, 0.5 for other persons 14 or more years old, 0.3 for children under 14).*

If we observe all three years, the share of income received by the bottom quartile has decreased from 12.0% to 11.3%. We can also look at the ratio of both shares. The ratio in 1994 is 3.3 and in 1996 it is 3.6. This is one of the signs that the distribution of income between both quartiles became more unequal.

The chart below represents the Lorenz curve, which shows the degree of inequality of income distribution. Perfect equality would be represented by a straight line at 45°. In that case 50% of households would have 50% of all income. In practise, the greater the inequality the more this curve deviates from the theoretical straight line.

Lorenz curve for distribution of household income Republic of Slovenia, 1996



Source: Household Budget Survey

One of the observations we can tell from the curve is that 50% of the «poorest» households receive 31% of all income, whereas 35% of all income belongs to only 20% of the «richest» households. If we compare the bottom and the top decile, the difference is even more obvious. Only 3.2% of all income belongs to the «poorest» 10% of households while as much as 20.6% of all income belongs to the «richest» 10% of households.

There are several other indicators which can show us in more detail how severe the problem of inequality is. These were just some of the results from which we can observe how the income is distributed in the society and that income inequality has increased in the past years. The problems of poverty and inequality are important issues in all societies and are subject to many analyses which can - from different angles - shed light to these problems and give incentives to the search for the solutions.

Labour market

Principal characteristics of the population by activity, age and sex, 1998/4

	Total	Women	Men
Total population(in thousands)	1,982	1,016	966
Labour force	974	449	525
Persons in employment	897	413	485
- working part-time	61	35	27
Unemployed persons	76	36	40
%			
Activity rate [%]			
Total	59,0	52,5	65,9
15-24 years	44,5	41,8	47,1
25-49	91,6	89,6	93,5
50-64	37,1	25,9	49,0
65 years and over	9,0	7,0	12,5
Employment / population ratio			
Total	54,3	48,3	60,9
15-24 years	36,7	33,8	39,5
25-49	85,5	83,5	87,4
50-64	35,0	24,6	46,1
65 years and over	8,9	7,0	12,4
Unemployment rate			
Total	7,8	8,1	7,6
15-24 years	17,6	19,1	16,3
25-49	6,6	6,8	6,5
50-64	5,6	4,9	6,0
65 years and over	-	-	-

Today's labour market in Slovenia is the product of two strong factors resulting in present situation: centrally planed socialist economy with full employment and very high activity rate of women, typical for the period finished about 10 years ago and labour market Problemes typical for the last 10 years for transition countries caricaturised by change of economic system, privatisation of formerly state owned companies, employment decline, mass layoffs, private sector grows, sectarian shifts from manufacturing to services and of course high unemployment unevenly distributed across age groups and people with different levels of educational attainment.

Activity rate in Slovenia is 59%, for women with 53% considerably lower than for men 66%, but the difference is lower than in most countries around the world. In age group 25-49 years the difference is even smaller (90, 94).

Unemployment rates in Slovenia are rather moderate at 7,8% and being slightly higher for women than for men (8,1, 7,6). In the first years of transition rates for women were lower than for men due to problems in industry sector that employed mostly men and having big difficulties in comparison with less problematic services sector employing greater share of women. A great number of unemployed persons are less than 25 years old.

Majority of Slovenians is in paid employment (82%), slightly more women than men. There are 12% self-employed persons, majority men and 6% unpaid family workers, majority women working on farms.

There are only 11% persons employed in agriculture with no significant difference between women and men 39% in industry, predominantly men and 50% in services, predominantly women.

Persons in employment by status in employment and sex, 1998/4

	Structure %		
Persons in employment	100,0	100,0	100,0
Self-employed persons	11,9	6,8	16,2
Persons in paid employment	81,7	84,7	79,2
Unpaid family workers	6,4	8,5	4,6

Persons in employment by activity and sex, 1998/4

	Structure %		
Total	100,0	100,0	100,0
Agriculture	10,5	10,7	10,4
Industry	38,8	28,3	47,7
Services	50,2	60,7	41,3
Not classified	0,4	0,3	0,6

CHAPTER 2

SECTOR OF STATISTICAL ACTIVITY	TOTAL		
	Total	WS	MS
SECTOR 1 Production and Distribution of Statistical Information	389	310	79
SECTOR 2 University and Higher Teaching and Statistical Research	19	5	14

We are not able to provide data of sector 3 statistics consultancy. Comparing only two above mentioned sectors, 98% WS work in production and distribution of statistical information, in MS group share is a bit lower at 85%.

