



# Seminar 參席 結果報告

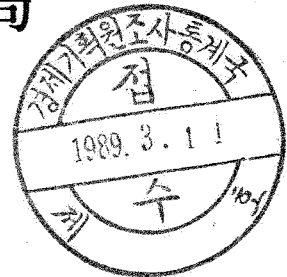
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National Bureau of Statistics  
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# I. 고용통계 세미나참석 결과보고



## 고용통계 세미나 참석 결과보고

### 1. 보고서 작성자

행정사무관 김 상 식 (金 相 植)

### 2. 세미나 개요

#### 가. 기 간

1989.1.16 ~ 1.20 ( 5 일간 )

#### 나. 회의장소

ESCAP ( 방콕, 태국 )빌딩 3층 회의실

#### 다. 성 격

- ESCAP 지역국가의 고용통계 담당자 회의 및 토론
- ESCAP 지역국가의 실정에 맞는 고용통계개념 검토
- 고용통계의 국제기준—비공식부문 ( informal sector )— 설정에 관한 개념토의

#### 라. 참가국 및 기관

- 참가국 : 26 개국

한국, 호주, 방글라데쉬, 부탄, 브루나이, 버마, 중국, 피지, 프랑스, 홍콩, 인도, 인도네시아, 이란, 일본, 말레이시아, 네덜란드, 네팔, 파키스탄, 파푸아뉴기니아, 필리핀, 사모아, 싱가포르, 스리랑카, 태국, 통가, 베트남

- 기 관

UNSO

ILO

ARTEP/ILO

ARPLA/ILO

마. 진행순서

- 1) 개회식
- 2) 임원선출
- 3) 의제채택
- 4) 노동력인구, 취업자, 불안전취업자 및 실업 통계에 관한 검토
- 5) 아시아 지역국가의 실업자, 불안전취업자의 개념 및 조사방법에 관한 비교 검토
- 6) 경제활동인구, 취업자, 실업자 등의 개념에 관한 국제권고안의 내용 및 이의 도입, 적용에 따른 문제점 토의
- 7) 「비공식부문」의 취업자에 관한 토의
- 8) 노동시장정보 분석 체제에 관한 토의
- 9) 센서스, 일반조사 등을 통한 제고용 통계 자료의 종합적인 활용방안 검토
- 10) 세미나 결과보고서 채택

3. 우리나라 대표의 주요 활동사항

가. 우리나라 고용통계작성 현황발표(원문 별첨)

1) 조사연혁

- 1963년부터 분기별로 「경제활동인구조사」 실시
- 경제기획원 조사통계국에서 자료집계 및 분석결과 공표

2) 조사범위

- 대한민국 행정권이 미치는 전지역

3) 조사대상

- 전국 32,000 표본가구내에 상주하고 있는 15세 이상 가구원, 단 군인, 전투경찰, 교도소 수감자, 방위병 등은 제외

4) 조사자료의 수집

- 15일이 속한 1주일의 활동상태를 대상으로 그 다음 주간에 전국 14개 지방사무소에 상주하고 있는 500여 조사원이 표본가구를 방문조사하는 면접 타계식 조사

5) 주요개념 및 정의

- 경제 활동인구
- 경제활동참가율
- 취업자
- 실업자
- 실업율

6) 조사항목

- 공통사항  
이름, 가구주와의 관계, 성별, 연령, 교육정도, 혼인상태, 경제활동상태, 취업여부, 일시휴직여부, 구직활동여부, 취업가능성여부, 취업의사여부
- 취업자 사항  
취업시간, 평소취업시간, 추가 및 전직희망 여부

- 실업자 사항  
구직방법, 구직활동기간, 신규 및 전직실업 여부
- 실망실업자 사항  
희망취업형태, 비구직사유, 지난 6개월 이내 구직여부
- 취업자 및 전직실업자 공통사항  
산업, 직업, 종사상지위, 사업체 종업원 규모, 소득

7) 표본규모 및 설계

- 전국을 시부와 군부로 층화하여 1985년 인구센서스 조사구를 대상으로 시부는 1개 조사구당 30 가구, 군부는 1개 조사구당 40 가구가 되도록 하여 전국 961개 조사구, 31,140 가구를 추출하였음. (1988. 7월 이후 시행)
- 표본설계는 인구센서스 실시 이후 매 5년마다 교체함.

8) 조사결과치 추정 공식

별첨 원문 참조

9) 자료분석 및 활용방법

- 개인별 경제활동상태를 연령, 성별, 교육정도, 혼인상태 및 가구주와의 관계 등에 따라 분류하여 집계함.
- 매월 「경제활동인구총괄」 「산업 및 직업별 취업자」 「종사자 지위별 취업자」 「원계열 및 계절조정실업율」 등에 관해서 공표하고 있음.
- 매년 「경제활동인구연보」를 발간하여 자료 이용자들에게 제공함.
- 동연보는 「경제활동인구총괄표」 등 29개 표를 제표하여 수록하고 있음.

10) 고용구조 특별조사

- 고용구조에 관한 특별조사로서 1983년 부터 3년주기로 실시하고 있음.
- 전국 150,000가구를 대상으로 취업 및 실업에 관한 심층조사를 하는데 목적이 있음.

11) ILO접근방법의 한계

- ILO접근방법은 선진공업국에 적합한 조사방법으로서 전체취업자중 자영업자 및 무급가족 종사자가 높은 비중을 차지하고 있는 개발도상국가에는 적용상의 문제가 있음.
- 한국도 마찬가지로 ILO 권고안을 채택하여 활용하고 있는바 취업구조적 측면에서 적용상의 한계가 있는데 그 내용을 보면  
첫째, 전체취업자중 22% 정도가 농림어업에 종사한다는 점  
둘째, 임금근로자가 전체에서 55%를 차지한다는 점  
셋째, 노동시장에 관한 정보획득이 용이하지 않아 구직단념자가 다수발생한다는 점  
이와같은 요인으로 경기변화에 따른 실업율의 변동이 둔감하게 나타난다는 문제가 있음.

12) 한국고용통계의 향후 개선방향

- 앞에서 언급한 바와 같이 우리나라의 실업율 변화가 경기변동에 둔감하다는 점에서 다음과 같은 여섯종류의 실업율을 작성 제공하여 이용자의 편의에 맞도록 활용케 함이 바람직할 것임.

$U_1$  : 노동력 전체에 대한 실업율

$U_2$  : 농가부문의 실업율

U<sub>3</sub> : 비농가의 실업률

U<sub>4</sub> : 18시간 미만 취업자를 실업자로 간주하여 산출한 전체 실업률

U<sub>5</sub> : 구직단념자를 실업자로 간주하여 산출한 전체실업률

U<sub>6</sub> : 18시간 미만 취업자, 구직단념자 모두를 실업자로 간주하여 산출한 전체 실업률

- 불완전 취업자 및 구직단념자에 관한 개념을 발전시키고 이들의 보다 정확한 계측방법을 개발하여야 할 것임.
- 기존의 노동력 접근방법의 문제점을 보완하고 보다 정확한 노동력 상태를 파악하기 위해 현재 미국에서 하고 있는 “Longitude Survey”의 도입여부를 적극 검토해 나아가야 할 것임.

#### 나. 국제기준작성에 따른 문제점 제시

- 1) 현재 아시아 국가에서 채택, 활용하고 있는 ILO 권고안의 주요 고용통계 개념은 노동력 접근방법에 기초하고 있음.
- 2) 노동력 접근방법은 지난 1940년부터 미국에서 개발하여 적용하고 있는 조사방법임.
- 3) 동 조사방법은 1957년에 ILO/UN에 의해 국제권고안의 기준으로 정식 채택된 것임.
- 4) 따라서 동 조사방법은 개발도상국 보다는 선진공업국에 적합한 노동력 조사방법으로서 동 조사방법을 개발도상국가에 적용하는데에는 한계가 있음.
- 5) 이러한 한계점을 극복하여 보완할 수 있는 방법들을 모색하고자 함이 이번 Seminar의 목적이 있다할 것임.
- 6) 향후 ILO/UN에서 국제기준안을 작성하고자 할 때에는 이러한 근본적

인 문제점을 직시하여 선진공업국가와 개발도상국가의 각 집단에 적합한 기준을 별도로 작성하여야 할 것임.

요컨대 선진공업국가에서 개발된 조사체계 및 제개념 등은 기본적으로 그들 국가에 적합한 것으로서 개발도상국가에 이러한 기준의 적용을 권고한다는 것은 근본적으로 문제점을 안고 시작한다는 점에서 이러한 제의를 하는 것임.

#### 4. 의제별 주의토의 내용

##### 가. 개회사

1) Mr.Koji Nakagawa ESCAP 부총재의 발표

2) 임원선출

의장: Ms.Sonia Castro

Director, Bureau of Labor and Employment Statistics, Manila, Philippines

부의장: Mr.Tate Simi

Commissioner of Labor, Apia, Samoa

부의장: Hogatol-Eslam Seyed Fakhrudeen Hashemi

Member of Parliament of the Islamic Republic of Iran and Member of the Labor and Social Affairs Commission, Tehran

서기: Mr.Paul Jacob

Joint Director, National Sample Survey Organization, New Delhi

나. 노동력인구, 취업자, 불완전취업자 및 실업통계에 관한 검토

1) 각국대표의 자국 고용통계에 관한 작성현황 발표

2) 각국의 고용통계현황에 대한 질의 및 응답

다. 아시아 지역국가의 실업자, 불완전 취업자의 개념 및 조사방법에 관한 비교 검토

1) Mr.Pravin Visaria, Consultant, ARTEP/ILO의 주제 발표

- 아시아 지역국가에서 작성되고 있는 고용통계 작성방법에 관한 비교 검토
- 취업자중 노동력이 불완전하게 활용되고 있는 부분에 관한 계측방법
- 실업자의 해당기준이 자영업준비자에게 까지도 해당되는지의 여부
- 비노동력 인구중에서 구직단념자(실망실업자)를 분류해 낼 수 있는 방안에 관한 검토
- 정책입안자의 노동력통계 활용방안에 관한 검토

2) 한국대표의 토의내용

- 한국의 조사대상 하한연령이 1987.1 부터 14 세에서 15 세로 상향조정 되었음을 주지시키고 동 주제발표 내용 수정
- 불완전 취업자에 관한 한국의 접근방법의 내용을 소개하여 주제발표내용을 보완

라. 경제활동인구, 취업자, 실업자 등의 개념에 관한 국제권고안의 내용 및 이의 도입, 적용에 따른 문제점 토의

1) Mr.Ralf Hussmanns, Statistician, ILO의 주제발표

- 국제권고안의 주요고용통계 개념분류 체계 검토
- 재화 및 용역생산에 기여하는지의 여부 — 경제활동여부 즉 국민계정



### 체계 ( SNA ) 에 따른 개념 분류

- 경제활동상태와 비경제활동 상태의 분류
- 취업자
- 실업자
- 평소상태 접근방법의 제개념체계 검토
  - 평소취업자 및 평소실업자

### 2) 한국대표의 토의내용

- 평소상태 접근방법에서 「실업자」 개념을 사용한 현상태 접근방법 하의 「실업자」 개념과 혼동을 가져와 자료이용자의 혼란을 가져올 우려 있음.
- 따라서 평소상태 접근방법에서는 「실업자」라는 용어보다 「구직경험자」라는 용어사용이 보다 합리적일 것임.
- 국제기준작성에 따른 문제점 제의  
구체적인 내용은 앞에서 기술하였음.

### 다. 비공식부문의 취업자에 관한 토의

#### 1) Mr. Farhad Mehran, Chief, ILO의 주제발표

- 70년대초에 「비공식부문」의 개념이 도입된 후 오늘날 세계전문가 및 각국 정책당국에 의해 주요 관심의 대상이 되고 있음.
- 「비공식부문」의 개념에 대해서는 수많은 접근방법이 있을 수 있기 때문에 국내적으로 뿐만 아니라 국제적으로도 통일된 기준개념이 아직 확립되지 않은 상태임.
- 「비공식부문」은 「위법한 부문 ( illegal )」과는 구분됨.

- 비공식부문은 소규모, 자급을 위한 자영활동형태가 특징적임.
- 「비공식부문」의 개념정립을 위해 1992년 제 15차 국제노동통계 관회의 ( ICLS )시 주요 정식의제의 하나로서 포함될 것임.

2) 한국대표의 토의내용

- 한국에서도 아직 「비공식부문」의 개념에 관한 객관적 분류기준이 확립되어 있지는 않으나 학자에 따라서는 종업원 규모 10인 이하의 영세사업체를 대상으로 비공식부문으로 보는 경우가 있음.

바. 노동시장정보 분석체제에 관한 토의

1) Mr. A.M.A.H. Siddiqui, Director, ARPLA/ILO의 주제발표

- 고용통계생산자료 ( source )의 다양화에 따른 자료 활용방안검토
- 각 고용통계 작성방법의 특성에 따른 자료이용이 되도록 하여야 할 것임.
- 통계자료의 특징, 내용 등이 상호 보완되어 활용됨으로써 정책당국자의 분석목적에 부합될 수 있음.

( 예 : 싱가포르, 프랑스, 인도 등 )

2) 한국대표의 토의내용

- 특기사항 없음.

사. 센서스, 일반조사 등을 통한 제고용 통계 자료의 종합적인 활용방안 검토

1) Mr. M.V.S. Rao, Technical Adviser, NHSCP/UN의 주제발표

- 고용에 관련된 자료생산의 출처는 인구센서스, 가구 표본조사, 사업체 조사 등의 세가지가 있음.
- 고용에 관련된 주요개념—경제활동인구, 취업자, 실업자—은 1982년의 제 13차 국제노동통계 관회의 ( ICLS )에서 채택한 권고안에 그 기초를 두고 있음.

- 이들의 주요개념들은 특히 개발도상국가에서는 적용상의 한계가 있는 것임.
- 현상태 접근방법의 한계를 보완하기 위해 국가실정에 따라 평소상태 접근방법을 채택하여 일정기간동안(1년)의 개인별 경제활동상태를 파악하여 현상태 접근자료를 보완하고, 개인의 복지정도를 측정할 수 있는 자료로 활용될 수 있음.
- 사업체 조사에 의한 고용자료 —임금, 근로자수, 근로시간 등—는 가구 조사자료와 함께 상호 보완적으로 활용될 수 있음.

## 2) 한국대표의 토의내용

- 한국의 경제활동인구조사 —가구 표본조사—는 1983.7월부터 분기별에서 월별조사로 전환되었음. —동주제 발표내용을 수정
- 한국에서는 1986년에 최초로 비농림업 부문의 사업체에 대한 전수조사—총사업체조사—를 실시하였음. —동주제 발표 내용을 보완

아. 세미나결과 보고서 채택

## Ⅱ. 회 의 자 료 (원 문)

ECONOMIC AND SOCIAL COMMISSION  
FOR ASIA AND THE PACIFIC

Seminar on  
Employment and Unemployment Statistics  
January 16 ~ 20, 1989  
Bangkok, Thailand

COUNTRY REPORT

ON

EMPLOYMENT AND UNEMPLOYMENT STATISTICS

IN THE REPUBLIC OF KOREA

Prepared by

SANG SIK KIM

National Bureau of Statistics  
Economic Planning Board  
Republic of Korea

## CONTENTS

1. Introduction
2. Organization responsible for the survey data
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9. Ways in which the data are used and analyzed
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11. Limitations in applying the ILO approach
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13. Table 1. Summary Table of Economically Active Population
14. Table 2. Employed by Sex, Industry, Occupation and Status of Workers

## 1. Introduction

Statistical information on employment and unemployment in Korea is principally derived from the Economically Active Population Survey, conducted by the National Bureau of Statistics (NBOS), Economic Planning Board (EPB), since 1963. The Population Census, which has been conducted every 5 years, also provides us with information regarding the basic labor force characteristics.

In addition, there are several establishment surveys, including the Establishment Survey on Labor Conditions, the Monthly Labor Survey and the Occupation Wage Survey, which provide data on employment, hours and earnings of establishments and are conducted by the Ministry of Labor affairs.

In this paper, I would like to introduce the Economically Active Population Survey which is based on the household units. This survey is recognized as being so basic and important for the employment and unemployment statistics in the Republic of Korea.

## 2. Organization responsible for the survey data

NBOS is responsible for the entire process of the Survey. In Korea, NBOS collects data, analyzes and releases the results monthly through the mass media, while also publishing an annual report.

## 3. Coverage of the Survey

The Economically Active Population Survey covers the persons aged 15 years and over who reside within the territory of the Republic of Korea at the time of enumeration. The lower age limit had been 14 years until December of 1986, and excludes prisoners, foreigners and non-resident citizens.

In the Survey, as our military system is compulsory for males having attained the age of 20 we exclude the members of the Armed Forces. The members of the Armed Forces are presumed to number about 600,000.

## 4. Frequency and data collection of the Survey

The monthly survey began in March, 1963, as a quarterly, changing to a monthly in July of 1982. The Survey is undertaken by about 500 resident enumerators through means of personal interviews. Permanent local survey organizations are responsible for data collection. Interviews are conducted during the week just after the reference period (the week containing the 15th day of the month).

## 5. Concepts and definitions

Most of the concepts and definitions in Korea are based on the ILO recommendations, are used officially as follows:

### - Economically Active Population:

This comprises all employed and unemployed persons aged 15 years and over.

### - Activity rate:

The specific activity rate - participation rate - represents the percentage of the economically active population in a particular demographic group in the total population in that group.

The crude activity rate represents the percentage of the total economically active population in the total population of all ages (including the active population).

### - Employment:

The employed comprise all persons who worked at least one hour or more for pay or profit, or who worked 18 hours or more as unpaid family workers during the reference week. Those persons who had a job but were temporarily absent from work are also categorized as employed. Also included are students who worked full-time or part-time.

### - Unemployment:

The unemployed comprise all persons who were not at work but were available for work and were actively seeking work during the reference week. The persons not seeking work arrangements to begin a new job within a month subsequent to the reference week are also considered as the unemployed.

Those persons who were waiting to be recalled to a job from which they had been laid off or waiting to report to a new job within 30 days need not have been seeking work to be classified as the unemployed.

### - Unemployment rate:

The unemployment rate is computed in percentage form by dividing the number of unemployed by the economically active population (employed and unemployed) derived from the Survey.



## 6. The questionnaire

Items covered in the Survey are as follows:

On the demographic characteristics and economic activity status

- 1) Name
- 2) Relationship to head of household
- 3) Sex
- 4) Age
- 5) Educational attainment
- 6) Marital status
- 7) Activity status
- 8) Any work for pay or profit
- 9) Temporary absence and its reason
- 10) seeking work last week
- 11) Currently available for work
- 12) Willingness to work

On the employed

- A-1) Hours worked
- A-2) Usual working hours
- A-3) Wishing to have additional work or to change jobs

On the unemployed

- B-1) Ways of seeking work
- B-2) Duration of work search
- B-3) Former occupation and reason for unemployment

On the people not in labor force

- C-1) Type of desired work
- C-2) Reason for not currently seeking work
- C-3) Seeking work during the last 6 months

On the employed and the unemployed

- D-1) Industry
- D-2) Occupation
- D-3) Working status
- D-4) Number of workers in the establishment
- D-5) Income

## 7. Sample size and design

Currently, the sample size is about 32,000 households, with approximately 500 trained interviewers visiting the sample households every month. As the non-responsive households are few, the exact rate is not available.

The sample is the nationwide self-weighting sample, using a stratified two-stage sampling with census sample enumeration districts (EDs) in both the urban and rural areas.

The census sample EDs refer to the EDs selected for the 1985 Population Census, consisting of 30 households in the urban area and 40 households in the rural area, out of a total of 21,900 urban households represented by 730 EDs and 9,240 rural households by 231 EDs.

The sample design is revised every five years, when the population census is conducted, to make use of the most recent results of the Population Census.

## 8. Method of estimation

In Korea, the method of estimation is the ratio estimation based on the population by sex, the estimation or adjustment for nonresponsive households not being of importance. The yearly estimates are obtained by averaging the monthly estimates.