CHAPTER 3

NOTE: The coordination of the project didn't include this material in order to save the total lenght of the report.

CHAPTER 4

PATTERN 1:

Distribution of WS and MS in Production and Distribution of Statistical Information according to the fields of studies an

Sector of statistical activity	Holders of diplomas on fields of studies														
	Total			Natural Sciences			Engineering and Technology			Medical Sciences			Agricultural Sciences		
	T	WS	MS	T	WS	MS	T	WS	MS	T	WS	MS	T	WS	MS
SECTOR 1 Production and Distribution of Statistical Information	389	310	79	102	78	24	27	10	17	13	11	2	15	13	2
SECTOR 2 University and Higher Teaching and Statistical Research	19	5	14												

PATTERN 2:

Distribution of WS and MS in Production and Distribution of Statistical Information according to the level of responsibil

Sector of statistical activity	Level of responsibility					
	TOTAL			Management and Technical le		
	T	WS	MS	T	WS	M
SECTOR 1 Production and Distribution of Statistical Information	389	310	79	235	186	4

PATTERN 3:

Distribution of WS and MS in Production and Distribution of Statistical Information according to decil of scale of wages

Sector of statistical activity	Decils											
	TOTAL			Decil 1			Decil 2			Decil 3		
	T	WS	MS	T	WS	MS	T	WS	MS	T	WS	MS
SECTOR 1 Production and Distribution of Statistical Information	389	310	79	38	33	5	39	32	7	39	30	9

Sector of statistical activity	deciles														
	Decil 6			Decil 7			Decil 8			Decil 9			Decil 10		
	T	WS	MS	T	WS	MS	T	WS	MS	T	WS	MS	T	WS	MS
SECTOR 1 Production and Distribution of Statistical Information	39	30	9	39	30	9	39	32	7	39	29	10	39	29	10

We have no studies of statistics in Slovenia but statistics as a subject is being tought in most universities. Social sciences are predominantly producing statisticians in WS and MS groups. Natural sciences are second most important in both groups with slightly more importance in MS group. All others are of less importance.

There are no differences between WS and MS groups in proportional distribution but there is impact of methodology chosen described in introduction.

WS is dispersed all over wages distribution proportionally, which can be said for MS distribution too, but there is a weak tendency to deciles 9 and 10 and less tendency to 1 and 2. But this pattern is significant to wages divided by gender for other occupations in Slovenia, too.

Teachers of statistics in universities and secondary schools

	Total	Women	Men
Total	70	38	32
University	19	5	14
Secondary school	51	33	18

	Structure %		
Total	100,0	100,0	100,0
University	27,1	13,2	43,8
Secondary school	72,9	86,8	56,3

There are important gender differences between teachers of statistics in universities and secondary schools. In universities there are predominantly men, in secondary schools women, but less predominantly. But this pattern is not typical only for teachers of statistics.

CHAPTER 5

PATTERN 5: Indicators

INDICATOR 1	Social Sciences	61,3%
INDICATOR 2	Social Science	41,8%
INDICATOR 3	Production and Distribution of Statistical Information	98,4%
INDICATOR 4	Production and Distribution of Statistical Information	84,9%
INDICATOR 5	Management and Technical level	60,0%
INDICATOR 6	Management and Technical level	62,0%
INDICATOR 7	Decil 4	11,0%
INDICATOR 8	Decil 9 and Decil 10	12,7%
INDICATOR 9	Management and Technical level	1
INDICATOR 10	Management and Technical level	1
INDICATOR 11		73456 US$
INDICATOR 12		40521 US$
INDICATOR 13		75
INDICATOR 14		35
INDICATOR 15		7600
INDICATOR 16		4400

As there is no studies of statistics in Slovenia statisticians have different background. As indicators 1 and 2 show in both cases they are coming from social sciences but the dispersion is different between WS and MS. In the first group social sciences are of great predominance because more than half of them have this background. The picture in MS group is a different one with 40%.

We do not have reliable data sources to estimate indicators 3 and 4. With not beeing able to provide data on sector of statistical consultancy which has a minor role, 98% of WS work in production and distribution of statistical data, compared to 85% MS.

Indicators 5 and 6 show in WS and MS groups technical level is predominant with about 60% persons. But there is sure strong influence due to methodology chosen. This is described in introduction.

Indicators 7 and 8 show very different patterns in WS and MS groups. WS are mostly concentrated in decil 4, MS in decils 9 and 10. But detailed analyses shows that in both groups people are pretty evenly distributed through the whole distribution.

Indicators 9 and 10 do not play any significant role due to our methodology.

Indicators 11 and 12 are of no importance because extreme values are in databases we used resulting from unusual behaviour of the observation unit or not correct data in the database.

Indicators 13, 14 15, 16 show WS predominance over MS with no influence of responsibility level.

We also analysed average wages by level of responsibility and find out that WS on tehnical level have with 14090 US$ 2000 US$ lower yearly wages than their colleges in MS group. On operational level with 13937 US$ WS have 2000 US$ higher wages than MS group.

We also analysed group of teachers of statistics and they have with 28275 US$ much higher wages than their colleges at tehnical level, but teachers of statistics in secondary schools (14721 US$) have their wages on the level tehnical level of statisticians.

CHAPTER 6

MAIN CONCLUSIONS OF THE STUDY

Statistician is a female occupation in Slovenia. Among 389 employed persons 80% are females. The same pattern is true for teachers of statistics (in our study not regarded as statisticians but as teachers) in secondary schools, but there is male predominance as university teachers.

Background of Slovenian statisticians are most often social sciences (60% WS, 40% MS) followed by natural sciences. Other fields of studies do not have significant importance.

98% WS work in production and distribution of statistical information in comparison with 85% MS. The rest work in jobs related to teaching statistics. (We are not able to provide data on statistics consultancy). There are 75% MS at university level, but the picture is different on secondary school level where proportion of WS is much higher than of MS.

MS enjoy higher wages than WS on tehnical level where wages are of course higher than on operational level where WS earn more than MS. University teachers with 75% share of MS have nearly double wages in comparison with tehnical level statisticians.

SPAIN

CHAPTER 1

COUNTRY DATA

The coordination have decided to include this report in Spanish, because the English version wasn't available at the time to print this general report

1. Datos generales del pais

A. Superficie total

La extensión superficial total en Km² de ESPAÑA es 505.992

B. Densidad de Población

La densidad de población de ESPAÑA es de 77 habitantes por Km², con lo cual es la 4ª menos densamente poblada de toda la Unión Europea cuyas densidades oscilan entre los 15 habitantes por Km² de Finlandia y los 371 habitantes por Km² de Paises Bajos.

Fuente bibliográfica: España en cifras 1978. (INE)

C. Población de las 5 ciudades más pobladas

Madrid	3,029,734 hab.
Barcelona	1,614,571 hab.
Valencia	763,299 hab.
Sevilla	719,588 hab.
Zaragoza	607,899 hab.

Fuente: Padrón Municipal de habitantes de 1995.

D. PBI per cápita

El producto interior bruto de 1995 a precios de mercado y precios corrientes es 69.778.856 millones de pesetas.

Los PIB correspondientes a los cinco años anteriores son a precios corrientes:

1994	64,698,812 millones de pesetas
1993	60,934,281 millones de pesetas
1992	59,104,986 millones de pesetas
1991	54,927,320 millones de pesetas
1990	50,145,195 millones de pesetas

Fuente: Contabilidad Nacional de España. Base 1986.

2. Población del último censo de población (1991)

A. Población total: 38,872,268
Total mujeres: 19,835,822
Total varones: 19,036,446

Fuente: Censo de Población 1991. INE

B. Población economicamente activa (1991)

Total: 15,398,592
Total mujeres: 5,266,737
Total varones: 10,131,855

Fuente: Censo de Población 1991. INE

6. Estructura de la población economicamente activa del país

Población total clasificada por sexo y condición de actividad, según el nivel de educación

Condición de Actividad		Nivel de Educación				
		TOTAL	Primario	Secund.	Superior y Universitario	Sin Instrucción
MUJERES	ACTIVAS	6,325.0	1,336.8	3,290.6	1,336.0	361.6
	Ocupadas	4,618.2	1,005.7	2,277.8	1,070.3	264.3
	Desocupadas	1,706.8	331.0	1,012.7	265.7	97.3
	INACTIVAS	10,513.9	3,933.7	3,222.3	429.8	2,928.1
VARONES	ACTIVOS	9,839.1	2,861.7	5,081.5	1,302.8	593.1
	Ocupados	8,373.4	2,463.3	4,270.9	1,164.2	474.9
	Desocupados	1,465.7	398.4	810.6	138.6	118.2
	INACTIVOS	5,658.7	1,960.9	1,866.3	327.0	1,504.5