The formulas for the monthly estimations are as follows:

$$\begin{aligned}\hat{Y}_{gh} &= X_{gh}(y_{gh}/x_{gh}) = X_{gh}(\sum_i y_{ghi}/\sum_i x_{ghi}) \\ &= X_{gh}(\sum_i \sum_j y_{ghij}/\sum_i \sum_j x_{ghij}), \\ \hat{Y}_g &= \sum_h \hat{Y}_{gh}\end{aligned}$$

where,

- Y = estimate of the number of persons having the characteristics of Y.
- X = number of persons 15 years old and over based on projected population.
- x = number of persons 15 years old and over in the sample.
- y = number of persons having the characteristics of Y in the sample.
- g = subscript for month.
- h = subscript for sex.
- i = subscript for i-th stratum.
- j = subscript for j-th sample PSU.

- Relative Standard Error for  $\hat{Y}_{gh}$

$$\begin{aligned} rse(\hat{Y}_{gh}) &= \sqrt{\text{var}(\hat{Y}_{gh})} \div \hat{Y}_{gh} \times 100 \\ \text{var}(\hat{Y}_{gh}) &= [F(F-1)/2] \times [\sum_x n_x / (n_x - 1)] \times [\sum_x (Dy_{ghij} - y_{gh} D_{xghij} / x_{gh})^2] \end{aligned}$$

where, rse = notation for relative standard error  
var = notation for variance  
F = inverse of sample PSU's

$$Dy_{ghij} = y_{ghij} - y_{ghij}r_i$$

$$D_{xghij} = x_{ghij} - x_{ghij}r_i$$

- Relative Standard Error for  $\hat{Y}_g$

$$\begin{aligned} rse(\hat{Y}_g) &= \sqrt{\text{var}(\hat{Y}_g)} \div \hat{Y}_g \times 100 \\ \text{var}(\hat{Y}_g) &= \sum_h \text{var}(\hat{Y}_{gh}) + 2\text{cov}(\hat{Y}_g, \hat{Y}_g) \\ \text{cov}(\hat{Y}_g, \hat{Y}_g) &= [F(F-1)/2] \times [\sum_x n_x / (n_x - 1)] \times \\ &\quad [\sum_j (Dy_{gij} - y_g D_{xgij} / x_g) (Dy_{gij} - y_g D_{xgij} / x_g)] \end{aligned}$$

- Relative Standard Error for  $\hat{Y}_h$

$$\begin{aligned} rse(\hat{Y}_h) &= \sqrt{\text{var}(\hat{Y}_h)} \div \hat{Y}_h \times 100 \\ \text{var}(\hat{Y}_h) &= \sum_g \text{var}(\hat{Y}_{gh}) \div 144 \end{aligned}$$

- Relative Standard Error for  $\hat{Y}$

$$\begin{aligned} rse(\hat{Y}) &= \sqrt{\text{var}(\hat{Y})} \div \hat{Y} \times 100 \\ \text{var}(\hat{Y}) &= \sum_g \text{var}(\hat{Y}_g) \div 144 \end{aligned}$$

## 9. Ways in which the data are used and analyzed

The survey results provide not only the information on classification of the population by labor activity status but also personal characteristics of the labor force, such as age, sex, educational attainment, marital status and family relationship on their industry and occupation.

Based on the above data, NBOS has issued the 1987 report, "Annual Report on the Economically Active Population Survey", which contains 29 tables, from Table 1, Summary Table of Economically Active Population, to Table 29, Unemployed Persons who previously worked, by Educational Attainment, Former Working Status, and Former Occupation (major group), by Sex.

However, the major data on employment status, such as general level, employment in agriculture, non-agricultural and manufacturing industries, unemployed persons and unemployment rate, are released each month. These data and reports are used by policy-makers in government, private enterprise, education and research institutes.

#### 10. The Employment Structure Survey

The other special survey on the labor force structure, the Employment Structure Survey, has been conducted since 1983.

The purpose of the Survey, which is conducted every 3 years, is to provide information on the regional structure of employment and unemployment, as well as the migration of the labor force among regions, occupations and industries.

This Survey was designed to supplement the Economically Active Population Survey and to present a clear picture of the current situation of employment and unemployment. As such, the sample size was expanded to 150,000 households, but the definitions, concepts and other aspects of the surveys remain the same.

Additionally, we feel that the approach method of the Survey should be conducted differently from the prior Survey. The approach method has thus far been used on the current status, but since 1989 we are considering adopting the usual status approach. We are confident the adoption of the usual status approach will enable us to better develop the labor force statistics in Korea.

#### 11. Limitations in applying the ILO approach

The labor force approach recommended by ILO is more applicable and suitable for analyzing the employment and unemployment structure of industrialized countries where the labor market is well organized, but not so in developing countries where there exists a high incidence of own-account, casual and unpaid family workers, and the job opportunities are very limited.

In Korea, there are some fundamental deficiencies in the adoption of the ILO approach, which can be summarized as follows:

First, a considerable number of workers, 22%, is engaged in the farming sector.

Second, the portion of the paid workers among the total employed is about 55%.

Third, the criterion "job seeking activity" states that those who are willing to work but not actively seeking work due to limited job information channels are classified as population not in the labor force.

Therefore, there is the some possibility of underemployment and non-sensibility in the unemployment rate compared to changes in the economy.

## 12. Improvement directions of employment and unemployment statistics in Korea

In conclusion, I would like to comment on our improvement directions of employment and unemployment statistics in Korea.

First, in developing countries, which have more of a weighted industrial structure in agriculture, the unemployment rate derived from the labor force approach is understated in reviewing the employment status. Given this situation, in Korea, with the consideration of the labor force characteristics, the following unemployment rates can be suggested and used:

- U-1 : Total unemployment as a percent of the labor force
- U-2 : Total unemployment as a percent of the labor force in the rural area
- U-3 : Total unemployment as a percent of the labor force in the urban area
- U-4 : Total unemployment and workers working less than 18 hours as a percent of the labor force
- U-5 : Total unemployment and discouraged workers as a percent of the labor force
- U-6 : Total unemployment, workers working less than 18 hours and discouraged workers as a percent of the labor force

Second, the usual unemployment statistics, the chief quantitative measure derived from the "labor force approach", could not adequately show the actual labor force status in a labor market. That is, the unemployment rate by itself is an inadequate labor force indicator, and therefore should be supplemented by the analysis of the underemployment or discouraged workers.

Accordingly, to supplement and to reflect the correct fluctuation of the labor force structure, more advanced analysis methods and the data on the underemployment and discouraged workers should be developed.

Third, as a supplement method to the labor force approach, the analysis method by the 'flow' approach to the change of the labor force status can be considered.

The labor force approach is only utilized on the current activities. Thus to reflect the change of the labor force status during the reference times, the flow approach method, the 'longitude survey', should be developed, as it can portray the flow of the labor force status as time passes.

Table 1. Summary Table of Economically Active Population.

(In thousand persons)

	Population 15 years old & over					Employed Less than 18 hours	Active rate (%)	Unemployment rate (%)
		Economically active population		Not Economically Active Population				
		Employed	Unemployed					
1965	15,387	8,754	8,112	642	6,613	66	57.0	7.3
1970	17,468	10,062	9,617	445	7,407	48	57.6	4.4
1975	20,918	12,193	11,692	501	8,726	30	58.3	4.1
1980	24,463	14,431	13,683	748	10,032	81	59.0	5.2
1981	25,100	14,683	14,023	660	10,417	62	58.5	4.5
1982	25,638	15,032	14,379	654	10,605	51	58.6	4.4
1983	26,212	15,118	14,505	613	11,094	80	57.7	4.1
1984	26,861	14,997	14,429	568	11,865	91	55.8	3.8
1985	27,553	15,592	14,970	622	11,961	112	56.6	4.0
1986	28,225	16,116	15,505	611	12,109	145	57.1	3.8
1987	28,955	16,873	16,354	519	12,082	197	58.3	3.1

Table 2. Employed by Sex, Industry, Occupation and Status of Workers

(In thousand persons)

	1965	1970	1975	1980	1985	1986	1987
Male	5,273	6,104	7,431	8,462	9,137	9,339	9,741
Female	2,839	3,513	4,261	5,222	5,833	6,165	6,613
Agri., For. & Fish. <sup>1)</sup>	4,742	4,846	5,339	4,654	3,733	3,662	3,580
Mining & Mfg.	840	1,377	2,235	3,079	3,659	4,013	4,602
Construction	236	281	509	843	911	889	920
Others	2,249	3,114	3,609	5,108	6,667	6,941	7,252
Pro., Tech., Adm. & Man. <sup>2)</sup>	562	1,037	1,163	2,000	2,819	4,157	3,119
Sales workers	972	1,194	1,522	1,984	2,313	2,355	2,452
Service workers	519	615	830	1,078	1,622	1,670	1,781
Agri., For. & Fishermen	4,739	4,827	5,360	4,648	3,686	3,621	3,543
Prod. & related <sup>3)</sup>	1,319	1,944	2,815	3,974	4,530	4,894	5,459
Self-employed	2,984	3,286	4,008	4,651	4,679	4,868	4,994
Family workers	2,516	2,586	2,932	2,569	2,187	2,204	2,169
Regular employees	1,765	2,728	3,628	5,164	6,714	6,979	7,662
Daily workers	844	1,018	1,123	1,300	1,390	1,454	1,529

1) Agriculture, hunting, forestry and fishing

2) Professional, technical, administrative, managerial and related workers

3) Production &amp; related workers, transport equipment operators &amp; laborers

LIMITED

STAT/SEUS/L.1  
7 November 1988

ENGLISH ONLY

ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

ESCAP/ILO Seminar on Employment and Unemployment Statistics

16-20 January 1989  
Bangkok

PROVISIONAL AGENDA

1. Opening of the Seminar.
2. Election of officers.
3. Adoption of the agenda.
4. Review of the existing sources of statistics on labour force, employment, unemployment and underemployment.
5. Comparative evaluation of the concepts and measures of unemployment and underemployment used in countries of the Asian region.
6. Review of international recommendations concerning statistics of the economically active population, employment, unemployment and underemployment and their application to national conditions.
7. Employment in the informal sector.
8. The labour market information system.
9. An integrated programme of censuses, surveys and other reporting systems for collecting statistics of employment, unemployment and underemployment.
10. Adoption of the report of the Seminar.

. . . . .



ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

ESCAP/ILO Seminar on Employment and Unemployment Statistics  
16-20 January 1989  
Bangkok

OPENING STATEMENT BY MR. KOJI NAKAGAWA,  
DEPUTY EXECUTIVE SECRETARY AND OFFICER-IN-CHARGE  
ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

Distinguished Participants, Ladies and Gentlemen,

I have great pleasure in welcoming you all to this ESCAP/ILO Seminar on Employment and Unemployment Statistics. I am most encouraged to see such a large number of participants representing Asian and Pacific countries. Also encouraging to me is such a high level of participation; I have noted that most of you are senior officials in your governments. In the case of the Islamic Republic of Iran, I have been informed, a participant is also a Member of Parliament. Such a high level of representation certainly augurs well for the purpose of this Seminar.

Financial support for this Seminar has been provided by the Government of the Netherlands, in line with its traditional support to ESCAP activities. The available resources have enabled us to convene this long-awaited Seminar by paying the costs of 25 participants from developing countries. I am most grateful to the Government of the Netherlands for this generous support. Several developed countries are attending at their own cost, while some developing countries have sent additional participants on their own to represent the national labour and social affairs agencies of their governments. This again is most

encouraging; it is also indicative of the value the countries have placed on this Seminar.

As is evident from the name, this Seminar is being organized jointly by ESCAP and the International Labour Organisation (ILO) which has contributed several highly informative papers for your discussions. I appreciate very much the co-operation between ILO and ESCAP, in particular with our Statistics Division, in promoting the improvement of statistics relating to labour force, employment and unemployment. I trust that such co-operative efforts will continue in the future.

Distinguished participants,

The importance of reliable and timely statistical information on employment, unemployment and under-employment needs little emphasis in most economies. The remunerations earned by the working population contribute as much as 50 per cent of the gross domestic product in some countries. In the developed economies that share is rising. The services of the labour force are also traded internationally, and the remittances received have substantial influence on the balance of payments of several countries in our region. Advances in technology and changes in patterns of corporate organization have increased the roles of services and employment in production and trade sectors. These developments have put added pressure on many national statistical and planning offices, and international organizations, to provide Governments and various private organizations with more and better statistics on employment and unemployment.

Adequate and reliable information on labour force, employment, unemployment and under-employment is also needed by government ministries and departments which deal with matters related to labour, as well as by welfare organizations. National planning offices also need such information, and increasingly in greater geographic detail, to determine the quality and location of the labour force and the participation rates. Industrial and commercial chambers of commerce require employment-unemployment data for their corporate planning. The list of such users is usually extensive, and it is certainly in the interest of national statistical agencies to attempt to satisfy the needs of all types of users.

The sources of, as well as the resources for, generating employment-unemployment information on a comprehensive and timely basis, are usually limited. Censuses usually provide bench-mark data, many countries use regular household surveys, and administrative records are important in some cases. However, each method has its own advantages and shortcomings, and its own resource implications. No doubt the country statements to be presented shortly would be quite illuminating in this regard. The question of concepts and definitions to be used for employment, unemployment and under-employment, and whether they can be, or should be, applied consistently across countries, is another theme that you will need to consider.

I am informed that some excellent discussion documents have been prepared to assist in your deliberations. One ILO paper discusses concepts and definitions specifically in the light of the revised international recommendations concerning employment, unemployment and under-employment adopted by the thirteenth ILO International Conference of Labour Statisticians in 1982. This Seminar would no doubt consider their applicability and suitability in countries of our region.

The collection of statistics on employment in the informal sector is also raised for your consideration. As you are all aware, information on the informal sector which exists in most countries of our region, is important for planning a balanced economic growth, promotion of self employment, and other income generation activities. However, gathering of data on the informal sector is fraught with many difficulties. Another idea introduced in the papers relates to employment market information system, which no doubt becomes feasible through the use of computer technology currently available.

Distinguished participants,

These issues make your agenda a heavy one, but with your sense of purpose, I feel certain that your deliberations would generate useful conclusions. We shall look forward to the outcome of this Seminar with keen interest.

I wish you every success in your efforts and a very pleasant stay in Bangkok.

Thank you.

FOR PARTICIPANTS ONLY

STAT/SEUS/5  
13 January 1989

ENGLISH ONLY

ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

ESCAP/ILO Seminar on Employment and Unemployment Statistics  
16-20 January 1989  
Bangkok

COMPARATIVE EVALUATION OF THE CONCEPTS AND MEASURES OF  
UNEMPLOYMENT AND UNDEREMPLOYMENT USED IN COUNTRIES  
OF THE ASIAN REGION

(Item 5 of the provisional agenda)

CONCEPTS AND MEASUREMENT OF UNEMPLOYMENT AND UNDEREMPLOYMENT  
IN ASIAN COUNTRIES: A COMPARATIVE STUDY\*

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\* This paper was prepared by Mr. Pravin Visaria, Consultant, ILO Asian Regional Team for Employment Promotion (ARTEP), New Delhi. The views expressed in it are those of the author and do not necessarily reflect those of the United Nations. This paper has been reproduced as submitted.

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## CONCEPTS AND MEASUREMENT OF UNEMPLOYMENT AND UNDEREMPLOYMENT IN ASIAN COUNTRIES: A COMPARATIVE STUDY

### 1. **Introduction**

Few statistical estimates generate as much public debate and concern as the estimates of employment and unemployment. This is natural because for most people, income earned through work provides the means of subsistence and other consumption vital for survival and for productive life. Also, plans for economic and social development of any country must necessarily take account of the available human resources for the production of goods and services because labour time is perishable and is wasted if it is not used. The inventory of human resources must take due note also of the other characteristics of actual or potential workers that influence their productivity and the quantum of labour time contribution to the production process.

It was perhaps a recognition of the central role of human resources that prompted the Eighth International Conference of Labour Statisticians to recommend in December 1954 that "every country should prepare estimates of the civilian labour force classified by sex and age at least once a year" and that the "series showing the total numbers unemployed, analysed by sex, should be prepared at least quarterly".<sup>1</sup>

This paper aims to review the similarities and differences in the approach and conceptual frameworks used in the recent labour force surveys. An attempt is made also to review the comparability of the available estimates of unemployment and underemployment for different countries and their relevance for formulation of public policies. The first part of this review covers the conceptual issues whereas the second part considers the substantive data available for different countries.

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1. International Labour Office, International Recommendations on Labour Statistics, Geneva, 1976, p. 31.

### 1.1 Key Issues For Study

At the outset, it is important to record here the widespread scepticism about the usefulness of the concepts of labour force and unemployment in the developing countries of Asia or Africa with their predominance of subsistence agriculture and self-employment. The scepticism stems from the incredibly low estimates of unemployment provided by the labour force surveys conducted during the 1950s and the 1960s. The much smaller magnitudes of reported unemployment than of estimates of poverty have further strengthened such scepticism partly out of a mistaken presumption of a high degree of correspondence between the two. In any case, the critical questioning has stimulated considerable debate and experimentation.

It is important to recognise that employment and the status of being out of the labour force form a spectrum or a continuum with considerable haziness or mixing of hues at the margins. The labour force and employment statuses frequently change for many persons who are not regular employees and who pursue multiple activities or roles because of the varied contingencies of human life. The main issues that need careful thought include the following:

- (a) How can the criteria to record unemployment status be inclusive of persons who may not seek a paid job?
- (b) Can surveys record unutilised labour time of those who are classified as employed on the basis of priority rule used in most labour force surveys?
- (c) How can we recognise the discouraged dropouts from the labour force, who do not report themselves as unemployed even though they might have sought work if the employment situation were better?
- (d) What insights can the policy makers obtain from the statistics gathered by the labour force?

This paper seeks to review the experience of Asian countries on these important issues on the basis of literature at hand. A broad comparative overview of the key features of recent labour force surveys in the nine countries covered by



this paper is provided by Table 1. It reports such key items as the frequency of surveys, the population covered, the length of the reference period, criteria of measuring unemployment and underemployment, etc.

## 1.2 Frequency Of Surveys

Five of the nine Asian countries<sup>1</sup> covered in this report have been collecting annual data on the labour force, employment, unemployment and under employment. India had conducted annual labour force surveys upto 1967-68 but has subsequently switched to a system of detailed quinquennial surveys of employment and unemployment beginning with 1972-73. (The same set of sample households is interviewed also for information relating to their consumption expenditure.) Sri Lanka has followed the same approach of simultaneous collection of data on labour force issues and the level of living in 1969-70 (socio-economic survey) and more recently in 1980-81 and 1985-86 (the labour force and socio-economic surveys). Indonesia has conducted frequent labour force surveys during the 1970s and the 1980s, although they do not form an annual series. Bangladesh has conducted two labour force surveys during 1983-84 and 1984-85 and might make it an annual event.

Simultaneous collection of data on employment/unemployment and level of living is vital for understanding the varied dimensions of poverty and unemployment. Unfortunately, however, such an effort prolongs the time required for each interview and also for analyses and interpretation of data. Also, except in countries like Malaysia, where the employment situation changes sharply from year to year, the case for an annual survey may seem weak. Yet, if the survey year is affected by unusual ups and/or downs in agriculture because of rainfall, the extension of the survey beyond a one-year period can often become useful.

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1. International Labour Organisation, Statistics of the Labour Force, Employment, Unemployment and Under-employment, Report prepared for the Thirteenth International Conference of Labour Statisticians (18-29 October 1982), Geneva : International Labour Office, 1982, Report No. ICLS/13/11.

Table 1 indicates that not all countries having annual surveys collect data round the year. Some of them gather data for two quarters and others for four quarters. The averages of the quarterly situations are expected to provide a representative profile of the conditions of the year as a whole. The size of the sample canvassed each quarter is sometimes considered inadequate to warrant separate estimates for each quarter (Bangladesh and Malaysia). Sri Lanka, however, has sometimes compiled separate tables for different "rounds" or quarters. India spreads its survey work over the entire year and builds up some quarterly estimates as well on the ground that the seasonal variations in the level and pattern of economic activity are noteworthy and relevant to policy formulation.