Fuente: Encuesta de Población Activa. Primer Trimestre 1998.INE

Area de conocimiento según sexo			
Especialidad	Total de ID	Mujer	Varón
CC.SS	290	116	174
Estadística	297	86	211
Ingeniería	172	56	116
Médicas	13	8	5
Naturales	56	17	39

Categoría según sexo			
Categoría	Total de Id	Mujer	Varón
Asociado	301	93	208
Ayudante	141	69	72
C.Bachillerato	1		1
C.E.U.	10	6	4
C.U.	62	7	55
E.S.O.	2		2
T.E.U.	77	32	45
T.U.	221	74	147
Visitante	13	2	11

Sector deActividad Estadística	Areas de Conocimiento de su formación Universitaria											
	Total		Estadística		Cs. Naturales		Ingeniería y Técnica		Cs. Médicas		Cs. Sociales	
	WS	MS	WS	MS	WS	MS	WS	MS	WS	MS	WS	MS
Docencia	283	545	86	211	17	39	56	116	8	5	116	174
Universitaria e	34,20%	65,80%	29%	71%	30,35%	69,65%	32,55%	67,45%	32,60%	38,40%	40%	60%
Investigación	828		297		56		172		13		290	

Sector de Actividad Estadística	Nivel de Responsabilidad Total Gerencial y Técnico Operativo (Asociados, Catedráticos yTitulares, Ayudantes y Becarios)					
	WS	MS	WS	MS	WS	MS
Docencia Universitaria	283	545	121	265	162	280
e Investigación	34,20%	65,80%	31%	69%	36,60%	63,40%
	828		386		442	

El sistema estadístico

El sistema estadístico español, es un sistema relativamente descentralizado, regulado por la Ley de la Función Estadística Pública de 1989, que encomienda la coordinación de ese complejo sistema al Instituto Nacional de Estadística (INE).

El INE es un organismo autónomo. Es el principal responsable de la formulación del Plan Estadístico Nacional que establece la Ley como instrumento coordinador de la actividad estadística. Entre sus funciones también se halla la armonización de la producción estadística, la propuesta de clasificaciones, normas y definiciones, el desarrollode la investigación y la metodología estadística así como la aplicación y vigilancia del cumplimiento de las normas del secreto estadístico. Pero además es el responsable de la ejecución de los grandes censos y encuestas del país, tanto de carácter demográficos como económicos.

Los servicios estadísticos de los Departamentos Ministeriales elaboran estadísticas sectoriales derivadas, generalmente, de su propia actividad.

La coordinación horizontal de las actividades estadísticas del INE y de los otros servicios estdísticos de la Administración del Estado se posibilita a través de la Comisión Interministerial de Estadística. Está integrada por el Presidente, los Vocales y el Secretario. La presidencia está a cargo del Presidente del INE y cada Departamento ministerial está representado por un vocal.

El órgano donde convergen productores, informantes y usuarios de las estadísticas es el Consejo Superior de Estadística. Es un órgano consultivo de los servicios estadísticos y de participación de los agentes sociales. Está integrado por el Presidente, el Vicepresidente y los Consejeros. El Presidente es el Ministro de Economía y Hacienda y el Vicepresidente es el Presidente del INE. Cada Departamento ministerial está representado por un Consejero y el resto de los Consejeros, en igual número, debe pertenecer a organizaciones sindicales y empresariales y demás grupos e instituciones sociales, económicas y académicas suficientemente representativas.

Después de una reorganización política de España en 17 Comunidades Autónomas, cada una de éstas comunidades han ido desarrollando un sistema propio para la elaboración de las estadísticas de interés particular para su territorio. Los servicios estadísticos de la Administración del Estado y los de las Comunidades Autónomas se reúnen en el Comité Interterritorial, que preside el Presidente del INE para potenciar la cooperación y coordinación entre los servicios estadísticos estatales y autonómicos.

OCEANIA

- **NEW ZEALAND**

NEW ZEALAND

CHAPTER 1

PROFILE OF NEW ZEALAND WOMEN

Background

New Zealand has a small, quite widely dispersed population of 3.6 million. The indigenous Maori population was colonized by Great Britain in 1841, and this colonial legacy has left its imprint in our society, including our education ystem. New Zealand's history has also been characterised by large scale migration from Europe and in the 1970s, large scale immigration from the Pacific Islands, and more recently an increase in Asian immigration. These changes have resulted in a society which is increasingly diverse.

At the 1996 Population Census there were 1,840,800 females resident in New Zealand and they made up 51 percent of the total population. Females have outnumbered men in New Zealand since 1971. The excess of females over males is most marked at the older ages, reflecting the longer life expectancy of females. In 1995/97 females could expect to live to 79.6 years, about five years longer than their male counterparts.