### **1.3 Population Covered By Labour Force Data**

Four of the nine countries collect labour force data for population aged 10 and over and Thailand does so for the population aged 11 and over. India, collects labour force data for the population aged 5 and over. (In 1983, however, only 2.5 percent of the rural population and less than 1.0 percent of the urban population aged 5-9 was classified as in the labour force in terms of its usual status or usual activity.)

Malaysia, Philippines and the Republic of Korea begin the record of economic activities at age 14 or 15. Besides, Malaysia limits the labour force data to the population in the age group 15-64 while other countries avoid any upper age limit. Obviously, the country-specific practices are guided by the local conditions in regard to the prevalence of child labour and of any concept of retirement.

### **1.4 Reference Period**

A relatively short reference period is the central feature of the labour force approach to the measurement of economically active population. This approach has gradually won widespread acceptance partly because it was found better for estimating the level of unemployment than the conventional gainful worker approach which presumed certain stability in the economic roles of individuals. This fact seems to be recognised by all the nine countries reviewed here. Except for the

TABLE 1

KEY CHARACTERISTICS AND ITEMS OF INFORMATION ON UNEMPLOYMENT AND UNDEREMPLOYMENT COVERED BY RECENT LABOUR FORCE SURVEYS IN SELECTED ASIAN COUNTRIES

Item	Bangladesh	India	Indonesia	Malaysia	Pakistan	Philippines	Republic of Korea	Sri Lanka	Thailand
1. Frequency of survey									
Annual	--	--	--	x	x	x	(x)	--	x
Periodical	x	x	x	--	--	--	--	x	--
2. Data Collection									
Biannual/Triannual	--	--	--	--	--	1956-69	--	--	x
Quarterly	--	--	x	--	x	x	1963-82	--	--
Monthly	x	--	--	x	--	--	(Since 82)	x	--
Throughout the year	--	x	--	--	--	--	--	--	--
3. Data Tabulation									
For the year	x	x	x	x	x	x	(x)	x	x
Quarterly	--	--	--	--	--	x	--	x	--
Biannual	--	--	--	--	--	--	--	--	x
4. Population Covered									
	10+	5+	10+	15-64	10+	15+	14+	10+	11+
5. Reference Period									
Previous year	--	x	--	x	--	--	--	x	x
Previous Quarter	--	--	--	--	--	1976-87	--	--	--
Previous Week	x	x	x	x	x	x	x	x	x
Each day of the Previous Week	--	x	x	--	--	--	--	--	--

Item	Bangla- desh	India	Indo- nesia	Malaysia	Pakistan	Philip- pines	Republic of Korea	Sri Lanka	Thailand
<b>6. Unemployed</b>									
(a) Seeking Work	X	X	--	X	X	--	X	X	X
(b) Not Seeking but Available for Work	--	--	--	--	X	--	--	--	--
(c) Seasonally Inactive	X	X	X	X	--	X	--	X	X
(d) Students Seeking Work	--	--	--	--	--	--	X	--	--
(e) Unpaid Apprentices	--	--	--	--	--	--	X	--	--
(f) Indefinitely laid off	--	--	--	--	--	--	--	--	X
(g) Duration of Unempt.	--	--	--	--	--	--	--	--	--
(h) Prior Work Experience	--	--	--	--	--	--	--	--	--
<b>7. Underemployment</b>									
(a) Hours Worked	X	--	X	X	X	--	--	--	--
(b) Days Worked	--	X	--	--	--	X	X	X	X
(c) Availability for Additional Work	X	X	X	X	X	X	--	X	X
(d) Type of Work Preferred	--	X	--	--	--	--	--	--	--
<b>8. Availability for Work of Those Classified as Outside the Labour Force</b>									
	--	X	X	--	--	--	--	--	X
<b>9. Search for Work by the Employed</b>									
	--	X	X	--	--	--	--	--	--

Philippines, which used the reference period of a quarter year for a little over a decade, eight countries collect information for the week preceding the date of interview or the reference week (sometimes called the "weekly status"). Beginning July 1987, the Philippines has also reverted to the reference period of the previous week, along with big changes in the survey schedule. (During May 1956 - August 1976 also, the week preceding the week of interview was adopted as the reference week.)<sup>1</sup>

Four of the nine countries, India, Malaysia, Sri Lanka and Thailand, collect information also on the usual status of the respondent (or the activity of the previous year), in addition to the current status or the activity of the previous week. At least two countries - India and Indonesia - also collect data on the activities on each day of the week. The Indian example had thus been emulated even before the Thirteenth International Conference of Labour Statisticians revised the international recommendations on the subject. Unfortunately, the present author has not been able to locate many tabulations of data according to both usual and current or weekly status. One exception is India, where estimates of unemployment are available from three quinquennial surveys of 1972-73, 1977-78 and 1983 according to not only the usual and current statuses but also in terms of the person-days within the week. These alternative estimates seem significantly different and shed useful light on the underlying situation. However, as shown below, the estimates of incidence of unemployment in Indonesia based on activities of each day of the reference week, are not significantly different from those obtained from the weekly status data.

The Indian experience of labour force surveys conducted by the National Sample Survey (NSS) during the 1950s suggests that the longer the reference period, the higher would be the participation rates and the lower the estimated

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1. Angeles-Reyes, Edna, "The Philippine Labour Market: 1956- 1986", a paper presented at the Policy Makers' Round-table Conference on Employment Strategies for Accelerated Economic Growth in Asia, Kuala Lumpur, Asian and Pacific Development Centre and Economic Planning Unit of the Government of Malaysia, December 1-2, 1988, mimeo.

unemployment rate (i.e. the incidence of unemployment). These results are logical corollaries of the conventional priority rule. Table 2 shows the estimates of unemployment for the nine Asian countries along with the reference periods used by them. These cross-country data do not seem consistent with the hypothesis noted above, which is nevertheless likely to hold within each country.

The simultaneous use of alternative reference periods is now an integral component of the international recommendations on labour force statistics adopted by the Thirteenth International Conference of Labour Statistics in 1982. The rationale of this recommendation is best explained by reference to the Indian experience of the 1970s, which deserves some detailed discussion.

#### 1.5 A Digression On The Indian Experience

After considerable experimentation during the early 1950s, the Indian National Sample Survey had standardised its data collection relating to labour force issues by adopting a reference period of a week preceding the date of interview. The estimates of rural unemployment based on this approach were found so low that in 1963, Professor P.C. Mahalanobis, Statistical Adviser to the Government of India, recommended discontinuation of the collection of such implausible data.<sup>1</sup> As a result, the rural labour force surveys were given up after 1966-67. The Indian Planning Commission then appointed a committee on unemployment estimates which gave its report in March 1970. The Committee recommended simultaneous collection of information on the economic activities of the population in terms of their usual status (to be ascertained by asking a question about the activities of the 365 days preceding the date of interview) and the current activities or the activities of the week preceding the date of interview.

The usual status questions would ensure a comprehensive count of the economically active population. Also, the usual industry, occupation and status (or

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1. See : India, Planning Commission, Report of the Committee of Experts on Unemployment Estimates, New Delhi, 1970, p.16n.

TABLE 2  
INCIDENCE OF UNEMPLOYMENT IN SELECTED ASIAN COUNTRIES BY  
RURAL URBAN RESIDENCE AND SEX, RECENT YEARS

Country	Year	Population Covered/ Reference Period	Unemployment Rate											
			All Areas					Rural/Urban						
			M	F	P	M	F	P	M	F	P			
Bangladesh	1984-85	10+(W)	1.4	5.6	1.8	1.2	6.0	1.6	3.1	4.0	3.2			
India	1983	5+												
		Daily Status(D)				7.5	9.0	7.9	9.2	11.0	9.5			
		Weekly Status(W)				3.7	4.3	3.9	6.7	7.5	6.8			
		Usual Status (Y)				1.4	0.7	1.1	5.1	4.9	5.0			
Indonesia	1985	10+(W)	2.2	2.0	2.1	1.2	1.1	1.2	5.3	5.6	5.4			
Malaysia	1980	15-64(W)	4.7	7.2	5.6	4.7	7.7	5.8	4.5	6.2	5.0			
Pakistan	1986-87	10+(W)	3.3	1.1	3.1	2.8	1.0	2.5	4.7	2.0	4.5			
Philippines	1985	15+(Q)	-	-	7.1	-	-	4.4	-	-	11.8			
Republic of Korea	1985	14+(W)	5.0	2.4	4.0	-	-	-	-	-	-			
Sri Lanka	1985-86	10+(W)	10.8	20.8	14.1	9.5	21.3	13.2	15.8	27.9	19.5			
Thailand	1986	11+(W)	-	-	9.1	-	-	-	-	-	-			

Note : Figures in parentheses show the length of the reference period

D : Each day of the reference week

W : Week preceding the date of interview

Q : Quarter preceding the quarter of interview

Y : Year preceding the date of interview

class of worker) could be better related to the living standard of the respondent household. The collection of data on current activities was recommended to ensure comparability of information with the rest of the world as well as with the earlier labour force surveys conducted in India. In addition, the committee highlighted the fact that the usual priority rule adopted in labour force surveys leads persons working on even one day of the reference week as employed. Similarly the status of unemployment would receive priority over that of being outside the labour force (insofar as if a person reports himself or herself to be unemployed on any one day of the reference week and as outside the labour force during the rest of the week, the priority rule is expected to record his unemployed status). However, even nominal work on any day of the week would lead to his classification as employed. The Committee therefore recommended collection of the activity data separately for each day of the reference week in order to capture underemployment within the reference week of those classified as employed because of the priority rule.

When these recommendations were being discussed, it was argued that we could logically extend the collection of activity data from each day to each hour of the reference week. The unit of analysis could be person-hour rather than person-day. The basic validity of the argument was accepted but the difficulties of collecting dependable data for each hour from a large number of households precluded the adoption of the implied suggestion. (However, case studies on limited scale, sometimes called time-use studies, can and do collect hourly data on activities of selected individuals). In fact, the respondents to questions on hours worked during the reference week, asked in several Rounds of the National Sample Survey, typically provided a range (such as two to four, four to six, etc.) and the investigator had to choose either the mid-point of the range or one of the two figures. The problem is inherent in the conditions of work of the self-employed or unpaid family helpers who are not guided by any fixed hours of work in deciding their activities. This feature of the situation was considered by the NSS also in framing the procedures to record the activities pursued on each day of the reference week. Work for less than



four hours has been recorded as a half day and work for more than four hours has been recorded as a full day.

In implementing the recommendations of the Expert Committee in the 1972-73 survey, some misunderstanding led the usual status to be defined almost in terms of the gainful worker approach along with the priority rule. This procedure was changed in 1977-78 and since then, the major activity of the reference year (i.e. being employed, unemployed or outside the labour force) is recorded as the usual activity. However, to ensure comparability with the 1972-73 survey, the subsequent surveys have also ascertained whether a person classified as unemployed or outside the labour force in terms of his or her usual activity had undertaken any gainful work as a subsidiary activity. Both in 1977-78 and 1983, the answers relating to subsidiary activity have raised the usual status female work participation rates (based on the major activity of the preceding year) by 10-11 percentage points in rural areas and by 3-4 percentage points in urban areas. The corresponding male rates have risen by 1 or 2 percentage points in urban and rural India, respectively.

#### **1.6 The Unemployed: Criteria For Classification**

The key criterion to classify a person as unemployed continues to be involuntary idleness; he or she is a person who is without work, wants it and has sought it or made some efforts to find work during or prior to the reference period. (The period of prior search for work is 30 days in Thailand.) Such persons are sometimes called the active unemployed. In addition, however, persons who did not actively seek work during the specified period because of bad weather, illness or a belief that work was not available but were in fact willing or available to take up work are also included among the unemployed (sometimes called the inactive unemployed). Both categories include unemployed persons seeking work for the first time (or new entrants into the labour force). Korea seems to limit the unemployment status to only the active work-seekers and not extend it to those unable to search for work because of illness or bad weather. All other countries include both the active and the inactive work-seekers among the unemployed. The

inclusion of inactive unemployed in the category of unemployed is a major relaxation of the conventional definition in deference to the conditions prevailing in the Asian economies. Apparently, it began in India in the 1950s and the practice then spread to other countries. We shall presently revert to this issue again.

An important category of persons whose classification can affect the estimate of unemployment is the "seasonally inactive persons", who neither worked nor sought work during the reference period because they were waiting for the agricultural season.

Until 1982, Thailand used to classify such persons as outside the labour force during the reference period. Since 1982, such persons are termed "seasonally inactive labour force". They are treated as a part of the total labour force but not of the current labour force. It appears that these seasonally inactive persons were classified as unemployed if they reported themselves as "available for work". In the Philippines also, seasonal workers awaiting seasonal work are reportedly included among the unemployed. Pakistan includes among the unemployed persons with "some usual occupation" but "doing nothing during the reference period". It is not clear whether or how far such persons correspond to the seasonally inactive workers in Thailand but during 1982-83 and 1986-87 they formed about 10-14 percent of all unemployed (12-15 percent in rural areas and 7-8 percent in urban areas). (See Table 5.4.)

A likely reason for a sudden spurt in the reported incidence of unemployment in Thailand since the second Round of 1982 is said to be the decision to include among the unemployed those persons who were engaged in household work but were available for work. The rationale for this procedure is the high probability of such persons being discouraged drop-outs from the labour force. A similar effort to identify persons available for work is made in the Indian surveys (for persons reporting themselves as engaged in household duties in terms of their "usual activity") and in the Indonesian surveys (for persons classified as outside the labour force during the reference week). However, both India and Indonesia separately show information relating to the availability for work those classified as outside the usual or the current labour force.

Among other categories of persons sometimes classified as unemployed are the full-and part-time students seeking full-or part-time work and the unpaid apprentices. Malaysia on the other hand, includes both paid and unpaid apprentices among the employed.<sup>1</sup> Pakistan classifies apprentices without a guaranteed job as unemployed. This latter procedure is unlikely to affect seriously the estimate of unemployment because of the relatively small number of apprentices; but since only a very limited percentage of the employed can claim any assurance of work opportunities the rationale of the rule is not clear.

Another category of the unemployed are persons who have been "laid-off" from their jobs. Thailand includes those reporting indefinite lay-off among the unemployed. Malaysia prescribes that the temporarily laid-off who expect definitely to return to their former jobs should be classified as employed. Pakistan, on the other hand, includes all laid-off persons (whether temporary or indefinite) among the unemployed. They accounted for only 4-6 percent of the unemployed in 1982-83 and 1986-87 but it would be useful to distinguish the temporarily laid-off from those indefinitely laid-off. (However, the information on this issue is not likely to be accurate).

Most countries gather information on the duration of unemployment of those classified as unemployed and about the fact and nature of their prior work experience. This information is valuable for understanding the seriousness of the problem and the sectors of economic activity facing various difficulties such as the deficiency of demand, structural maladjustment and/or obsolescence.

### 1.7 Underemployment

Most of the countries covered by this paper try to measure what has been called "visible underemployment" by eliciting information on both (a) the hours

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1. International Labour Office, Statistical Sources and Methods, Vol.3, Economically Active Population, Employment, Unemployment and Hours of Work (Household Surveys), Geneva, 1986, pp. 106,110.

worked during the week and (b) the availability for additional work. India, however, no longer collects information on hours worked; and as noted earlier records person-days worked during the reference week in units of half days. In the Philippines, the employed were asked about the days worked during the quarter; and whether they wanted additional work. (The recent change in the reference period used in the Philippines has probably changed this practice.) Elsewhere, persons working less than a specified number of hours during the week and available for additional work are classified as underemployed. The cut-off point or number of hours varies from country to country.

In Republic of Korea, all employed persons working less than 36 hours (during the reference week) are classified as underemployed, evidently, without any further question about their availability for additional work.

Thailand on the other hand has attempted during 1977-82 rather elaborate measurement of the under-utilisation of the labour force in terms of (a) hours of work, (b) income, and (c) mismatch.<sup>1</sup> Since 1983, this approach has been abandoned because income data relating to only the reference week were considered unsatisfactory. The mismatch estimates were also considered of little practical use because of (a) inadequate links between education and employment for a large proportion of the labour force particularly that in rural areas; (b) the difficulties of evolving accepted criteria to identifying mismatch.

Philippines has tabulated the data on the employed wanting additional work by age, educational attainment, occupation; type of industry and total quarterly earnings. Evidently, the employed who had worked 65 days or more, and still wanted additional work, were classified as invisibly underemployed. The use of this term without reference to income or productivity seems questionable and needs further discussion.<sup>2</sup>

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1. The framework of these estimates was developed by Professor Philip M. Hauser.
  2. Angeles-Reyes, *op.cit.*

India has attempted also to elicit the preferences of those available for additional work of the type of work for which they are available (i.e. full-time or part-time, farm, non-farm or either) and the type of efforts made to find such work, nature, location and status of work sought and the wage or salary acceptable to those seeking salaried employment. (The published tabulations do not, however, include all these details.)

#### **1.8 Discouraged Drop-outs From The Labour Force**

An important limitation of the conventional labour force surveys has been that information collected about those classified as outside the labour force is generally limited to their sex, age and nature of activity. Many of them could be discouraged dropouts from the labour force, discouraged by the difficulties of finding an acceptable work opportunity. The Indian labour force surveys have attempted to assess this problem in two ways. First, by cross-tabulating the current and usual activities of persons, it is possible to ascertain whether those classified as outside the labour force were working, seeking work or available for work at any time during the previous year or during the reference week. Secondly, students, those engaged in household duties, and others asked whether they were available for work, and if so the nature of efforts made by them to find such work. In addition, women engaged in household duties were asked about (a) their participation in specified activities likely to contribute to family income; (b) their availability for work at the household, type and nature of acceptable work, and the possible assistance required for the purpose. Indonesia and Thailand have also attempted to ascertain the extent to which persons classified as outside the labour force during the reference week were available for work.

#### **1.9 Active Search For Work By The Employed**

The Indian surveys permit estimation of the percentage of employed who are also registered with an employment exchange which happens to be a channel for finding alternative work opportunities in the organised sector (mainly the public

sector). Similarly, the Indonesian labour force surveys have identified persons who were working but "for one reason or another" were also looking for work (including persons who were awaiting a reply to applications sent prior to the reference period). It can be an indicator of the magnitude of discontent among the employed with their present jobs or work opportunities. Tabulated according to household income (or its proxy, expenditure), the data can also indicate the felt pressures for better jobs in terms of higher income.

#### **1.10 Available Tabulations: Possibilities And Limitations**

As most users of labour force data recognise, most surveys do not tabulate all the information that they collect. Besides, not all the tables are published; and therefore, analysts are not able to assess or evaluate the validity or plausibility of the estimates of unemployment and/or underemployment generated by these surveys. As a result, the potential contribution of labour force surveys to the formulation of relevant policies remains circumscribed. This situation can change significantly if the survey analysts relate their data to the characteristics of households in which the respondents live and work. The Republic of Korea, for example, has for many years tabulated the labour force and related data according to whether the household was classified as a farm household or a non-farm household. (A similar survey is conducted also by Japan despite the relatively low proportion of farm households and farm workers in the Japanese economy.) The recent Indian surveys, particularly the 1983 survey, have also attempted elaborate cross-tabulations of the employment and unemployment data, some of which are reported and discussed briefly in the next section. A demonstration of the interesting and useful cross-tabulations might perhaps generate some enthusiasm among the agencies collecting labour force data. Therefore we shall turn now to the second part of this paper, relating to the substantive data on unemployment and underemployment in the different countries.

## 2. SUBSTANTIVE DATA ON UNEMPLOYMENT AND UNDEREMPLOYMENT

An important objective of this paper is to review the highlights of data on unemployment and underemployment in the nine Asian countries under consideration. Several tables based on the available data are included in the Statistical Appendix to this paper. These tables are arranged according to country rather than according to the topic or theme because several of them shed light on more than one issue. While the labour force surveys are the main source, the available census data are also utilized for certain purposes because the cross-tabulations based on them are likely to have a relatively low sampling error. (Of course, the non-sampling errors are a more serious problem in labour force data and they are more difficult to control in a census than in a survey.)

Admittedly, the selection of tables for inclusion in the Statistical Appendix has been constrained by non-availability of relevant publications. It is proposed to strengthen the Statistical Appendix when the paper is revised.

Table 3 shows at a glance the topics covered by different tables. Whenever possible, an attempt is made in the Statistical Appendix to distinguish between urban and rural areas because of the substantial difference their labour force situation. However, this fact is not explicitly stated in Table 3.

### 2.1 Unemployment Rates According To Alternative Concepts

Appendix Tables 2.1 and 3.1 for India and Indonesia, respectively, are the only tables showing unemployment rates (or the incidence of unemployment) according to alternative concepts. The Indian data show the rates based on daily status to be markedly higher than the weekly status rates. Logically also, the former must exceed or equal the latter because they include the underemployment within the reference week of those classified as employed according to the priority rule. (If the employed were employed on all days of the reference week, the two rates would be identical.) However, the Indonesian data show much smaller differences between the unemployment rates according to the daily and the weekly status than the Indian data.

Interestingly, the Indonesian data report an odd finding of higher male labour force participation rates according to the daily status than according to the weekly status. Ordinarily, a priority rule is applied in the classification of persons during the reference week as employed or unemployed according to which work for even one hour leads to a person's classification as employed; and similarly status of unemployed during any one of the seven days of the reference week would lead to classification as unemployed. It is not clear whether and how the priority rule has been applied in the Indonesian labour force survey.

The Indian data also report the usual status unemployment rates. But when these rates are based on the major activity of the reference year, it is difficult to infer any specific relationship between them and the weekly status rates. This difficulty is confirmed by the fact that for females in urban India during 1977-78, the usual status unemployment rate was higher than the weekly status rate.

## **2.2 Time Trends In Unemployment Rates**

The data in the Statistical Appendix indicate time trends in unemployment rates for all countries except Bangladesh. (For Bangladesh, the earlier unemployment data were gathered in the 1974 Census and indicated rates of 2.4 and 3.6 percent for males and females, respectively.) By comparison, the 1984-85 labour force survey has reported a lower male unemployment and a higher incidence of female unemployment, along with a higher female participation rate.

The Indian data on unemployment shown in Table 2.1 do not show any steady trend. The rates for rural areas are affected partly by the scarcity of rainfall (which was severe during 1972-73) or a normal year. But the public works programmes initiated by the government for scarcity relief seem to weaken the relationship between rainfall and unemployment even in rural areas. (The relationships needs to be studied at a disaggregated level.)



TABLE 3

CHARACTERISTICS OF UNEMPLOYMENT AND UNDEREMPLOYMENT  
COVERED BY TABLES INCLUDED IN THE STATISTICAL APPENDIX

Item	Bangladesh	India	Indonesia	Malaysia	Pakistan	Philippines	Republic of Korea	Sri Lanka	Thailand
1. Rates according to alternative concepts	--	x	x	--	--	--	--	--	--
2. Time trends	--	x	x	x	x	x	x	x	x
3. Unemployment rates by									
(a) Age	x	x	x	x	x	--	x	x	--
(b) Education	x	x	x	--	x	--	x	x	--
(c) Quarter	--	x	--	--	--	--	--	--	--
(d) Per capita expenditure	--	x	--	--	--	--	--	--	--
(e) Principal industry of household	--	x	--	--	--	--	--	--	--
(f) Household type	--	x	--	--	--	--	x	--	--
(g) Land cultivated	--	x	--	--	--	--	--	--	--
(h) Ethnic group	--	--	--	x	--	--	--	--	--
4. Distribution of unemployed by									
(a) Means of livelihood	--	--	x	--	--	--	--	--	--
(b) Duration of unempt.	x	--	--	--	--	--	x	--	--
(c) Reason of unempt.	--	--	--	--	x	--	--	--	--
(d) Prior work experience	--	--	--	--	--	--	x	--	--
(e) Headship of household	--	--	--	--	--	--	x	--	--
5. Unemployment by									
(a) Age	--	x	--	--	--	--	--	--	--
(b) Education	--	x	--	--	--	--	--	--	--
(c) Status	--	x	--	--	x	--	--	--	--
(d) Principal activity	--	x	--	--	x	--	--	--	--
(e) Hours worked	--	--	x	--	--	--	--	--	--
(f) Among non-workers	--	x	--	--	--	--	--	--	--
6. Active work search by the employed	--	--	x	--	--	--	--	--	--
7. Availability for work among those outside the labour force	--	x	--	--	--	--	--	--	--

The Indonesian unemployment data from the 1971 Census have demonstrated the possibility of substantially different estimates according to the editing or classification procedures. Subsequent data collected through labour force or intercensal surveys fail to show any clear trend in the level of unemployment. Urban unemployment rates substantially exceed the rural unemployment rates among both males and females.

In Peninsular Malaysia, the rural-urban difference in unemployment rates is smaller and sometimes in a direction opposite to that observed in most other countries. The importance of employees in the rural labour force of Peninsular Malaysia may be the likely contributory factor but that is not really so. The Malaysian labour force survey data for 1980 confirm that the inclusion of inactive unemployed among the unemployed raises the rural unemployment rate above the urban. However, the Malaysian employment situation seems to be affected also by the international market situation for its exports of primary products such as rubber and tin.

For Pakistan, the unemployment rates (Table 5.1) reported by the labour force surveys of the 1984-87 period and the 1981 Census are much lower than the rates for Peninsular Malaysia. One factor is the very low female participation rates (although the labour force surveys report substantially higher rates than the census). The inactive unemployed form only a very small proportion of the unemployed in Pakistan (see Table 5.4). Perhaps the concept is not easy to communicate.

In the Philippines, the rural unemployment rates have fluctuated within a narrow range but the urban unemployment rates have gradually edged up to an unprecedented 11-12 percent during 1984-85. In fact, the estimated unemployment has risen sharply to 11.2 percent during 1986 and to 16.1 percent during the second quarter of 1987. The latter estimate is presumably a result of substantial changes in the survey instruments and its comparability with the previous estimates seems to be questionable. In South Korea the unemployment rates have remained generally stable during 1970-86, and the interesting distinction between farm and non-farm households shows that the problem of unemployment is faced by the latter. Further,

the booming Korean economy seems to ensure that the new entrants do not encounter any difficulty in finding a niche in the economic structure. Despite the steady shrinking of the rural and the farm sector in the Korean economy, the proportion of unemployed persons with prior work experience has been much higher in Korea (between 60 and 74 percent) than in all the other countries.

Sri Lanka has the dubious distinction of having the highest reported unemployment rates in both rural and urban areas among the nine countries under discussion in this paper. The current tensions in the island economy seem to be closely linked to the persistent high rates of unemployment. Unlike Rep. of Korea, Sri Lanka includes the inactive unemployed among its unemployed; but that is not the primary explanation for its reporting very high unemployment rates. Thailand has reported a sharp increase in the estimate of unemployment beginning with the second Round of the 1982 Survey. As noted earlier, the Thailand surveys have revised their procedures adopted for the enumeration and/or classification of unemployed. The non-comparability of the series is obvious and highlights the great need for a close study of the survey procedures whenever one uses any data relating to unemployment.

### 2.3 Unemployment Rates According To Characteristics Of Households And Of Individuals

The following broad conclusions seem confirmed by the data for most countries covered by this paper.

- (a) Unemployment rates for the youth in ages 15-29 tend to be substantially higher than for persons in other ages.  
As a logical corollary, the youth account for a majority of the unemployed in several countries.
- (b) The interesting classification of the unemployed in the Philippines according to their relationship to the head of the households indicates that only about 10-12 percent of them tend to be heads of the households. Others evidently draw support from other members of households (see Table 6.3). This is confirmed by direct questions on means of livelihood asked in the

Indonesian surveys. In 1978, between 72 and 91 percent of the unemployed were maintained by the family or friends. Of the remainder, a majority had some occasional job; the proportion in this category was higher in rural areas than in urban areas and higher among males than among females. Between 5 and 8 per cent reported "other means" as the source of their livelihood. (The details of other means are not clear but could include sale of family assets and/or borrowing.)

- (c) Unemployment rates tend to be low for the illiterates and those with a modest schooling, presumably because they accept or take up whatever work opportunities are available. The better - educated report a higher incidence of unemployment; but generally speaking, persons with a degree or diploma suffer a lower incidence of unemployment than those who have just graduated from high school.

Females with college degrees resident in rural areas often report the highest incidence of unemployment. The nature of work sought by them tends to differ from the locally available opportunities.

- (d) The Indian data suggest a fair degree of seasonal variation in rural unemployment rates, particularly among females. The range of variation might be larger if the data for smaller spatial units such as states or groups of districts are examined.
- (e) The Indian unemployment rates vary inversely with per capita expenditure of the household (used as a proxy for income). Unemployment and poverty are indeed correlated although many of the poor cannot afford to remain unemployed and have to accept whatever work can be found in the local economy.
- (f) Unemployment rates tend to be higher among households relying on construction activity for a major part of their income; among the rural landless and those with small land holdings; and among households whose major source of income happens to be sale of their labour rather than self-employment.

The findings reported above confirm that the search or availability for work is not easily reported by the self-employed. This is confirmed by data on unemployment rates obtained separately for persons who report self-employment as their usual status. The effectiveness of the modification in the international recommendations to record the availability of self-employed for additional work needs to be assessed carefully. It would be useful if more countries compile separate estimates of unemployment according to the characteristics of the household (in terms of the level and source of their income or expenditure).

#### 2.4 Underemployment

Most countries collect data on underemployment in their labour force surveys. The analysis of these data can be strengthened through additional cross-tabulations with usual activity and other characteristics of household/individuals. The Statistical Appendix in the revised draft of this paper will include more material on this subject.

#### 2.5 Discouraged Dropouts From The Labour Force

The Indian data show only about five percent of the rural women and 4 - 5 per cent of the urban women engaged in domestic duties to be available for work. The corresponding percentages for students range between 1 - 2 per cent. (The 1981 census data report similar results.)

In Indonesia, however, between 12 and 26 percent of the men and women aged 10 and over, resident in rural/urban areas and classified "as outside the labour force" during the reference week were willing to work. Evidently, dropping out from the labour force due to discouragement from the depressing unemployment situation is more expensive in Indonesia than in India.

### 3. **CONCLUSION**

To conclude this extensive and yet highly selective discussion of the data presented in the Statistical Appendix, analysts need to remember that there are real live figures behind the numerical figures of labour force surveys. Varied dimensions of the complex reality can indeed be depicted realistically if the statisticians and social scientists join forces and launch a concerted drive to improve the data on employment, unemployment and underemployment.

It is true that responses to hypothetical questions about availability for work or additional work may not always correspond to subsequent or concurrent actions.

However, it should not be beyond the ingenuity of social scientists to test the validity of such data in real life. The planning activities in most of the developing countries of Asia provide ample opportunities for such verification. An interdisciplinary approach to such studies can well provide useful guidance for appropriate policy formulation and action, which indeed is the *raison d'être* of research on labour force issues.

**TABLE 1.1**  
**BANGLADESH : INCIDENCE OF UNEMPLOYMENT BY SEX, RURAL-URBAN**  
**RESIDENCE AND (a) AGE GROUP AND (b) EDUCATIONAL ATTAINMENT, 1984-85**

AGE GROUP	Bangladesh									
	Urban			Rural						
	All	Male	Female	All	Male	Female				
All	1.8	1.4	5.6	3.2	3.1	4.0	1.6	1.2	6.0	
10-14	3.5	3.3	4.8	5.2	8.1	0.0	3.4	3.0	5.9	
15-19	3.0	2.1	12.7	8.6	8.4	9.6	2.3	1.4	13.5	
20-24	3.8	2.9	12.6	7.2	7.0	8.5	3.3	2.2	13.5	
25-29	2.3	2.3	2.1	3.2	3.2	3.6	2.1	2.1	1.8	
30-34	1.4	0.7	6.0	2.2	1.9	5.6	0.9	0.4	6.2	
35 & above	0.3	0.2	1.5	0.4	0.3	1.1	0.3	0.2	1.7	
<b>LEVEL OF EDUCATION</b>										
All	1.8	1.4	5.6	3.2	3.1	4.0	1.6	1.2	6.0	
No education	1.3	0.9	4.3	2.3	2.4	1.6	1.2	0.8	4.8	
Below class 10	1.7	1.5	7.5	2.6	2.2	6.8	1.4	1.2	7.7	
SSC & HSC	5.8	4.7	16.9	6.1	5.4	17.8	5.5	4.5	16.7	
Degree & above	5.4	4.3	23.5	3.1	3.3	12.7	9.3	6.3	88.9	
Madrasha & other education	3.9	3.9	0.0	2.9	2.9	0.0	4.2	4.2	0.0	

TABLE 1.2

**BANGLADESH : DISTRIBUTION OF THE UNEMPLOYED BY DURATION OF UNEMPLOYMENT,  
BY SEX AND URBAN-RURAL RESIDENCE, 1984-85**

Duration of unemployment (weeks)	Bangladesh				Urban				Rural			
	Both Sexes		Male		Female		Both Sexes		Male		Female	
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 13	9.0	12.6	0.0	6.1	7.1	0.0	10.0	14.9	0.0	0.0	0.0	0.0
13-24	5.3	7.4	0.0	6.8	8.0	0.0	4.7	7.1	0.0	0.0	0.0	0.0
25-52	33.2	32.8	34.2	38.6	38.0	42.1	31.4	30.6	33.1	31.4	33.1	33.1
More than 52	51.8	47.2	63.2	48.5	46.9	57.9	52.9	47.4	63.9	52.9	47.4	63.9
Not reported	0.7	0.0	2.6	0.0	0.0	0.0	1.0	0.0	3.0	1.0	0.0	3.0

Source: Bangladesh Bureau of Statistics, Report on Labour Force Survey 1984-85, February 1988, pp. 36-37.



TABLE 2.1

INDIA : INCIDENCE OF UNEMPLOYMENT ACCORDING TO ALTERNATIVE CONCEPTS, BY SEX AND RURAL-URBAN RESIDENCE 1972-73 TO 1983

Concept/Year	Rural Areas		Urban Areas	
	Males	Females	Males	Females
<u>Usual Status</u>				
1972-73	1.2	0.5	4.8	6.0
1977-78	1.3	2.0	5.4	12.4
1983	1.4	0.7	5.1	4.9
<u>Weekly Status</u>				
1961-62	3.7	8.5	3.0	3.3
1966-67	1.8	4.3	1.5	1.8
1972-73	3.0	5.5	6.0	9.2
1977-78	3.6	4.0	7.1	10.9
1983	3.7	4.3	6.7	7.5
<u>Daily Status</u>				
1972-73	6.8	11.2	8.0	13.7
1977-78	7.1	9.2	9.4	14.5
1983	7.5	9.0	9.2	11.0

Source : 1. Sarvekshana - Journal of the National Sample Survey Organisation, Vol. XI, No. 4, Issue No. 35, April 1988, pp. 22, 42.

2. Visaria, Pravin, "Employment and Unemployment in India : A Review of Selected Statistics", in : India Planning Commission, Report of the Committee of Experts on Unemployment Estimates, New Delhi, 1970, pp. 52-54.

TABLE 2.2

INDIA : INCIDENCE OF UNEMPLOYMENT BY DAILY STATUS AND WEEKLY STATUS AND THE RATIOS OF TWO SETS OF RATES BY RURAL-URBAN RESIDENCE, SEX AND SELECTED CHARACTERISTICS, 1983

Characteristic	Daily Status Unemployment Rates				Weekly Status Unemployment Rates				Ratio of Daily and Weekly Status Unemployment				
	Rural Areas		Urban Areas		Rural Areas		Urban Areas		Rural Areas		Urban Areas		
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	
<u>Sub-Round</u>													
All	7.5	9.0	9.2	11.0	3.7	4.3	6.7	7.5	2.0	2.1	1.4	1.5	
Jan.-March													
SR 1	7.7	10.0	9.4	12.9	3.7	4.9	6.5	8.9	2.1	2.0	1.4	1.4	
April-June													
SR 2	8.6	11.3	9.4	12.4	4.6	6.3	6.8	8.8	1.9	1.8	1.4	1.4	
July-Sept.													
SR 3	7.3	8.0	9.5	11.0	3.5	3.3	7.2	7.8	2.1	22.4	1.3	1.4	
Oct.-Dec.													
SR 4	6.4	7.4	9.1	9.3	3.0	2.8	6.6	5.6	2.1	2.6	1.4	1.7	
<u>Age Group (in Years)</u>													
5 - 9	1.4	1.7	7.0	6.7	0.9	1.1	3.6	6.6	1.6	1.5	1.9	1.0	
10 - 14	6.2	6.4	13.7	7.3	3.8	2.4	10.3	3.5	1.6	2.7	1.3	2.1	
15 - 29	10.4	11.3	16.1	19.0	6.0	6.0	13.0	14.8	1.7	1.9	1.2	1.3	
30 - 44	6.3	8.2	4.2	6.5	2.4	3.6	2.2	3.2	2.6	2.3	1.9	2.03	
45 - 59	5.5	7.7	3.7	5.9	2.0	3.2	1.8	2.9	2.8	2.4	2.1	2.0	
60 & Above	4.6	8.1	4.9	3.0	1.9	3.4	2.1	0.9	2.4	2.4	2.3	3.3	
<u>MPCCE</u>													
0 - 30	13.2	13.2	13.9	8.8	5.8	3.7	10.9	5.7	2.3	3.6	1.3	1.5	
30 - 40	12.9	13.5	15.8	12.7	5.6	6.4	8.6	5.5	0.2	2.1	1.8	2.3	
40 - 50	10.6	12.6	17.0	13.3	4.6	5.3	10.1	3.8	2.3	2.4	1.7	3.5	
50 - 60	9.4	11.3	13.2	9.0	4.0	5.2	7.8	4.2	2.4	2.2	1.7	2.1	
60 - 70	8.4	11.0	12.5	9.1	3.5	5.2	8.1	4.4	2.4	2.1	1.5	2.1	
70 - 85	8.1	9.8	10.3	11.0	3.6	4.2	6.5	6.0	2.3	2.3	1.6	1.8	
85 - 100	7.1	8.2	11.5	10.6	3.3	3.9	8.2	6.4	2.2	2.1	1.4	1.7	
100 - 125	7.2	7.6	10.4	11.6	3.9	3.6	7.4	7.2	1.8	2.1	1.4	1.6	
125 - 150	6.2	6.6	10.0	13.1	3.5	3.3	7.6	9.7	1.8	2.0	1.4	1.4	

(Contd.....)