At the 1996 Census, 83 percent of New Zealand women were of European ethnicity. The indigenous Maori population made up the next largest ethnic group at 15 percent, followed by Pacific Islands (6 percent) and Asian (5 percent). More than 80 percent of all females were New Zealand born.

New Zealand has an ageing population. Despite this, the proportion of older women in the population is relatively small compared with other developed nations. In 1996 the median age of females was 34 years compared with 32 for males. The Maori and Pacific Island female populations have a more youthful profile, with median ages of 22 years and 21 years respectively.

Family Structure

New Zealand women are less likely to marry than in the past and are delaying both marriage and childbearing. The average age of women entering their first marriage rose from 21.7 years in 1971 to 27.1 years in 1996, although women still tend to marry at a younger age than men.

This deferral of formal marriage has been accompanied by a rise in the proportion of women living in de facto relationships. Between 1986 and 1996 the proportion of women living with a de facto partner increased from 4.6 percent to 9.1 percent. Women in their twenties are the most likely to live in de facto relationships.

Trends in childbearing are closely related to trends in marriage. Women are having fewer children and are delaying their childbearing until later ages. Between 1966 and 1996 the fertility rate among 20 to 24-year-olds fell from 220 births per 1,000 women to 81 births per 1,000 women, and this group has now been replaced by 25 to 29-year-olds as the peak childbearing age group.

The most common family situation of women in 1996 was as parents in a two-parent family, with 39.7 percent in this situation. However, this figure fell between 1986 and 1996 and there was an increase in the proportions in living in one-parent families and couple-only families. The proportion of women who were sole parents with dependent children increased from 5.8 percent to 7.8 percent over this period. In 1996 women made up 85 percent of all sole parents with dependent children.

Education[1]

New Zealand females are staying at school longer and leaving school more qualified than 10 years ago, and more qualified than their male peers. In 1996, 83.4 percent of women school leavers had a formal qualification compared with 75.3 percent in 1986. The 1996 figure for men was 78.4 percent.

Women now outnumber men in tertiary education, making up 55 percent of all enrolments in 1997. Although women make up a higher proportion of tertiary graduates, men are more likely to graduate with a higher qualification: 17.4 percent of men graduated with a post-graduate award in 1996 compared with 12.6 percent of women.

Despite the gains that women have made in educational participation and attainment, traditional expectations continue to play a large role in subject selection. In 1997, the three most popular subjects taken by female students (for School Certificate – the first national examination at secondary school (apart from the core subjects English, mathematics and science); were geography, typing and art. For males the most popular subjects were geography, technology and graphics.

Work

A changed economic and social environment has increased the labour force participation of New Zealand women over the past four decades. However, women's participation remains lower than men's, at 57.9 percent in 1996 compared with 73.5 percent for men. The gender gap has narrowed has narrowed since 1986, when 53.3 percent of women and 77.5 percent of men were in the labour force.

Family circumstances can have a considerable impact on whether or not women are participants in the labour force. The age of the youngest child is a critical factor, with women's participation in the labour market becoming increasingly likely as their children get older. In 1996 women whose youngest child was less than one year had a participation rate of 36.5 percent. When the youngest dependent child in the family was aged between 13 and 17 years, women's labour force participation rate more than doubled to 78.1 percent. Sole mothers with dependent children are less likely than partnered mothers to be employed; 36 percent compared with 65 percent.

Women are more likely than men to work part-time, accounting for 70.5 percent of all part-time employees in 1996. They are also more likely concentrated in areas which reflect traditional ideas of women's work, with four out of every five women working in the service sector.

In 1996 the unemployment rate was higher for women than men (8.3 percent compared to 7.2 percent). However, since 1986 men's unemployment rate has increased more quickly than women's.

Income

In 1996 women in New Zealand received a median income of $12,600, significantly lower than that received by their male counterparts ($22,100). Women's income is closely related to age, with those aged between 25 and 29 years receiving the highest median income of $17,300. Beyond this age group the income levels of women begin to drop as they enter the key childbearing and childrearing years, and it is not until the ages of 45-49 that the lost ground is regained.

The income distribution of women is uneven. Women are over-represented in the lower three income quintiles and under-represented in the top two. In 1996, only 10.1 percent of women in full-time employment (30 or more hours per week) received incomes in the top 20 percent of incomes received by all people in full-time employment.