Daily Status Unemployment Rates      Weekly Status Unemployment Rates      Ratio of Daily and Weekly Status Unemployment

Characteristic	Rural Areas		Urban Areas		Rural Areas		Urban Areas		Rural Areas		Urban Areas	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
<b>MPCE (contd..)</b>												
150 - 200	6.0	6.3	8.7	13.5	3.7	3.3	6.6	10.8	1.6	1.9	1.3	1.3
200 - 250	5.2	5.9	7.2	11.1	3.1	3.5	5.5	9.4	1.7	1.7	1.3	1.2
250 - 300	5.6	7.0	5.9	10.4	3.5	4.8	4.7	8.3	1.6	1.5	1.3	1.3
300 & Above	4.8	6.1	5.3	7.4	3.4	4.2	4.3	6.6	1.4	1.5	1.2	1.1
<b>Educational Attainment</b>												
All	7.6	9.3	9.1	11.3	3.7	4.5	6.6	7.7	2.1	2.1	1.4	1.5
Illiterate	7.0	8.6	7.4	7.1	2.7	3.8	3.3	2.8	2.6	2.3	2.2	2.5
Upto Primary	7.4	9.9	9.0	9.4	3.2	4.6	5.6	5.6	2.3	2.2	1.6	1.7
Middle	8.8	17.8	11.2	22.4	5.9	12.7	9.0	19.2	1.5	1.4	1.2	1.2
Secondary	10.5	31.0	10.1	21.6	9.1	29.3	9.1	20.5	1.2	1.1	1.1	1.1
Graduate & Above	11.9	38.1	7.3	18.8	10.7	36.2	7.0	18.5	1.1	1.1	1.0	1.0

TABLE 2.3

INDIA : INCIDENCE OF UNEMPLOYMENT BY DAILY STATUS CONCEPT, ACCORDING TO PRINCIPAL INDUSTRY OF THE HOUSEHOLD, HOUSEHOLD TYPE AND LAND CULTIVATED BY THE HOUSEHOLD, BY SEX AND RURAL-URBAN RESIDENCE, 1983

Principal Industry of the Household	Daily Status Rates				Household Land Cultivated (0.00 acres)		Daily Status Rates	
	Rural Areas		Urban Areas		Rural Areas		Rural Areas	
	Males	Females	Males	Females	Males	Females	Males	Females
Agriculture	7.2	8.9	12.0	11.8	0 - 00		12.4	15.1
Mining and Quarrying	9.4	9.5	6.9	14.7	0.01 - 0.49		15.9	17.9
Manufacturing	7.7	7.2	8.7	10.0	0.50 - 0.99		10.2	11.3
Electricity, Gas and Water	5.5	8.6	6.9	13.7	1.00 - 2.49		6.2	7.2
Construction	15.9	12.7	17.7	13.8	2.50 - 4.99		3.3	3.8
Trade	5.3	6.7	5.2	8.6	5.00 - 7.49		2.7	2.5
Transport	10.3	17.5	10.1	16.4	7.50 - 9.99		2.2	1.5
Services	11.1	19.1	7.0	9.7	10.00 - 14.99		1.8	1.1
Others	6.7	9.7	9.1	9.1	15.00 - 19.99		1.4	0.9
					20.00 & Above		1.3	1.2
<b>Household Type</b>								
Self-Employed	3.5	3.0	9.8	8.6				
(a) in Agri.	2.9	2.5						
(b) in Non-Agri.	5.7	5.4						
Labour Households	14.5	16.4						
(a) Agri. Labour	14.8	16.9	9.2	11.1				
(b) Other Labour	13.2	13.7						
Other Households	7.2	9.0						

TABLE 2.4

INDIA: PERCENTAGE OF WORKERS REPORTING THEMSELVES AS "FULLY ENGAGED IN WORK" (IN TERMS OF USUAL ACTIVITY) BY EDUCATION AND BROAD AGE GROUP - NSS 38TH ROUND (JANUARY - DECEMBER 1983)

Education	Rural		Urban	
	Male	Female	Male	Female
15-24 All	85.2	81.5	88.2	82.3
Illiterate*	84.9	81.1	87.2	80.1
Pre-primary to middle school	85.2	82.9	87.4	82.3
Secondary	86.6	84.8	91.1	88.3
Under or post graduate	91.4	91.9	96.2	95.4
25-29 All	86.7	81.0	91.4	86.9
Illiterate*	85.3	80.3	88.9	83.2
Pre-primary to middle school	87.0	83.6	89.6	82.0
Secondary	90.8	88.9	93.7	96.9
Under or post graduate	92.6	100.0	96.5	97.0
30-59 All	88.2	83.9	93.9	87.9
Illiterate*	86.6	83.8	89.3	85.3
Pre-primary to middle school	89.5	84.0	93.4	88.7
Secondary	95.5	97.2	97.7	96.9
Under or post graduate	95.7	100.0	98.6	98.2
60 & Above All	89.8	83.4	91.7	86.5
Illiterate*	89.4	83.5	90.4	87.8
Pre-primary to middle school	90.7	80.3	92.3	74.3
Secondary	93.5	100.0	95.3	100.0
Under or post graduate	90.5	-	94.6	100.0

(contd....)

Education	Rural		Urban	
	Male	Female	Male	Female
All	87.4	82.8	92.1	86.3
Ages Illiterate*	86.4	82.7	88.9	84.3
Pre-primary to middle school	87.9	83.3	91.1	85.0
Secondary	92.2	91.3	95.8	94.9
Under or post graduate	94.3	98.1	97.8	97.4

\* Including literate without any formal education.

Source : Sarvekshana - Journal of the National Sample Survey Organisation  
Vol.XI, No.4, Issue No.35, April 1988.

TABLE 2.5

INDIA : PERCENTAGE OF WORKERS AVAILABLE FOR ADDITIONAL WORK ACCORDING TO SEX, RESIDENCE AND NATURE AND STATUS OF THEIR USUAL ACTIVITY, 1977-78 AND 1983 RURAL-URBAN

Usual Principal Activity	Rural Areas				Urban Areas			
	Males		Females		Males		Females	
	1983	1977-78	1983	1977-78	1983	1977-78	1983	1977-78
1. Self-Employed	12.6	18.3	7.6	11.0	10.5	15.0	9.0	12.1
(a) Agriculture	11.8	17.5	7.0	11.3	11.1	16.7	5.6	8.7
(b) Non-Agriculture	16.0	22.2	11.9	15.5	10.4	14.7	10.7	13.3
2. Regular Employees	12.7	12.9	11.8	14.2	7.5	9.8	8.3	9.7
(a) Agriculture	14.7	15.3	13.1	12.5	12.1	16.4	5.3	3.7
(b) Non-Agriculture	11.7	11.0	11.2	15.3	7.4	9.7	8.3	9.9
3. Casual Employees	38.2	54.1	32.1	49.6	36.0	53.5	27.6	46.8
(a) Agriculture	38.9	54.5	33.1	50.5	37.6	58.6	34.9	55.0
(b) Non-Agriculture	34.5	51.2	22.5	37.9	28.9	51.7	22.7	39.2
4. All Workers	20.3	27.3	18.1	26.6	13.1	17.5	14.6	20.7
5. Non-Workers	1.8	2.0	1.8	4.2	2.5	3.2	3.9	3.1
(a) Students	1.6	2.0	0.8	1.0	2.4	3.2	1.2	1.5
(b) Persons Attending Domestic Duties	4.9	4.2	5.5	5.0	8.1	3.2	5.2	3.9

Source : Sarvekshana (Journal of the National Sample Survey Organisation), Vol. V, Nos. 1 & 2, July - October 1981, pp. S 116; Vol. XI, No. 4, April 1988, p. S189-194.

TABLE 2.6

INDIA : PERCENTAGE OF SUBSIDIARY WORKERS AND NON-WORKERS IN TERMS OF THEIR USUAL ACTIVITY REPORTING AVAILABILITY FOR WORK, ACCORDING TO THE 1981 CENSUS AND THE 38TH ROUND OF THE NSS, 1983

Usual Activity of Subsidiary Workers Non-Workers	Rural Areas				Urban Areas			
	1981 Census		38th Round 1983		1981 Census		38th Round 1983	
	Males	Females	Males	Females	Males	Females	Males	Females
<b>(A) SUBSIDIARY WORKERS</b>								
1. Students	22.6	10.6	8.5	4.7	43.8	34.5	12.4	16.2
2. Household Duties	42.2	8.1	13.6	9.5	53.1	19.0	45.6	11.8
3. Rentiers, Pensioners etc.	15.8	6.5	3.0	7.6	5.8	15.4	14.2	25.2
4. Others*	81.7	61.2	8.8	9.4	84.6	67.2	14.6	12.0
5. All	57.0	8.8	8.8	9.4	73.7	22.4	14.6	12.0
<b>(B) NON-WORKERS</b>								
1. Students	3.3	2.6	1.2	0.8	5.1	3.2	2.1	1.2
2. Household Duties	12.5	2.8	3.7	4.3	18.5	4.5	3.6	4.8
3. Rentiers, Pensioners etc.	4.1	0.9	8.2	2.1	3.3	1.2	3.9	2.4
4. Others*	76.4	60.7	8.2	2.1	82.3	71.6	3.9	2.4
5. All	8.0	3.3	1.3	3.4	13.9	5.1	2.2	3.6

\* The dependents and infants are excluded from the 1981 census data.

Source : 1. Census of India, 1981, Series 1, India, Part III B (VI) General Economic Tables, New Delhi, 1987, Table B-22, pp. 946-57.

2. Sarvekshana - Journal of the National Sample Survey Organisation, Vol. XI, No. 4, Issue No. 35, April 1988, pp. S-189-194.



TABLE 3.1  
 INDONESIA : UNEMPLOYMENT RATES BY AGE AND SEX, 1980, AND FOR ALL AGES, VARIOUS YEARS

Data Source and Date	Males			Females		
	Urban	Rural	Total	Urban	Rural	Total
	Percentage					
<b>All Ages</b>						
1971 Census, Series C	5.0	1.9	2.4	4.5	1.4	1.8
1971 Census, Series D	10.8	6.8	7.5	17.1	10.7	11.5
1976 Supas	5.4	1.2	1.9	5.9	1.5	2.0
1976 Sakernas (Sept.-Dec.)	6.9	1.9	2.7	5.1	1.1	1.6
1978 Sakernas	7.0	2.1	2.9	3.8	1.4	1.8
1980 Census	2.7	1.0	1.4	3.0	2.2	2.3
1985 Supas	5.3	1.2	2.2	5.6	1.1	2.0
<b>AGE GROUP, 1980 CENSUS</b>						
10 - 14 years	6.0	2.4	2.6	4.7	3.8	3.9
15 - 19 years	8.3	2.7	3.5	5.7	3.8	4.1
20 - 24 years	6.8	1.9	3.1	6.5	3.0	3.8
25 - 29 years	2.3	0.9	1.3	2.6	2.1	2.2
30 - 34 years	1.0	0.6	0.7	1.5	1.7	1.7
35 - 44 years	0.8	0.5	0.6	0.8	1.3	1.2
45 + years	1.0	0.5	0.6	0.8	1.3	1.2

Source : Hugo Graeme, et al., The Demographic Dimension in Indonesian Development, Singapore, Oxford University Press, 1987, pp. 287-288.

The Central Bureau of Statistics, Population of Indonesia Series No. 5 Results of the 1985 Intercensal Population Survey, Jakarta, undated.

TABLE 3.2

INDONESIA : LABOUR FORCE PARTICIPATION RATE AND THE INCIDENCE OF UNEMPLOYMENT IN POPULATION  
AGED 10 AND OVER BY SEX AND RURAL-URBAN RESIDENCE ACCORDING TO THE ALTERNATIVE  
CONCEPTS OF WEEKLY ACTIVITY AND DAILY ACTIVITY, 1977 AND 1978

Sex/ Residence	1978						1977					
	LFPR (10+)			Unemployment Rate			LFPR (10+)			Unemployment Rate		
	Current Activity	Daily Activity		Current Activity	Daily Activity		Current Activity	Daily Activity		Current Activity	Daily Activity	
<b>MALES</b>												
Urban	64.0	64.2		7.0	7.3		62.3	62.8		6.4	6.6	
Rural	77.0	77.1		2.1	2.2		75.1	75.4		1.9	1.9	
All	74.5	74.6		2.9	3.1		72.6	73.0		2.6	2.7	
<b>FEMALES</b>												
Urban	28.2	27.4		3.8	4.0		24.3	23.7		5.4	5.4	
Rural	42.5	39.8		1.4	1.5		38.1	36.1		1.1	1.2	
All	39.8	37.4		1.8	1.9		35.5	33.7		1.6	1.7	
<b>BOTH SEXES</b>												
Urban	45.7	44.9		6.0	6.2		42.9	42.4		6.1	6.2	
Rural	59.2	57.6		1.8	2.6		56.3	55.1		1.6	1.7	
All	56.7	55.2		2.5	2.5		53.7	52.7		2.3	2.4	

Source : 1. Labour Force Situation in Indonesia, 1977, Director General of The Central Bureau of Statistics, Jakarta, 1979.  
2. Labour Force Situation in Indonesia, 1978, Director General of The Central Bureau of Statistics, Jakarta, 1981.

TABLE 3.3

## INDONESIA : UNEMPLOYMENT RATES, BY SEX, AGE GROUP AND EDUCATIONAL ATTAINMENT, IN URBAN AREAS, 1978

Sex and Age	Unemployment Rate (Percentage) by Educational Attainment						
	No Schooling	Some Primary Schooling	Completed Primary Schooling	Lower Secondary Schooling	Upper Secondary Schooling and above	All Levels	
<b>MALE</b>							
15 - 19 years	4.3+	18.2	28.1	37.3	36.6+	25.0	
20 - 24 years	4.5+	9.9	13.6	122.2	30.3	17.9	
25 - 29 years	6.1+	4.4	6.3	6.5	8.8	6.7	
30 - 34 years	1.4+	2.0	3.3	3.6	4.0	3.3	
35 - 44 years	0.3	1.1	1.6	1.9	1.7	1.4	
45 + years	0.7	1.1	1.4	1.9	1.0	1.2	
All Ages*	2.0	5.6	7.6	9.2	9.3	7.0	
<b>FEMALES</b>							
15 - 19 years	1.4	4.7	12.2	21.6	67.6+	9.5	
20 - 24 years	2.3	4.3	6.9	15.3	20.3	10.4	
25 - 29 years	3.1	2.1	2.9	5.3	5.5	3.9	
35 - 44 years	0.8	0.4	0.2	1.7	0.4	0.6	
45 + years	0.0	0.2	0.0	0.8	0.0	0.1	
All Ages*	0.7	2.2	5.2	8.1	10.6	3.8	

+ Numbers in this group are fairly small

\* Includes 10 - 14 age group

Source : Hugo Graeme, et al., *The Demographic Dimension in Indonesian Development*, Singapore, Oxford University Press, 1987, pp. 287-288.

TABLE 3.4

INDONESIA: LABOUR FORCE PARTICIPATION RATE (LFPR) INCIDENCE OF UNEMPLOYMENT AND THE PERCENTAGE OF WORK-SEEKERS AMONG WORKERS BY SEX AND RURAL-URBAN RESIDENCE ACCORDING TO THE INTERCENSAL (SUPAS), 1985

Educational Attainment	Rural Areas						Urban Areas					
	Males			Females			Males			Females		
	LFPR	Unemp- loyment	Work Seekers Among Workers	LFPR	Unemp- loyment	Work Seekers Among Workers	LFPR	Unemp- loyment	Work Seekers Among Workers	LFPR	Unemp- loyment	Work Seekers Among Workers
1. Never Attended School	85.6	0.3	1.6	49.8	0.3	0.8	72.5	1.1	2.2	37.6	0.3	0.6
2. Do not complete/Not yet Completed Primary School	64.4	0.5	2.3	36.3	0.5	0.8	48.0	2.5	3.0	24.3	1.3	0.9
3. Primary School	76.5	0.9	3.1	38.4	1.0	1.1	59.8	3.6	2.5	22.8	3.3	1.1
4. Junior High School(General)	61.2	3.5	5.6	26.1	4.6	3.2	49.2	5.0	3.2	16.8	8.4	10.5
5. Junior High School(Vocational)	77.7	2.4	5.4	32.8	5.4	3.2	74.2	4.8	3.2	25.3	6.1	2.4
6. Senior High School(General)	79.9	12.3	11.2	42.7	30.9	14.9	66.3	12.3	3.8	33.7	21.9	4.3
7. Senior High School(Vocational)	93.4	5.6	6.8	77.8	8.8	4.8	88.4	9.5	2.7	60.8	13.2	2.6
8. Diploma I/II	98.7	1.0	3.7	87.3	2.1	2.0	92.4	2.8	2.9	84.8	5.1	1.6
9. Academy/Diploma III	96.9	4.3	5.6	73.9	18.7	6.3	92.2	5.0	2.6	71.9	12.9	1.9
10. University	92.4	3.0	3.5	70.8	4.4	2.5	95.5	3.2	2.1	80.6	13.1	2.7
All	72.3	1.2	3.0	44.1	1.1	1.1	59.9	5.3	2.9	28.1	5.6	1.5

Source: Indonesia, Biro Pusat Statistik, Population of Indonesia, Results of the 1985 Intercensal Population Survey, Jakarta, pp. 225-223.

TABLE 3.3  
**INDONESIA : UNEMPLOYMENT RATES, BY SEX, AGE GROUP AND EDUCATIONAL ATTAINMENT,  
 IN URBAN AREAS, 1978**

Sex and Age	Unemployment Rate (Percentage) by Educational Attainment						
	No Schooling	Some Primary Schooling	Completed Primary Schooling	Lower Secondary Schooling	Upper Secondary Schooling and above	All Levels	
<b>MALE</b>							
15 - 19 years	18.3+	18.2	28.7	37.3	36.6+	25.0	
20 - 24 years	4.5+	9.9	13.6	122.2	30.3	17.9	
25 - 29 years	6.1+	4.4	6.3	6.5	8.8	6.7	
30 - 34 years	1.4+	2.0	3.3	3.6	4.0	3.3	
35 - 44 years	0.3	1.1	1.6	1.9	1.7	1.4	
45 + years	0.7	1.1	1.4	1.9	1.0	1.2	
All Ages*	2.0	5.6	7.6	9.2	9.3	7.0	
<b>FEMALES</b>							
15 - 19 years	1.4	4.7	12.2	21.6	67.6+	9.5	
20 - 24 years	2.3	4.3	6.9	15.3	20.3	10.4	
25 - 29 years	3.1	2.1	2.9	5.3	5.5	3.9	
30 - 34 years	0.8	0.4	0.2	1.7	0.4	0.6	
35 - 44 years	0.0	0.2	0.0	0.8	0.0	0.1	
45 + years	0.7	2.2	5.2	8.1	10.6	3.8	
+ Numbers in this group are fairly small							
* Includes 10 - 14 age group							

Source : Hugo, Graeme, et al., *The Demographic Dimension in Indonesian Development*, Singapore, Oxford University Press, 1987, pp. 287-288.

TABLE 3.4

INDONESIA: LABOUR FORCE PARTICIPATION RATE (LFPR) INCIDENCE OF UNEMPLOYMENT AND THE PERCENTAGE OF WORK-SEEKERS AMONG WORKERS BY SEX AND RURAL-URBAN RESIDENCE ACCORDING TO THE INTERCENSAL (SIPAS), 1985

Educational Attainment	Rural Areas				Urban Areas							
	Males		Females		Males		Females					
	LFPR	Unemp- loymnt	Work Seekers Among Workers	LFPR	Unemp- loymnt	Work Seekers Among Workers	LFPR	Unemp- loymnt	Work Seekers Among Workers			
1. Never Attended School	85.6	0.3	1.6	49.8	0.3	0.8	72.5	1.1	2.2	37.6	0.3	0.6
2. Do not complete/Not yet Completed Primary School	64.4	0.5	2.3	36.3	0.5	0.8	48.0	2.5	3.0	24.3	1.3	0.9
3. Primary School	76.5	0.9	3.1	38.4	1.0	1.1	59.8	3.6	2.5	22.8	3.3	1.1
4. Junior High School(General)	61.2	3.5	5.6	26.1	4.6	3.2	49.2	5.0	3.2	16.8	8.4	10.5
5. Junior High School(Vocational)	77.7	2.4	5.4	32.8	5.4	3.2	74.2	4.8	3.2	25.3	6.1	2.4
6. Senior High School(General)	79.9	12.3	11.2	42.7	30.9	14.9	66.3	12.3	3.8	33.7	21.9	4.3
7. Senior High School(Vocational)	93.4	5.6	6.8	77.8	8.8	4.8	88.4	9.5	2.7	60.8	13.2	2.6
8. Diploma I/II	98.7	1.0	3.7	87.3	2.1	2.0	92.4	2.8	2.9	84.8	5.1	1.6
9. Academy/Diploma III	96.9	4.3	5.6	73.9	18.7	6.3	92.2	5.0	2.6	71.9	12.9	1.9
10. University	92.4	3.0	3.5	70.8	4.4	2.5	95.5	3.2	2.1	80.6	13.1	2.7
All	72.3	1.2	3.0	44.1	1.1	1.1	59.9	5.3	2.9	28.1	5.6	1.5

Source: Indonesia, Biro Pusat Statistik, Population of Indonesia, Results of the 1985 Intercensal Population Survey, Jakarta, pp. 225-223.

TABLE 3.5

INDONESIA : UNEMPLOYED PERSONS BY SEX, RURAL-URBAN RESIDENCE,  
DURATION OF UNEMPLOYMENT BY MEANS OF LIVELIHOOD, 1978

Duration of Unemployment/ Means of Livelihood	Urban Areas		Rural Areas		All Areas	
	Male	Female	Male	Female	Male	Female
A. All	100.0	100.0	100.0	100.0	100.0	100.0
1. Occasional job	11.1	4.2	20.1	9.5	16.5	8.0
2. Maintained by family/friend	82.7	91.0	72.4	83.0	76.5	85.3
3. Other means	6.2	4.8	7.5	7.5	7.0	6.7
B. <u>Less than three months</u>						
1. Occasional job	7.4	6.8	21.5	10.1	17.6	9.4
2. Maintained by family/friend	87.6	88.1	71.7	82.5	75.9	83.6
3. Other means	5.4	5.2	6.8	7.4	6.4	6.9
C. <u>4-6 Months</u>						
1. Occasional job	7.9	2.8	21.3	12.1	14.8	9.0
2. Maintained by family/friend	81.6	97.2	74.7	84.9	78.0	89.1
3. Other means	10.5		4.0	2.9	7.2	1.9
D. <u>7-12 Months</u>						
1. Occasional job	16.4	1.7	15.8	9.2	16.1	6.7
2. Maintained by family/friend	78.0	90.8	69.8	77.3	73.6	81.8
3. Other means	5.6	7.5	14.4	13.5	10.3	11.5

(contd.....)

Duration of Unemployment/ Means of Livelihood	Urban Areas		Rural Areas		All Areas	
	Male	Female	Male	Female	Male	Female
<b>E. 13-24 Months</b>						
1. Occasional job	12.1	-	18.3	6.2	14.0	3.7
2. Maintained by family/friend	83.5	91.7	81.1	90.2	82.8	90.8
3. Other means	4.4	8.3	0.6	3.5	3.2	5.5
<b>F. More than 24 months</b>						
1. Occasional job	20.2	11.3	1.4	-	16.0	6.5
2. Maintained by family/friend	77.9	86.4	83.0	87.9	79.1	87.0
3. Other means	1.8	2.3	15.6	12.1	5.0	6.4



TABLE 3.6

INDONESIA : PERCENTAGE OF EMPLOYED PERSONS AVAILABLE FOR MORE WORK BY HOURS WORKED,  
SEX AND RURAL-URBAN RESIDENCE, 1977

Number of Hours Worked	Rural Areas			Urban Areas			All Areas		
	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes
All	42.1	35.4	39.4	28.0	19.6	25.5	39.9	33.4	37.7
Temporarily not at work	41.4	40.0	40.9	39.6	38.2	39.2	41.2	74.0	40.7
< 10	47.1	34.7	40.6	41.8	34.5	37.4	46.9	34.7	40.5
10 - 24	48.9	39.2	40.0	48.8	36.3	42.0	48.9	39.1	43.9
25 - 34	49.0	35.1	43.3	38.4	23.0	31.8	48.1	34.1	42.3
35 - 59	41.0	35.2	39.4	27.4	18.9	25.4	38.6	32.7	37.0
60 - 79	30.8	20.1	28.2	22.0	9.4	18.7	28.4	16.9	25.6
80 +	24.1	21.1	23.1	13.2	7.4	10.4	21.4	15.7	19.3

Source : Indonesia, Biro Pusat Statistik, 977 National Labour Force Survey, Jakarta 1979, pp. 127 - 135.

TABLE 3.7

INDONESIA : PERCENTAGE WILLING TO WORK AMONG THOSE  
CLASSIFIED AS CURRENTLY OUTSIDE THE  
LABOUR FORCE, 1978

	Males	Females	Both sexes
Rural Areas	17.0	26.2	23.7
Urban Areas	11.7	20.1	17.4
All Areas	15.5	24.8	22.2

TABLE 4.1  
 PENINSULAR MALAYSIA : LABOUR FORCE PARTICIPATION RATES (LFPR) AND THE INCIDENCE OF  
 UNEMPLOYMENT BY RURAL-URBAN RESIDENCE, SEX AND AGE, 1980

Rate	LFPR			Unemployment Rate			LFPR			Unemployment	
	All Areas	Rural	Urban	All Areas	Rural	Urban	Males	Females	Males	Females	
15 - 64	65.0	65.4	64.0	5.6	5.8	5.0	85.5	44.8	4.7	7.2	
15 - 19	41.9	41.5	42.7	16.6	17.4	14.7	50.1	33.7	15.9	17.5	
20 - 24	73.8	71.8	77.7	9.4	10.6	7.3	92.2	56.7	7.4	12.5	
25 - 29	71.5	70.6	73.3	3.1	3.1	3.1	97.7	46.5	2.6	4.1	
30 - 34	71.7	72.5	70.0	2.2	2.4	1.9	98.3	44.4	1.6	3.6	
35 - 39	73.5	74.7	71.0	1.4	1.4	1.5	97.8	48.2	1.2	1.8	
40 - 44	74.7	77.6	68.6	1.6	1.7	1.2	98.2	50.2	1.5	1.6	
45 - 49	73.3	76.0	67.5	1.4	1.4	1.4	97.7	49.4	1.4	1.4	
50 - 54	69.4	71.9	63.6	2.5	2.0	3.8	94.9	44.1	2.4	2.8	
55 - 59	57.1	62.0	45.6	4.0	4.0	3.9	79.9	35.4	4.1	3.7	
60 - 64	48.6	54.8	34.9	4.7	3.8	7.7	70.5	27.9	4.6	5.0	

Source : Report of the Labour Force Survey, 1980, Department of Statistics Malaysia, Kuala Lumpur, August 1983, pp. 76-81, 110-111.

**TABLE 4.2**  
**PENINSULAR MALAYSIA : INCIDENCE OF UNEMPLOYMENT AGED 15-64 BY ETHNIC**  
**GROUP AND SEX, 1970 AND 1980**

Ethnic Group	1970 Census		1980 Survey	
	Males	Females	Males	Females
Malay	4.4	6.0	5.1	9.1
Chinese	4.0	7.8	3.8	4.0
Indian	7.1	10.1	5.3	8.0
Others	2.8	5.2	2.4	5.3
All Races	4.5	7.0	4.7	7.2

Note : The 1970 estimates have been adjusted to make them comparable with the 1980 survey in terms of the population covered (i.e. age group 15-64).

Source : 1. Population Census of Malaysia, 1970, General Report, Vol.2, Commissioner for Census, Malaysia, April 1977, pp. 248-52.

2. Report of the labour force survey, 1980, Department of Statistics, Malaysia, Kuala Lumpur, August 1983, p. 41

TABLE 4.3

PENINSULAR MALAYSIA: (a) PERCENTAGE DISTRIBUTION OF UNEMPLOYED PERSONS BY AGE-GROUP,  
 (b) INCIDENCE OF UNEMPLOYMENT BY RESIDENCE AND  
 (c) UNDER EMPLOYMENT RATE ACCORDING TO LABOUR FORCE SURVEY OF 1975, 1980 AND 1985.

Year	(a) Age Group						Total	
	15-19	20-24	25-29	30-34	35-39	40-54		55-64
1975	39.8	30.0	10.0	4.0	3.3	8.8	4.9	100.0
1980	38.6	33.4	9.1	4.9	2.4	6.8	4.9	100.0
1985	33.4	37.4	9.6	4.9	3.8	7.7	3.2	100.0

Year	(b) Incidence of Unemployment			Total
	Rural	Urban	Total	
1975	6.4	7.2	6.8	6.8
1980	5.8	5.0	5.6	5.6
1985	7.2	6.2	6.7	6.7

Year	(c) Underemployment Rate As Percentage of	
	Labour Force	Employed Persons
1975	2.0	2.1
1980	2.4	2.5
1985	3.2	3.4

Source: Karim, Abu Bakar and Fun, Tham Ah, Trends in Employment, Unemployment and Underemployment, Paper presented for Policy makers' Round Table Conference on Employment Strategies for Accelerated Economic Growth In Asia, December 1-2, 1988 Kuala Lumpur, Malaysia, pp. 11-12.

TABLE 5.1

PAKISTAN: INCIDENCE OF UNEMPLOYMENT BY SEX AND AGE ACCORDING TO THE 1981 CENSUS (USUAL STATUS)  
AND LABOUR FORCE SURVEYS OF 1984-85 TO 1986-87 (CURRENT STATUS)

	Males					Females					Both Sexes					
	1981	1984-85	1985-86	1986-87	1981	1984-85	1985-86	1986-87	1981	1984-85	1985-86	1986-87	1981	1984-85	1985-86	1986-87
<b>Incidence of Unemployment</b>																
10+	2.93	3.96	3.85	3.34	7.43	1.48	1.66	1.13	3.10	3.72	3.63	3.05	3.10	3.72	3.63	3.05
10-14	8.07	14.27	13.67	9.72	13.29	3.32	4.15	2.34	8.44	12.66	12.10	8.14	8.44	12.66	12.10	8.14
15+	2.40	2.97	3.00	2.84	6.06	1.10	1.25	0.94	2.53	2.80	2.83	2.61	2.53	2.80	2.83	2.61
15-19	5.89	6.52	5.34	7.05	8.20	2.99	1.89	3.11	5.99	6.07	4.94	6.50	5.99	6.07	4.94	6.50
20-29	3.09	3.29	4.05	3.53	4.43	0.90	1.23	0.46	3.14	3.08	3.81	3.17	3.14	3.08	3.81	3.17
30-39	1.50	1.78	1.98	1.38	4.44	0.99	0.43	0.17	1.59	1.64	1.80	1.21	1.59	1.64	1.80	1.21
40-49	1.21	2.01	1.55	1.67	4.95	0.65	0.62	0.76	1.32	1.88	1.46	1.55	1.32	1.88	1.46	1.55
50-59	1.14	2.79	2.72	1.39	3.39	-	-	-	1.20	2.61	2.51	1.25	1.20	2.61	2.51	1.25
60+	1.64	1.75	1.81	2.19	15.79	-	8.31	3.20	1.95	1.68	2.13	2.27	1.95	1.68	2.13	2.27
<b>Labour Force Participation Rates</b>																
10+	72.45	77.09	74.76	73.48	3.18	8.68	9.12	11.90	40.16	44.22	43.37	44.00	40.16	44.22	43.37	44.00
15+	81.57	87.08	85.37	84.36	3.18	9.16	9.58	12.67	44.88	49.45	48.86	49.90	44.88	49.45	48.86	49.90

Note : The 1981 census rates are based on the "usual status" approach whereas the other data are based on the "current status" approach with a reference period of the week preceding the date of interview.

Source : Pakistan, Statistics Division, Federal Bureau of Statistics, Labour Force Survey 1986-87, Islamabad, 1987, pp. xvii-xx.

TABLE 5.2

PAKISTAN: INCIDENCE OF UNEMPLOYMENT BY SEX, AGE AND RURAL-URBAN  
RESIDENCE, 1986-87

Age Group (Years)	Males		Females		Both Sexes	
	Rural	Urban	Rural	Urban	Rural	Urban
	10+	2.77	4.68	0.99	2.01	2.50
10-14	7.63	18.20	2.26	3.32	6.34	16.83
15-19	6.24	9.27	2.60	5.85	5.67	8.98
20-24	3.03	7.25	0.62	2.47	2.69	6.98
25-29	1.42	4.79	-	-	1.21	4.53
30-34	1.59	0.75	-	-	1.35	0.69
35-39	1.58	1.11	-	2.66	1.29	1.21
40-44	1.40	1.39	-	-	1.19	1.29
45-49	2.12	1.59	1.55	-	2.01	1.52
50-54	0.60	2.77	-	-	0.53	2.64
55-59	1.50	2.20	-	-	1.30	2.10
60+	0.45	4.61	2.83	5.32	1.57	4.65
<b>Labour Force Participation Rates</b>						
10+	76.27	67.62	14.99	5.12	46.73	38.17

TABLE 5.3

PAKISTAN : INCIDENCE OF UNEMPLOYMENT BY SEX, AGE AND EDUCATIONAL ATTAINMENT IN RURAL AND URBAN AREAS, 1981 CENSUS

Sex/Age	Rural Areas						Urban Areas					
	Illiterate	Literate	Below Metric	Metric but Below Degree	Degree and above	All	Illiterate	Literate	Below	Metric but Below Degree	Degree and above	All
<b>Males</b>												
10 +	2.1	2.4	2.2	3.4	2.8	2.2	5.9	4.1	4.0	4.6	3.2	5.1
10 - 14	5.4	5.3	5.2	13.6	-	5.4	25.0	16.7	16.4	28.1	-	23.9
15 - 19	3.3	5.4	4.5	10.1	8.5	3.4	12.3	11.9	9.9	18.2	18.8	12.2
20 - 24	2.2	3.5	2.7	5.4	9.5	2.6	6.1	6.8	5.1	8.5	10.7	6.5
25 - 29	1.6	2.2	1.8	2.9	4.2	1.8	3.3	3.8	3.2	4.0	5.4	3.6
30 - 34	1.3	1.4	1.2	1.8	2.4	1.3	2.7	2.3	2.0	2.5	2.6	2.5
35 - 39	1.2	1.0	1.0	1.1	1.3	1.2	2.0	1.6	1.5	1.7	1.3	1.7
40 - 44	1.0	1.2	1.1	1.2	1.7	1.1	1.7	1.4	1.4	1.5	1.2	1.6
45 - 49	1.0	1.0	1.0	1.0	0.6	1.0	1.7	1.4	1.4	1.5	1.2	1.5
50 - 54	1.0	0.9	1.0	0.8	0.8	1.0	1.7	1.5	1.4	1.7	1.0	1.6
55 - 59	0.8	0.9	0.9	1.1	-	0.8	1.7	1.8	1.6	2.5	1.4	1.8
60 and Above	1.3	1.4	1.3	1.5	1.8	1.4	0.3	2.9	2.6	3.4	3.9	3.0
<b>Females</b>												
10 +	7.6	3.6	4.0	3.0	0.5	7.2	10.7	5.6	14.6	4.5	2.7	8.2
10 - 14	10.5	10.1	10.2	-	-	10.5	26.7	33.0	33.7	22.1	-	27.3
15 - 19	5.7	6.5	6.6	6.2	-	5.8	13.1	18.3	23.4	13.6	15.6	15.2
20 - 24	4.9	3.4	2.9	4.1	-	4.6	10.3	7.1	13.6	5.9	5.8	8.2
25 - 29	4.4	2.0	5.0	1.6	-	3.9	7.1	3.6	10.7	3.0	2.3	4.6
30 - 34	3.8	2.0	5.0	0.2	1.8	3.5	5.1	2.0	5.2	1.4	1.4	3.1
35 - 39	4.0	2.3	1.4	4.0	-	3.8	5.0	1.9	4.5	1.7	0.8	3.2
40 - 44	5.3	2.5	1.1	5.2	2.4	3.1	5.0	2.2	3.9	1.8	1.1	3.8
45 - 49	4.9	3.5	5.9	-	-	6.4	6.1	3.7	4.1	3.5	3.4	5.2
50 - 54	6.1	3.4	3.6	2.6	-	5.9	6.0	2.9	4.7	1.4	1.8	6.1
55 - 59	10.7	4.7	4.3	6.0	-	10.5	6.8	3.7	6.4	2.4	1.2	6.1
60 and Above	17.8	28	3.0	3.6	-	17.3	13.2	7.0	8.7	4.8	3.3	12.3

TABLE 5.4

PAKISTAN : CLASSIFICATION OF UNEMPLOYED IN RURAL AND URBAN AREAS BY  
REASON OF UNEMPLOYMENT, 1982-83 AND 1986-87

Reasons of Unemployment	Rural Areas		Urban Areas		All Areas	
	1982-83	1986-87	1982-83	1986-87	1982-83	1986-87
Total	100.00	100.00	100.00	100.00	100.00	100.00
Looking for work	33.91	36.70	42.45	36.13	37.06	36.47
Not looking for work because of illness	10.80	10.10	3.52	6.93	8.12	8.81
Not looking for work because believing job not available	3.25	3.99	3.04	2.45	3.17	3.36
Temporary or indefinite lay off	4.54	5.57	2.32	6.06	3.72	5.77
Waiting to report to new job	1.69	2.62	2.46	3.05	1.97	2.79
Willing to work if provided with a job	19.60	17.87	18.57	18.97	19.22	18.32
Apprentice without a guaranteed job	9.19	11.07	19.51	19.68	13.00	14.54
Having some usual occupation but doing nothing during reference period	17.00	12.15	8.31	6.74	13.73	9.94



TABLE 5.5

PAKISTAN : PERCENTAGE OF EMPLOYED REPORTING WORK FOR LESS THAN 35 HOURS DURING THE REFERENCE WEEK BY RURAL-URBAN RESIDENCE AND SELECTED CHARACTERISTICS, 1982-83

Industry Division	Rural Areas	Urban Areas	All Areas	Status	Rural Areas	Urban Areas	All Areas
Total	15.1	05.6	12.7	Total	15.1	05.6	12.7
Agriculture, Forestry, Hunting & Fishing	18.1	13.7	17.9	Employer	12.2	01.7	09.4
Mining & Quarrying	00.0	00.0	00.0	Self Employed	08.6	06.0	08.0
Manufacturing	09.9	06.0	08.1	Unpaid family helper	26.9	14.1	25.6
Electricity, Gas & Water Construction	01.1 11.3	02.4 07.0	01.8 09.8	Employee	08.7	03.6	06.5
Wholesale, Retail Trade, Restaurants & Hotels	05.7	03.8	04.6				
Transport, Storage & Communication	04.3	02.4	03.3				
Financing, Insurance, Real Estate & Business Services	00.0	01.6	01.2				
Community, Social & Personal Services	12.3	06.6	09.5				
Activities not Adequately Defined	00.0	00.0	00.0				

**TABLE 6.1**  
**PHILIPPINES: LABOUR FORCE PARTICIPATION RATES AND THE INCIDENCE OF**  
**UNEMPLOYMENT BY RURAL-URBAN RESIDENCE FOR POPULATION**  
**AGED 15 AND OVER, 1976-1985**

Year	Labour Force Participation Rate (Percent)			Incidence of Unemployment		
	All Areas	Urban Areas	Rural Areas	All Areas	Urban Areas	Rural Areas
1976	60.5	58.1	61.7	5.2	8.5	3.5
1977	58.2	55.5	59.6	4.5	7.2	2.2
1978	62.5	57.5	65.1	4.1	6.0	3.2
1979	61.4	-	-	4.0	-	-
1980	59.8	54.8	62.2	5.0	8.2	3.7
1981	61.7	56.4	64.4	5.3	8.3	4.0
1982	60.1	56.2	62.0	6.0	9.8	4.2
1983	64.1	57.8	67.3	5.4	9.3	3.7
1984	64.2	59.9	66.9	6.2	10.7	3.5
1985	63.4	59.4	66.0	7.1	11.8	4.4

Notes: 1. Prior to 1976, the labour force data were collected for population aged 10 and over.

2. The reference period of the survey is the quarter preceeding the month of survey (January, April, July and October).

TABLE 6.2

PHILIPPINES: PERCENTAGE OF UNEMPLOYED PERSONS HAVING PRIOR WORK EXPERIENCE BY SEX AND RURAL-URBAN RESIDENCE AND EDUCATIONAL ATTAINMENT, THIRD QUARTER OF 1976

Educational Attainment	Male			Female		
	Rural	Urban	All	Rural	Urban	All
All	37.9	30.2	33.2	46.0	79.3	40.1
1. No grade completed	83.3	50.0	66.7	60.0	-@	70.0
2. Elementary	46.4	31.7	38.8	52.1	38.9	47.1
a. First to fifth grade	43.5	33.3	38.6	58.5	33.3	51.4
b. Graduate	48.5	30.8	38.4	44.6	42.2	43.9
3. High school	34.0	33.3	33.6	37.8	30.5	33.1
a. First to fifth year	45.0	34.0	40.3	36.0	35.7	34.8*
b. Graduat	25.9	27.9	27.1	40.0	24.4	29.5
4. College	23.8	22.4	21.7	38.8	34.9	36.4
a. Undergraduate	21.4	23.1	24.4*	34.6	31.8	32.9
b. Graduate	14.3	18.2	20.7*	45.5	38.5	40.3

\* Estimates are affected by rounding up of figures.