Women in full-time employment received the highest median income of all women in 1996, at $24,800. However, their average weekly earnings from wages and salaries remained lower than men's. This 'earnings gap' can be partially attributed to differences in the number of hours worked

[1] Participation in Education is discussed more fully in Chapter 2.

as well as different age and ethnic structures for women and men. But even after standardising for these factors, women in full-time employment still only receive around 85 percent of that received by full-time employed men.

CHAPTER 2

WOMEN'S PARTICIPATION IN MATHEMATICAL AND STATISTICAL EDUCATION

Background

Education is compulsory from the ages of 6 to 16 (15, prior to 1993) but most children start school on their fifth birthday. Students move through the primary/intermediate system (up to Year 8) before commencing secondary school in Form 3 (Year 9). After secondary school, about 45% of school leavers continue with formal tertiary education, which may be at a polytechnic (about 20%), a college of education (2%), or university (23%).

Not all students choose to sit national examinations, but the majority do so. There are three national awards administered by the New Zealand Qualifications Authority (NZQA), which may be studied for at secondary school: School Certificate, Sixth Form Certificate and University Bursary (Ministry of Education, 1992). School Certificate is the national award undertaken at Form 5 (Year 11). A candidate may enter up to six subjects in one year. A student's performance in School Certificate mathematics often determines his/her participation in mathematics courses at Form 6 (Year 12).

Most students are in their fourth year of secondary schooling when they undertake Sixth Form Certificate (Form 6, year 12). Again, each candidate may enter up to six subjects in one year. Grades of achievement range from '1' (highest) to '9' (lowest) for each subject. All of the grades are assessed internally within each school. To ensure national comparability each school is allocated a distribution of grades, which is moderated on the grades received in that school for School Certificate in the preceding year.

The University Bursaries/Entrance Scholarship Examination is a national examination in which students may elect to sit up to five subjects. This award is undertaken in the final year of secondary schooling – Form 7 (Year 13).

Statistics is part of the mathematics curriculum from Year 1, with students able to concentrate more on Statistics in Form 7 (Year 13).

Participation

Although the actual numbers fluctuate by several thousand there were approximately 50,000 students beginning secondary schooling (Form 3, Year 9) in New Zealand in each of the six years from 1989 to 1994. In each of these years, males out-numbered females (by 500 – 1500). The retention of students to the end of secondary schooling (Form 7, Year 13) has been steadily increasing but is still only about half of the Form 3 cohort. Since the late 1980s the retention rate of females has been higher than that of males and consequently, female students now outnumber male students in this final year of schooling (by between 300 – 1,200). *A similar gender difference is apparent for Maori students but their retention rate is markedly less (about half) than that of non-Maori students.*

Although mathematics is technically an optional subject at Year 11 (Form 5) most schools regard it as compulsory, and this is reflected in the 'full' participation of both male and female students. However, the mathematics participation rate of male students has risen from 79% in 1970, whilst that of females has risen from just 43% in 1970. The percentage of Year 12 (Form 6) males

studying mathematics has hovered between 80 and 90% but appears to be declining slightly since the mid-eighties. The participation of female students rose steadily from 43% in 1970 to 72% in 1985, and appears to have plateaued since (74% in 1994).

Numbers in Year 13 are relatively stable. Between 1970 and 1985 there were two mathematics subjects available for the national Year 13 qualification, *Pure Mathematics* and *Additional Mathematics*. Over this period between 70 and 80% of male students and 50 and 60% of female students took *Pure Mathematics*. Participation in *Additional Mathematics* rose steadily from 36% in 1970 to 62% in 1985 for males, and from 8% in 1970 to 38% in 1985 for females. In 1986, these papers were replaced by two others, *Mathematics with Calculus* (primarily designed for students intending to do tertiary mathematics) *and Mathematics with Statistics* (designed for students needing mathematics in other disciplines, or as a terminating course).

In 1986, 60% of males in Form 7 took *Mathematics with Statistics* compared to 40% of females. *Mathematics with Statistics* attracted about 12,000 students in each year (1992-1995); 3,000 more students than the *Mathematics with Calculus* course. Female participation in this course increased from 45% in 1992 to 47% in 1995. Participation for both males and females peaked in 1987-1988 at 70% for males and 54% for females. Although the difference in participation rates between the genders has lessened, the rates have declined for both groups (54% for males and 42% for females in 1998).

Attainment

In the past there have been small consistent gender difference (in favour of boys) in mathematics performance in School Certificate. During the period 1992 to 1995, female candidates, on average, achieved scores of about 53 percent compared with 54 percent for male candidates.

Maori females had the least success until 1995, when Maori boys had the lowest mean score.