@ Number of unemployed persons in the category was small.

TABLE 6.3

## PHILIPPINES: PERCENTAGE OF HEADS OF HOUSEHOLDS AMONG THE UNEMPLOYED DURING THIRD QUARTER OF 1977, 1980, 1983 AND 1986

Age	1977			1980			1983			1986		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Total	19.2	3.2	10.0	19.8	2.8	9.7	20.1	3.1	10.0	23.9	2.4	12.2
15-19	0.8	0.2	0.5	-	-	-	-	-	-	0.4	-	0.2
20-24	2.9	0.9	1.8	4.6	0.5	2.3	0.8	0.1	0.5	0.6	0.2	0.3
25-34	23.9	1.9	11.1	20.3	1.6	7.6	10.4	2.5	5.3	18.9	1.7	9.5
35-44	67.9	5.3	23.3	60.8	5.1	20.2	72.1	4.3	28.0	70.4	3.2	30.7
45-54	92.6	19.4	44.6	88.9	5.7	29.1	84.7	8.9	41.1	92.2	15.6	54.9
55-64	69.9	9.1	38.7	93.8	30.8	60.6	96.5	22.7	53.6	94.1	17.3	61.6
65 & above	86.6	34.3	60.1	88.4	14.2	60.4	81.2	50.3	70.2	82.5	29.6	61.9

TABLE 6.4

## PHILIPPINES: AGE DISTRIBUTION OF THE UNEMPLOYED BY SEX, DURING THIRD QUARTER OF 1977, 1980, 1983 AND 1986

Age	Males				Females			
	1977	1980	1983	1986	1977	1980	1983	1986
All	99.5	100.0	99.9	99.8	99.6	100.0	100.1	100.0
15 - 19	27.1	30.7	21.0	18.0	21.9	18.7	21.7	17.1
20 - 24	32.1	32.7	36.2	31.2	29.7	29.0	30.0	33.7
25 - 34	25.0	17.7	21.1	28.4	25.4	25.4	26.3	28.4
35 - 44	7.5	7.8	8.7	10.0	13.6	14.4	11.1	12.1
45 - 54	4.9	5.0	6.8	6.7	6.8	8.7	6.3	5.4
55 - 64	2.8	3.9	4.0	3.7	2.2	2.9	3.9	2.3
65 and Above	0.1	2.2	2.1	1.8	N	0.9	0.8	1.0

N: Negligible

**TABLE 7.1**  
**REPUBLIC OF KOREA : INCIDENCE OF UNEMPLOYMENT AND PERCENTAGE OF UNEMPLOYED WITH PREVIOUS WORK EXPERIENCE BY SEX, 1973-1985**

	Incidence of Unemployment			Type of Household		Percent of Unemployed with Previous Job Experience		
	Both Sexes	Males	Females	Farm	Non-Farm	Both Sexes	Males	Females
1965	7.3	8.3	5.4	3.0	13.5	N.A.	N.A.	N.A.
1970	4.4	5.3	2.8	1.5	7.4	N.A.	N.A.	N.A.
1971	4.4	5.1	3.2	1.4	7.2	N.A.	N.A.	N.A.
1972	4.5	5.6	2.4	1.3	7.5	N.A.	N.A.	N.A.
1973	3.9	5.0	2.1	0.9	6.8	62.7	N.A.	N.A.
1974	4.0	4.8	2.6	1.1	6.7	64.4	N.A.	N.A.
1975	4.1	5.0	2.6	1.2	6.6	60.4	N.A.	N.A.
1976	3.9	5.0	2.0	1.0	6.2	64.2	N.A.	N.A.
1977	3.8	4.6	2.4	1.1	5.8	55.0	58.7	42.9
1978	3.2	3.7	2.2	0.8	4.7	60.9	65.7	47.5
1979	3.8	4.7	2.4	0.9	5.6	72.3	74.5	65.6
1980	5.2	6.2	3.5	1.1	7.5	72.1	76.5	59.2
1981	4.5	5.5	2.5	0.8	6.5	69.7	74.0	53.3
1982	4.4	5.5	2.5	0.9	6.0	70.3	74.9	54.1
1983	4.1	5.2	2.2	0.8	5.5	73.6	77.4	59.4
1984	3.8	4.8	2.2	0.8	4.9	69.8	73.4	57.3
1985	4.0	5.0	2.4	1.1	4.9	66.9	71.5	51.1
1986	3.8	4.9	2.1	0.9	4.7	N.A.	N.A.	N.A.

Source: 1. International Labour Office, Year Book of Labour Statistics, 1983. Geneva, 1983, pp. 413, 448.  
2. International Labour Office, Year Book of Labour Statistics, 1986. Geneva, 1986, pp. 528, 550.  
3. Republic of Korea, Economic Planning Board, National Bureau of Statistics, Social Indicators in Korea, 1987, pp. 112-113.

TABLE 7.2  
**REPUBLIC OF KOREA : INCIDENCE OF UNEMPLOYMENT BY EDUCATIONAL  
 ATTAINMENT AND TYPE OF HOUSEHOLD**

Type of Household	Less than Primary School Graduates	Middle School	High School	College & University and Over
<u>Whole Country</u>				
1980	2.7	6.3	9.3	6.2
1985	1.5	4.1	5.9	6.6
1986	1.5	3.5	5.4	6.9
<u>Farm</u>				
1980	0.3	2.4	5.4	4.0
1985	0.1	1.6	4.3	12.1
1986	0.1	0.7	3.4	13.7
<u>Non-Farm</u>				
1980	5.6	7.7	10.0	6.3
1985	2.8	4.6	6.1	6.5
1986	2.7	4.0	5.6	6.7

TABLE 7.3

REPUBLIC OF KOREA : LABOUR FORCE PARTICIPATION RATE (LFPR) AND  
INCIDENCE OF UNEMPLOYMENT BY SEX AND BROAD AGE  
GROUPS, 1985

	Unemployment Rate			Labour Force Participation Rate		
	Males	Females	Both Sexes	Males	Females	Both Sexes
14 +	5.0	2.4	4.0	46.3	29.3	37.9
14 - 19	12.2	9.9	10.9	13.8*	18.6*	16.1*
20 - 24	13.8	6.3	9.7	38.3	49.1	43.6
25 - 44	4.5	1.1	3.4	91.0	46.5	67.5
45 - 54	3.2	0.4	2.1	94.9	59.1	76.8
55 - 59	2.2	0.3	1.3	82.4	50.7	64.9
60 +	0.4	0.0	0.2	48.1	21.1	31.9

\* LFPR relates to age group 15 - 19

Source : International Labour Office, Year Book of Labour Statistics, 1986, Geneva, 1986, pp. 32, 540.

TABLE 7.4

REPUBLIC OF KOREA : PERCENTAGE OF UNEMPLOYED BY DURATION OF  
UNEMPLOYMENT, BY SEX, 1985 AND 1986

Duration of Unemployment	1985			1986		
	Whole Country	Males	Females	Whole Country	Males	Females
Total	100.0	100.0	100.0	100.0	100.0	100.0
Less than 6 Months	81.4	80.5	84.5	79.5	78.4	83.4
6 Months to 1 Year	13.4	13.6	12.5	14.6	14.9	13.4
1 to 1.5 Years	3.7	4.2	2.1	4.0	4.5	2.3
1.5 to 2 Years	0.6	0.5	0.7	1.1	1.3	0.6
2 to 2.5 Years	0.5	0.7	0.1	0.5	0.6	0.2
2.5 to 3 Years	0.1	0.2	-	0.2	0.2	-
3 Years and Over	0.2	0.3	0.1	0.2	0.2	0.2

TABLE 8.1

SRI LANKA : INCIDENCE OF UNEMPLOYMENT BY AREA OF RESIDENCE, AGE GROUP  
AND LEVEL OF EDUCATION 1985-86

Characteristic	Males	Females	Both Sexes
<b>(a) Area of Residence</b>			
All	10.8	20.8	14.1
Urban Areas	15.8	27.9	19.5
Rural Areas	9.5	21.3	13.2
Estate	9.0	6.4	7.8
<b>(b) Age Group</b>			
10+	10.8	20.8	14.1
10 - 14	11.9	5.5	9.5
15 - 19	28.6	37.8	31.7
20 - 24	23.3	42.5	30.4
25 - 29	10.6	27.7	16.7
30 - 34	6.9	16.7	10.2
35 - 39	4.6	7.9	5.7
40 - 44	5.4	5.7	5.5
45 - 49	3.1	4.5	3.6
50 - 54	2.1	2.3	2.2
55 - 59	5.2	2.4	4.6
60 - 64	2.3	3.7	2.6
65 and Over	1.6	8.2	3.0
<b>(c) Level of Education</b>			
10 +	10.8	20.8	14.1
No Schooling	7.7	4.8	6.1
Passed Grade 0-4/1-5 year	7.0	9.4	7.7
Passed Grade 5-7/6-8 year	9.5	16.5	11.2
Passed Grade 8-9/9-10 year	15.4	34.9	20.8
Passed G.C.E.(O/L)/NCGE	14.4	35.6	22.3
Passed G.C.E.(A/L)/HNCE	18.7	44.9	32.0
Passed Degree	3.3	10.2	6.3
Post Graduate (Degree/Diploma)	4.2	3.2	3.9

Note : Data are based on responses relating to activities of the week preceding the date of interview  
Source : Sri Lanka, Department of Census and Statistics, Labour Force and Socio-Economic Survey  
- 1985-86 : Preliminary Report, Colombo, 1987.



**TABLE 8.2**  
**SRI LANKA : INCIDENCE OF UNEMPLOYMENT BY SEX AND**  
**RESIDENCE FOR 1963, 1971, 1981 AND 1986**

Year	Sex	Rural	Urban	All Areas
1963	Persons	-	-	7.6
1971	Males	13.4	17.0	14.3
	Females	27.4	47.6	31.1
	Persons	17.3	23.4	18.7
1981	Males	11.8	13.8	13.9
	Females	28.2	35.2	29.5
	Persons	16.0	18.5	16.6
1986	Persons	-	-	18.3

Source : Masinghe, K. Trends in Employment and Unemployment, Sri Lanka, Paper presented for Policy Makers Roundtable Conference on Employment Strategies for Accelerated Economic Growth in Asia, December 1-2, 1988, Kuala Lumpur, Malaysia, Tables 1.1 and 1.6.

**TABLE 9.1**  
**THAILAND : LABOUR FORCE PARTICIPATION RATES AND THE**  
**INCIDENCE OF UNEMPLOYMENT, 1971-86**  
(Percent)

		Labour Force Participation Rate		Incidence of Unemployment
		Crude	11+	
1971	1	47.4	72.8	0.2
	2	47.2	72.5	0.3
1972	1	44.6	68.6	0.6
	2	44.8	68.8	0.7
1973	1	43.0	66.1	0.5
	2	44.3	68.0	0.5
1974	1	35.0	53.6	0.8
	2	43.2	66.2	0.5
1975	1	35.2	53.9	0.4
	2	44.5	68.2	0.5
1976	1	33.6	51.3	0.9
	2	44.1	67.4	1.1
1977	1	37.1	56.4	1.4
	2	46.4	70.6	1.1
1978	1	37.8	57.4	1.2
	2	48.4	73.5	1.0
1979	1	37.2	56.5	1.3
	2	46.3	70.2	1.2
1980	1	-	-	-
	2	48.1	72.8	1.3
1981	1	37.6	53.4	2.2
	2	51.6	73.4	1.5
1982	1	39.0	54.5	2.8
	2	53.0	74.7	6.5
1983	1	49.4	69.2	12.0
1985		47.9	63.2	7.7
1986		45.0	61.9	9.1

Note : Data relate to the civilian non-institutional population

Source : Thailand, Ministry of Interior, Department of Labour  
Year Book of Labour Statistics 1984, Table 1.1

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REVIEW OF INTERNATIONAL RECOMMENDATIONS CONCERNING  
STATISTICS OF THE ECONOMICALLY ACTIVE POPULATION,  
EMPLOYMENT, UNEMPLOYMENT AND UNDEREMPLOYMENT  
AND THEIR APPLICATION TO NATIONAL CONDITIONS

(Item 6 of the provisional agenda)

INTERNATIONAL STANDARDS ON THE MEASUREMENT OF ECONOMIC  
ACTIVITY, EMPLOYMENT, UNEMPLOYMENT AND UNDEREMPLOYMENT

Paper prepared by the ILO  
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INTERNATIONAL STANDARDS ON THE MEASUREMENT OF ECONOMIC ACTIVITY,  
EMPLOYMENT, UNEMPLOYMENT AND UNDEREMPLOYMENT\*

Paper prepared by the ILO Bureau of Statistics  
CH-1211 Geneva 22

1. Introduction

Statistics of the economically active population, employment, unemployment and underemployment serve a large variety of purposes. From an economic point of view, they provide measures of labour supply, labour input, the structure of employment and the extent to which the available labour time and human resources are actually utilised or not. Such information is essential for macro-economic and human resources development planning and policy formulation. When collected at different points in time, the data provide the basis for monitoring current trends and changes in the labour market and employment situation, which may be analysed in connection with other economic and social phenomena so as to evaluate macro-economic policies. The unemployment rate, in particular, is widely used as an overall indicator of the current performance of a nation's economy.

Statistics of the economically active population, employment, unemployment and underemployment are also an essential base for the design and evaluation of government programmes geared to employment creation, vocational training, income maintenance, poverty alleviation and similar objectives. From a social point of view, the measurement of the relationships between employment, income and other socio-economic characteristics provides information on the adequacy of employment of different sub-groups of the population, the income-generating capacity of different types of economic activities, and the number and characteristics of persons unable to ensure their economic well-being on the basis of the employment opportunities available to them. Information on employment and income, disaggregated by branches of economic activity, occupations and socio-demographic characteristics, is needed for collective bargaining, for assessment of the social effects of structural adjustment policies on different sub-groups of the population, and for the analysis of race, sex or age inequalities in work opportunities and participation and their changes over time.

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So as to provide guidance to countries in developing their national statistical programmes and promote international comparability, the International Labour Organisation promulgates international standards on the various topics of labour statistics. These standards are set by the International Conference of Labour Statisticians (ICLS) which convenes about every five years. The standards presently in force concerning statistics of the economically active population, employment, unemployment and under-employment have been adopted by the Thirteenth ICLS in 1982.

The present paper is intended to describe one by one the basic concepts and definitions laid down in the 1982 international standards. Where relevant, particular issues are discussed that may arise in survey applications as to the appropriate statistical treatment of particular categories of workers, such as self-employed persons, unpaid family workers, casual workers, seasonal workers, apprentices and trainees, persons on lay-off and persons engaged in production for own consumption only, who sometimes are at the borderline between labour force categories.

## 2. The concept and boundary of economic activity

A clear understanding of the concept and boundary of economic activity is a fundamental requirement for the correct application of the definitions of the economically active population, employment and unemployment in labour force surveys. The exact boundary between economic and non-economic activities is a matter of convention, but unless a precise dividing line is drawn, the statistical treatment of many situations encountered in practice remains ambiguous and will raise questions about the reliability of the resulting statistics.

The concept of economic activity adopted by the Thirteenth ICLS (1982) for the measurement of the economically active population is defined in terms of the production of goods and services as set forth by the United Nations System of National Accounts (SNA). The international standards specify that "the economically active population comprises all persons of either sex who furnish the supply of labour for the production of economic goods and services, as defined by the United Nations systems of national accounts and balances, during a specified time-reference period". Thus, persons are to be considered as economically active if (and only if) they contribute or are available to contribute to the production of goods and services falling within the SNA production boundary. The use of a definition of economic activity which is based on the SNA serves to ensure that the activity concepts of employment statistics and production statistics are consistent, thus facilitating the joint analysis of the two bodies of statistics.

### SNA production boundary

According to the present SNA,<sup>1</sup> the production of goods and services comprises:

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<sup>1</sup> The SNA is currently under review; the revised version (planned for 1990) will entail, among others, some slight modifications in the delineation of the production boundary.

- (a) the production of goods and services normally intended for sale on the market at a price that is designed to cover their costs of production;
- (b) the production of other goods and services which are not normally sold on the market at a price intended to cover their cost of production, such as government services and private non-profit services to households, domestic services rendered by one household to another and other items;
- (c) specified types of production for own consumption and fixed capital formation for own use.

The latter include:

- (c1) production of primary products (e.g. milk, cereals, fruit, cotton, wood) for own consumption;
- (c2) processing of primary products by their producers to make such goods as butter, flour, wine, cloth or furniture for their own use, whether or not they sell any of these products on the market;
- (c3) production for own consumption of other goods and services only if they are also produced for the market by the same households;
- (c4) production of fixed assets for own use, such as own-account construction of dwellings, farm buildings, roads, tools and similar items which have an expected life of use of one year or more;
- (c5) total rent of owner-occupied dwellings (representing a monetary value which is not directly associated with an activity, this item has no relevance for employment statistics).

#### Market and non-market economic activities

For convenience, the activities corresponding to (a) and (b) may be designated as market activities, and those corresponding to (c) as non-market economic activities. The aggregate constitutes the scope of economic activity for the measurement of the economically active population. All other activities are called non-economic activities.

#### Work for pay

Typically, market activities involve some form of remuneration to those who participate in them. Such remuneration may be in the form of pay or profit. Pay includes cash payment as well as payment-in-kind, whether they are received in the same period where the work is done or not. Cash payment may be in the form of direct wages or salaries at time or piece rates, fees or tips, bonuses or gratuities, etc. Payment-in-kind may be in the form of food, fuel, housing or other goods and services. Payment-in-kind as the sole means of remuneration is not uncommon in some countries, e.g. for agricultural workers receiving a share of the harvest or for apprentices and trainees working just for bed and board.

### Work for profit and family gain

Profit refers to the remuneration for activities performed by persons who operate their own farm, business enterprise or service undertaking with or without hired employees. An activity may be undertaken for profit even if actually no profit is made during the time reference period of the survey. Work for profit also includes the activities of family members undertaken in connection with the operation of a household enterprise producing for the market, even though these persons typically work for family gain and do not receive any direct payment for the work done. Similarly, market production covers also work performed for productive purposes on the basis of an exchange labour arrangement between households, and the production of goods or services for barter among households, even when no cash payment is received.

### Rationale

The rationale for the inclusion of certain types of non-market production in the present SNA definition while excluding others lies in the importance of the activities for the subsistence of the population in many countries, and in the frequent existence of close market parallels, i.e. identical or very similar goods and services are usually also available on the market. Throughout the world, the production and processing of primary products of agriculture, hunting, forestry, fishing, mining and quarrying for own use represent a major part of consumption for many persons and their families.

Similarly, in a number of countries construction of houses, wells and other items to be considered as investment goods is undertaken to a significant extent on an own-account basis. Furthermore, since a shift may take place from production for own consumption to market production as economic development proceeds, it is essential to account for both types of activities, so as to obtain a comparable measure of the economically active population at different periods or for different countries.

There are also practical considerations involved in the delineation of the SNA production boundary. So as to cover market production completely, it is necessary to include some non-market production as well, as it is in practice often impossible to measure the market component separately when the same persons are engaged in both types of production. A similar argument applies for the inclusion of processing of primary products for own consumption which cannot be separated from the production of such products by the same households. This is the main reason why at present processing of goods for own consumption is considered as economic activity only if it involves the processing of primary products and is carried out by the producers of such items. Thus, using cotton fabric (a processed product) to sew clothes is excluded the same as spinning cotton fibres (a primary product) bought at the market, whereas spinning cotton fibres produced by oneself is included.

### Exclusions

Being based on the SNA definition of production of goods and services, the concept of economic activity for the measurement of the economically active population excludes production for own consumption of other items than those mentioned above under (c), such as the processing of primary products by those who do not produce them, the production of other goods and services by households who do not sell any part of them in the market, and the repair and maintenance of constructions, etc., carried out by households for themselves.