Sixth Form Certificate

At this point of schooling, the students taking mathematics are a more select group, particularly the females, as many more mathematically able girls than boys 'drop' mathematics from their course of study after Form 5. In the late eighties there was an almost constant gender difference with more boys awarded the very high and very low grades and girls dominating the middle grades. In general it has only been at the very highest grade in Sixth Form Certificate that boys out-perform girls.

Recently however, females seem to be making some inroads into these high grades. Over the whole period 1992 to 1995 a higher percentage of female than male students were awarded a 2 or a 3. *As with School Certificate, the apparent differences between non-Maori and Maori are the most striking feature.*

Approximately 30% of non-Maori females were awarded the top three grades in each year over the period 1992 to 1995. This compared with about 25% of their male counterparts.

The University Bursaries Examinations (Year 13)

Up to 1989 apparent gender differences (in favour of boys) in these two examinations largely disappeared if the *amount* of mathematics studied (one paper or both) is taken into account. A much larger percentage of males took both papers.

Mathematics with Statistics

Over the 1992 to 1995 period the overall mean achievement for females was about 53% in each year, while for males the mean score was about 55%.

However, in contrast to non-Maori females, Maori females, on average, achieved higher grades than their male counterparts in 1993 and in 1995 although these differences were relatively

small (0.2%) and not statistically significant. As with School Certificate and Sixth Form Certificate, on average, Maori females and males achieved at a significantly lower level than their non-Maori counterparts.

Despite greatly increased retention percentages taking Mathematics and science combinations, these still remain by far the most popular combinations and apart from English they remain the most popular subjects with Mathematics with Statistics being always the most popular subject with male students and the second to highest in popularity with female students consistently from 1990 to 1998.

There have been slight rises in the numbers and proportions of females taking the combinations Biology, Chemistry, Statistics and Biology, Geography, Statistics.to Form 7 (from 17 to 40% from 1985 to 1993; Pole, 1993), the consequent increasing diversity of subjects available, and the inevitable dropping of the

University

Data has been obtained from five of New Zealand's seven universities.

This shows that at first year (100 level) in the five universities during the period 1991 – 1995, the percentage of women in Mathematics courses has been static, and is less than the increasing percentage of women in Statistics courses.

The percentages in Mathematics and Statistics at university appear to be largely determined by what happens in year 13 at school.

In first year statistics courses at one (fairly typical) university women predominate in the service (required course for non-majors) statistics course (approx 60%) but in the course leading to a career as a statistician they usually form only 35% of the class. In general, only in Applied Statistics courses (at all levels) does the proportion of women approach that of men. Only in service courses does it exceed that of men.

The following table shows the percentages of females in Mathematics and Statistics courses at each level of the Bachelor's (first) degree. Statistics retains a higher percentage of females than Mathematics at each level. Both subjects have an increasing percentage of females at 200 (second year) level, and, in general, at 300 (third year) level. If each cohort of students is followed across the years, it can be seen that in general there is a small decrease in the percentage of females from 100 to 200 level, and again to 300 level, in both Mathematics and Statistics courses. The total number studying Statistics has increased sharply at all levels.

Female First, Second and Third Year Students at five New Zealand Universities.

Year	First Year				Second Year				Third Year			
	Maths		Stats		Maths		Stats		Maths		Stats	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1991	7508	34	4674	40	2159	28	1098	39	952	28	493	37
1992	7586	35	5442	42	2367	30	1262	40	955	26	473	36
1993	7679	35	5468	42	2552	31	1209	42	1135	33	566	41
1994	7185	34	6118	46	2787	32	1778	45	1336	34	583	43
1995	8586	35	6117	47	3039	32	1824	45	1137	32	722	41

Graduate Students and University Staff

The next table gives a picture of the growth in numbers of advanced students over the last two decades.

The overall growth in numbers that has taken place in the quantitative sciences (and it is substantial if computer science and econometrics are included), has taken place outside the Mathematics and Statistics majors.

Most recent growth, where it has occurred at all, has been in applied areas such as applied statistics, deterministic and stochastic modelling, operations research and financial mathematics

The rapid expansion of the mathematics departments during the 1960's and 1970's brought with it a problem of age distribution. Of the continuing academic staff in new Zealand university mathematics departments, over half are aged over 45, and nearly a quarter are aged over 55. Less than 13% overall are women; in the 46 or older bracket, only 8 out of over 102 are women and in the associate-professor/ professor bracket, only 1 out of 43 are women.

Within statistics, approximately 15% of all academic staff are female of which only 1 has reached the status of associate professor. The bulk of female staff are in the lecturer grade – lowest rank of permanent staff.

Table 2: Number of Graduates in Mathematics, Statistics and Operations Research

Year	Doctoral		Masters		Bachelors(Hons)		Total Post Grad.		Bachelor (1st degree)	
awarded	Total	% Fem.	Total	% Fem.	Total	% Fem.	Total	% Fem.	Total	% Fem.
1974	2	0	22	4	39	36	63	24	258	24
1975	3	33	22	0	30	20	55	13	255	28
1976	2	0	31	26	36	19	69	22	182	28
1977	5	0	20	15	30	17	55	14	180	27
1978	6	17	21	9	39	28	66	21	250	30
1979	5	0	23	9	47	28	75	20	206	29
1980	9	11	23	17	31	16	63	16	233	26
1981	1	0	12	33	34	15	47	19	223	29
1982	2	0	24	21	35	34	61	28	233	30
1983	5	20	34	6	36	30	75	19	214	26
1984	-	0	13	23	45	16	58	17	173	28
1985	4	25	21	10	36	28	61	21	229	34
1986	7	0	13	39	32	9	52	15	238	30
1987	3	0	11	18	32	22	46	19	203	33
1988	1	100	26	19	16	37	43	28	197	40
1989	3	33	23	26	29	31	55	29	296	31
1990	3	33	18	22	52	31	73	29	222	38
1991 1992 1993			3			Mathematics and Computer Science Combined (separate figures not available)				
1994	7	28	25	24	44	16	76	20	175	43
1995	5	20	22	23	17	18	44	20	117	49

CHAPTER 3

STATISTICS NEW ZEALAND WOMEN - A SUBSET OF STATISTICIANS IN NEW ZEALAND

Introduction

This chapter is a short profile of the statisticians working in New Zealand's central statistical agency - Statistics New Zealand (SNZ). At 30 June 1998, a total of 486 women were working at Statistics New Zealand, approximately 55 percent of the total staff. This group of women included statisticians at a variety of levels in the organisation, ranging from interviewers to one of the deputy Government Statisticians.

Age and Ethnicity Profile

While there are some signs that the proportion of women vs men is declining in recent years; women have out numbered men in SNZ since 1971. Over this time SNZ has grown significantly with expansions in the range and extent of official statistics. In recent years, with the implementation of extensive computerisation of previously clerical tasks, there has been a decline in the number of clerical staff, who have traditionally been women. This in part explains the decline of women as a proportion of the SNZ workforce from 61 percent in 1996. Interestingly enough if interviewers are removed from the staff count there are equal numbers of men and women statisticians.

However, over this time there has been a dramatic increase of women at more senior levels in the organisation. In 1985, there were no women in the senior management team, by 1998, 30.3 percent of the senior management team were women. This expansion has seen a greater emphasis on non-sampling versus sampling error, while also seeing an expansion of official statistics into new areas - eg measurement of unpaid work, measurement of impact of childcare availability on labour market participation. The comparatively high proportion of women in the senior management group has meant that the organisation has been encouraged to consider putting into place more family friendly policies, which in turn have encouraged more younger women to return from parental leave. This ensures that women's experience is more widely recognised and enhances their opportunities for corporate advancement.

In general women statisticians are predominantly of European ethnic origin, with approximately 89 percent of women at SNZ of European/New Zealand origin, compared with 85 percent of all women in New Zealand. Maori women (the indigenous population) are under-represented at SNZ. While Maori women made up 15 percent of New Zealand women, among women in SNZ, only 5 percent were of Maori ethnic origin.

Labour Market Characteristics

Women statisticians are more likely than their male counterparts to work part-time. Approximately 34 percent of women statisticians were working part time at June 1998, compared with 15 percent of their male colleagues. While a large proportion of these staff are part-time interviewers; even among office based staff; women are still more likely to work part-time than men.

In spite of equal pay legislation and appointment policies based on merit, women statisticians have a lower base salary than their male colleagues. Average salaries for women at 30 June 1998 were $NZ33,202, compared with $NZ40,019 for men. In part this reflects the impact of the low salary rates for interviewers. It is interesting to note that the salary differential between men and women statisticians is similar to the salary differentials for the New Zealand full-time work force; where even after standardising for hours worked, age and ethnicity, women in full-time employment still only receive 85 percent of that received by full-time employed men.

Women and men follow the same pattern of tenure at SNZ, although men staff have a slightly longer length of service than women. Women average 7.17 years at SNZ and men average 8.68 years.