Moreover, the SNA production boundary excludes volunteer services rendered to the community or private non-profit organisations, unpaid domestic activities such as teaching and caring for one's own children or cooking food and washing clothes for one's own household, and other types of unpaid activities. The fact that such activities fall at present outside the boundary of economic activity does however not mean that such activities, which are mainly carried out by women, should not be statistically measured at all, as it is widely recognised that they provide a major contribution to the welfare of populations and the development of countries. In fact, the 1982 international standards contain a provision to identify persons engaged in unpaid community and volunteer services, and other persons engaged in marginal activities which fall outside the boundary of economic activities, separately among the population not economically active.

### Measurement

In measuring the economically active population in household surveys, it is essential that careful attention be paid in questionnaire design and interviewer instructions so as to translate the notion of economic activity into appropriate questions, because the interviewers' and respondents' own subjective understanding of economic activity may differ from what the concept intends to include. This requirement is fundamental, as it sets the frame for all subsequent information collected in the course of the interview. A misunderstanding of whether or not certain activities are to be considered as economic may thus have irremediable impacts on the entire interview and on the survey results. Such problems may particularly arise in situations where a substantial part of the economically active population is engaged in activities other than regular full-time full-year employment, such as casual work, work remunerated in kind, unpaid family work and production for own consumption.

#### 3. The currently active population

The 1982 international standards distinguish between two measures of the economically active population: the currently active population (labour force), measured in relation to a short reference period such as one week or one day, and the usually active population, measured in relation to a long reference period such as a year.

The currently active population (or the labour force) comprises all persons above a specified minimum age (e.g. 15 years) who, during a specified brief period of one week or one day, fulfil the requirements for inclusion among the employed or the unemployed as described in later sections of this

paper. The currently active population is the most widely used measure of the economically active population. Being based on a short reference period, it is used for measuring the current employment situation of the economy and the current employment characteristics of the population. When measurement is repeated at sufficiently frequent intervals, current changes over time can be monitored.

#### Labour force framework

The measurement of the currently active population is based on the labour force framework. The essential feature of the labour force framework is that individuals are categorised according to their activities during a specified short reference period by using a specific set of priority rules. The result is a classification of the population into three mutually exclusive and exhaustive categories: employed, unemployed and not-in-the labour force (or not currently active). The first two categories make up the currently active population (or labour force), which gives a measure of the number of persons furnishing the supply of labour at a given moment in time. Persons below the age specified for measuring the economically active population are added to the population not currently active.

#### Priority rules

So as to ensure that each person is classified into one and only one of the three basic categories of the framework, the following set of priority rules is adopted. The first step consists of identifying persons who, during the specified short reference period, were either at work or temporarily absent from work (the "employed" category); the next step is to identify among the remaining persons those who were seeking and/or available for work (the "unemployed" category). The third category, i.e. those without work who were not seeking and/or not available for work, then falls out residually. The notion of work covers the whole range of economic activity as delineated by the SNA production boundary. In this scheme, precedence is given to employment over unemployment and to unemployment over economic inactivity. A person who is both working and seeking work is classified as employed, and a student who is attending school and also seeking work is classified as unemployed. Employment always takes precedence over other activities, regardless of the amount of time devoted to it during the reference period, which in extreme cases may be only one hour. A related feature of the labour force framework is that the concept of unemployment is limited to situations of a total lack of work.

#### Activity principle

Another characteristic of the labour force framework is that a person's labour force status should be determined on the basis of what the person was actually doing during the specified reference period (activity principle). The purpose of the activity principle is to make measurement of the labour force as objective as possible. Thus only persons who were engaged in an economic activity or who were seeking and/or available for such an activity are to be considered for inclusion into the labour force. There are only few exceptions to this activity principle, such as the inclusion among the employed of persons temporarily absent from work, or the inclusion among the unemployed of persons without work who are not seeking work because they have already found a job to start at a date subsequent to the reference period.

## Applicability of the labour force framework

The labour force framework is best suited to situations where the dominant type of employment is regular full-time paid employment. In these situations, a working person falls unambiguously in the employed category, a person seeking and/or available for such employment falls into the unemployed category, and others fall outside the labour force. In practice, however, the employment situation in a given country will to a greater or lesser extent differ from this model. Some deviations may be unimportant or can be handled by proper interpretation of the underlying concepts and definitions, but others may require more elaborate considerations. For example, there might be situations falling at the borderline between basic labour force categories (e.g. persons on temporary layoff, unpaid family workers during the off-season, persons on employment training schemes); raising questions about their appropriate statistical treatment. Others, while clearly falling into one category or another, contribute to the heterogeneity of that category, thus raising difficulties in the appropriate interpretation of the resulting statistics and calling for further differentiations (e.g. distinction between adequately employed and inadequately employed). There may even be situations which raise questions about the very meaningfulness of categories, such as the virtual non-existence of unemployment in the sense of total lack of work in certain countries. Some of these issues will be discussed along with the definitions of employment, unemployment and underemployment in later sections of this paper.

The current activity measurement provides a snapshot picture of the economically active population at a given point of time. In situations where the dominant pattern of employment is year-round, with little or no seasonal variations and relatively few movements into and out of the labour force or its main components, such a snapshot picture is probably sufficient to adequately describe the employment situation for the year. However, where significant seasonal patterns of activities or substantial labour force movements exist, the employment picture obtained from one short reference period may not be representative of others. In such situations, measurement should be made over a longer period of time, either by repeating or staggering the current activity measurement over time so as to cover the desired longer period, or by using the longer period itself as the reference period for measurement. The first approach requires increasing the frequency of labour force surveys or spreading the sample over time, while the second approach calls for retrospective measurement on the basis of an appropriate framework. The framework suggested by the 1982 international standards for the second approach is that of the "usually active population".

### 4. The usually active population

The usually active population comprises all persons above a specified age (e.g. 12 years) whose main activity status as determined in terms of number of weeks or days during a long specified period (such as the preceding 12 months or the preceding calendar year) was employed or unemployed. Residually, the population not usually active comprises all persons whose main activity status during the reference period was neither employed nor unemployed, including persons below the age specified for measuring the economically active population.

As opposed to the priority criterion of the labour force framework used for measurement of the currently active population, measurement of the usually active population is based on the assessment of a "main activity" status over a long reference period. Another fundamental difference between the two frameworks concerns subdivisions. In the labour force framework, individuals are first identified as employed or unemployed, and then the two categories are summed to obtain the currently active population. In the usual activity framework, however, individuals are first classified as usually active or not usually active, and then the usually active may be further subdivided as employed or unemployed according to the main activity during the active period.

#### Illustration

To illustrate the usual activity framework, consider the example of a person who, during the course of a year, was employed for 13 weeks, unemployed for 18 weeks and economically inactive during the remaining 21 weeks. This person would first be classified as usually active as the extent of economic activity over the year (31 weeks) exceeded the extent of inactivity, and these would be classified as unemployed as the extent of unemployment exceeded that of employment. This is despite the fact that among the three activity statuses "employed", "unemployed" and "inactive", the person was inactive for the largest number of weeks.

#### Duration of employment and unemployment during the year

The example shows that with the measurement of the usually active population and its components, data on the duration of employment and unemployment over the year may also be needed. This is because the main activity status of individuals is to be determined on the basis of the amount of time that these individuals were employed or unemployed during the reference period, measured in terms of weeks or days of employment or unemployment. It should be mentioned, however, that accurate measurement of the usually active population and its components is in practice not a simple task. Unless panel surveys for statistical follow-up of individuals are used, it involves retrospective questioning on the employment and unemployment experience of individuals during a whole year. Since retrospective measurement over such a long reference period may be subject to substantial recall errors, particularly in situations of frequent changes in activity status, it is important to adopt measurement procedures to reduce these errors to the extent possible.

The definitions of one week or one day of employment or unemployment are the same as those used in the labour force framework and discussed in the following sections of this paper. This provision links the definition of the usually active population to that of the currently active population. In practical survey applications, however, the usual activity status of individuals will have to be assessed on the basis of a much simpler sequence of questions than that used for the assessment of current activity status.

## 5. Employment

The international definition of employment, as given in the 1982 standards, is formulated in terms of the labour force framework. The definition distinguishes between paid employment (including apprentices and members of the armed forces) and self-employment (including employers, own-account workers, members of producers' co-operatives, unpaid family workers and persons engaged in non-market production). It provides criteria for the measurement of each of these two types of employment. According to the definition, the "employed" comprise all persons above a specified age (e.g. 15 years) who, during a specified short period of either one week or one day, were in the following categories:

### (a) paid employment:

- (a1) at work: persons who, during the reference period, performed some work (i.e. at least one hour) for wage or salary, in cash or in kind;
- (a2) with a job but not at work: persons who, having already worked in their present job, were temporarily not at work during the reference period and had a formal attachment to their job;

### (b) self-employment:

- (b1) at work: persons who, during the reference period, performed some work (i.e. at least one hour) for profit or family gain, in cash or in kind;
- (b2) with an enterprise but not at work: persons with an enterprise (which may be a business enterprise, a farm or a service undertaking) who were temporarily not at work during the reference period for any specific reason.

The concept of work for the measurement of employment corresponds to the concept of economic activity as defined by the United Nations System of National Accounts. This means that the notion of "work for pay, profit or family gain" in the definition of employment should be interpreted as any activity falling within the SNA production boundary.

### The one-hour criterion

The international standards stipulate that "some" work should be interpreted as work for at least one hour during the reference period. This means that engagement in an economic activity for as little as one hour is sufficient for being classified as employed on the basis of the labour force framework. There are several inter-related reasons for the use of the one-hour criterion in the international definition of employment. One is to make this definition as extensive as possible, in order to cover all types of employment that may exist in a given country, including short-time work, casual labour, stand-by work and other types of irregular employment. Another reason is to ensure that at an aggregate level total labour input corresponds to total production. This is particularly useful when joint analysis of employment and production statistics is intended. Still another reason



results from the characteristics of the labour force framework which gives precedence to any employment activity over any other activity, and which defines unemployment as a situation of total lack of work. The definitions of employment and unemployment being inter-related in that framework, raising the minimum number of hours worked in the definition of employment would have the effect that unemployment would no longer refer to situations of total lack of work.

#### Temporary absence from work

The definition of employment includes among the employed certain persons who were not at work during the reference period. These are persons who were temporarily absent from work for reasons such as illness or injury, holiday or vacation, strike or lock-out, educational or training leave, maternity or parental leave, reduction in economic activity, temporary disorganisation or suspension of work due to bad weather, mechanical or electrical breakdown, shortage of raw materials or fuels, etc., or other temporary absence with or without leave.

#### Formal job attachment

The notion of temporary absence from work refers to situations in which a period of work is interrupted by a period of absence. This implies that persons are only to be considered as temporarily absent from work (and thus as employed) if they have already worked in their present activity and are expected to return to their work after the period of absence. The international definition of employment specifies certain criteria for assessing temporary absence from work, distinguishing between paid and self-employment. In the case of paid employment, the criteria are based on the notion of "formal job attachment", to be determined in the light of national circumstances according to one or more of the following criteria: (i) the continued receipt of wage or salary; (ii) an assurance of return to work with the same employer following the end of the contingency, or an agreement as to the date of return; and (iii) the elapsed duration of absence from the job, which may be that duration for which workers can receive compensation benefits without obligations to accept other jobs. This third criterion implies that the absence should be of a fairly short duration for being considered as temporary, although the international standards could not specify any precise time limit that would meaningfully apply to all types of absences.

#### Temporary absence and self-employment

Given the large diversity in self-employment activities, the notion of temporary absence from such activities is less elaborate than that for paid employment. According to the international standards, a self-employed person is to be considered as absent from work when temporarily not at work during the reference period for any specific reason. Thus, a corollary to the criterion of formal attachment for paid workers does not exist in the case of self-employed persons. In practice, the decision as to whether or not self-employed persons are to be considered as temporarily absent from work

(and therefore as employed) may be based on criteria such as the continued existence of the enterprise during the absence, the duration of absence or the reason for absence.

There should be no problem concerning the appropriate statistical treatment of persons who operate a regular enterprise or are engaged independently in an established profession or trade, with or without hired employees, and whose enterprise normally continues to exist during their temporary absences. The same applies to persons who regularly participate as unpaid family workers in the activities of a household enterprise, but happen to be temporarily not at work during the reference period because of sickness and similar reasons. However, particular borderline issues may arise in the case of self-employed persons who are engaged in seasonal or casual activities, such as unpaid family workers during the off-season or casual own-account workers like side-street shoe-shiners and itinerant vendors. In the case of such persons, the notion of temporary absence from work becomes difficult to apply or may even be questioned at all.

#### Particular groups

The international standards refer explicitly to some particular groups of workers to be included among the employed: unpaid family workers, persons engaged in the production of goods and services for own and household consumption, apprentices, working students and homemakers, and members of the armed forces.

An unpaid family worker is a person who works without pay in an economic enterprise operated by a related person living in the same household. In the previous international standards, adopted at the 1954 ICLS, unpaid family workers were required to have worked at least one-third of normal working hours for being classified as employed. This special provision was abandoned at the 1982 ICLS, so that according to the present international standards unpaid family workers at work are to be considered as employed irrespective of the number of hours worked during the reference period, as all other categories of workers.

Another category of unpaid workers to be considered as employed are persons engaged in the production of goods and services for own and household consumption, if such activities fall into the production boundary of the SNA. The international standards specify, however, that such persons should be considered as employed only if their production comprises an important contribution to the total consumption of the household. This provision is in line with national accounting statistics which often exclude non-market economic activities considered as negligible. More specifically, it serves to exclude from the economically active population persons merely engaged in some minor non-market activity, such as persons who grow vegetables in their backyard but whose subsistence does not significantly depend on it.

Concerning apprentices, the international standards clearly state that those who receive pay in cash or in kind are to be considered as employed. Less straightforward is the statistical treatment of apprentices and trainees who are not paid. In such cases, the classification may follow the lines of the recommendations made by the 1987 ICLS concerning the statistical treatment of participants in employment promotion schemes. According to these

recommendations, inclusion among the employed (at work) should be based on whether or not the training takes place in the context of an enterprise and is associated to the productive activities of the enterprise, and inclusion among the employed (with a job but not at work) should be based on whether or not a formal job attachment exists.

With respect to other groups particularly mentioned, the international standards specify that students, homemakers and others mainly engaged in non-economic activities during the reference period, who at the same time were in paid employment or self-employment; should be considered as employed on the same basis as other categories of employed persons. This is in line with the priority rules of the labour force framework.

Members of the armed forces should be included among persons in paid employment and should comprise both the regular and temporary members of the armed forces as specified in the most recent revision of the International Standard Classification of Occupations (ISCO). It follows logically from this provision that persons performing civilian services as an alternative to compulsory military services, wherever such possibility exists, should also be classified as employed.

Given the broadness of the definition of employment, it is advisable to supplement the measurement of employment by collecting data on hours of work, earnings and other characteristics of employment as part of the same survey. Such additional information permits distinction among different sub-groups of the employed and is helpful to a sound interpretation of the statistics. The broadness of the definition of employment points in particular to the recommendations of the 1982 international standards on the measurement of underemployment, discussed in section 7 of the present paper.

## 6. Unemployment

The international standard definition of unemployment is based on three criteria which have to be met simultaneously. According to this definition the "unemployed" comprise all persons above the age specified for measuring the economically active population who during the reference period were:

- (a) "without work", i.e. were not in paid employment or self-employment as specified by the international definition of employment;
- (b) "currently available for work", i.e. were available for paid or self-employment during the reference period; and
- (c) "seeking work", i.e. had taken specific steps in a specified recent period to seek paid employment or self-employment.

### Without work

The "without work" criterion serves to ensure that employment and unemployment are mutually exclusive, with precedence given to employment. Thus, a person is to be considered as without work if she or he did not work at all during the reference period (not even for one hour) nor was temporarily absent from work in the sense described in the previous section of this

paper. The other two criteria, "current availability for work" and "seeking work", serve to distinguish among the non-employed population those who are unemployed from those who are economically inactive. None of the criteria of the definition is meant to be dependent on institutional or legal provisions, such as the receipt of unemployment insurance benefits or registration at a public placement office. They are intended to take account exclusively of the person's actual activity during the reference period.

#### Seeking work

In accordance with the activity principle of the labour force framework, the seeking work criterion is formulated in terms of active search for work. A person must have taken specific steps in a specified recent period to obtain work for being considered as seeking work. A general declaration of being in search for work is not sufficient. This formulation of the criterion is meant to provide an element of objectivity for measurement. The period specified for job search activities need not be the same as the basic survey reference period of one week or one day, but might be longer, such as the past four weeks. The purpose of extending the job search period a little backward in time is to take account of the prevailing time-lags involved in the process of obtaining work after the initial step to find it was made, time-lags during which persons may not take any other initiatives for finding work. This may particularly be the case of persons who can only apply for employment with one potential employer (e.g. public servants) and are awaiting the reply to their application.

The examples of active steps in seeking work listed in the international standards include: registration at a public or private employment exchange (for the purpose of obtaining a job offer); application to employers; checking at worksites, farms, factory gates, market or other assembly places; placing or answering newspaper advertisements; seeking assistance of friends or relatives; looking for land, building, machinery or equipment to establish own enterprise; arranging for financial resources; applying for permits and licenses, etc.

#### Seeking self-employment

Note that the examples cover steps that refer not only to paid employment but also to self-employment. This is because the notion of seeking work is independent from the type of employment sought, including self-employment, part-time employment, temporary, seasonal or casual work, and, in general, any type of work considered as economic activity.

The notion of seeking self-employment, however, requires particular attention, as the process of seeking self-employment may at a certain stage turn into the self-employment activity itself. The question is how to draw an appropriate dividing line. For example, it is not obvious whether the activity of buying an initial stock for opening a shop should still be regarded as a search activity or already as self-employed work. Having discussed the subject, the 1987 ICLS recommended that the distinction between seeking self-employment and self-employment activity itself should be based on the point when the enterprise starts to exist, e.g. when the enterprise is registered. In situations where enterprises are not necessarily required

formally to register in order to operate, the dividing line should be drawn at the point when the first order is received, when financial resources become available, or when the necessary infrastructure is in place.

#### Future starts

The international standard definition of unemployment specifies one particular category of workers for whom an exception is made from the general rule that all three criteria (without work, current availability for work, seeking work) have to be satisfied simultaneously for being considered as unemployed. These are persons without work and currently available for work who have made arrangements to take up paid employment or undertake self-employment activity at a date subsequent to the reference period ("future starts"). Such persons are to be considered as unemployed, whether or not they continue to seek work. Between the alternative of considering them as unemployed or employed (with a job but not at work), the international standards have opted for unemployment. This is because these persons, being currently available for work, would presumably already have started work had the job begun earlier and as such form part of the currently underutilised labour resources. Furthermore, there classification as temporarily absent from work would not be in line with the requirement that a person temporarily absent from work must have already worked in his or her present job.

#### Current availability for work

The current availability criterion involves two aspects: one is availability in the sense of present desire for work; the other is availability in the sense of capability to start work immediately. The first aspect serves to exclude from the unemployed those who have no present desire to obtain work, even if they might have sought work in the past. In survey applications, this aspect is the more important the longer the job search period used for assessing the seeking work criterion. The second aspect serves to exclude persons who are seeking work to begin at a later date, such as students already seeking work to be taken up after completion of the school year.

While the availability criterion is formulated in the international standards as availability during the reference week or day of the survey, many countries prefer to use a slightly longer period, e.g. the two weeks following the interview. This is to account for the fact that not everyone who is seeking work can be expected to take up a job immediately when it is offered. Persons may be temporarily sick at that moment, or may have to make arrangements concerning child care, transport facilities, etc. before being able to start work.

#### Relaxation of the standard definition of unemployment

Seeking work is essentially a process of search for information on the labour market. In this sense, it is most meaningful in situations where the bulk of the working population is oriented towards paid employment and where channels for exchange of labour market information exist and are widely used.

While in industrialised countries these conditions are largely satisfied, this may not be the case in many developing countries where most workers are self-employed, often in household enterprises, and where labour exchanges and similar institutional arrangements are not fully developed and are often limited to certain urban sectors or particular categories of workers. In rural areas and in agriculture, because of the size of the localities and the nature of the activities, most workers have more or less complete knowledge of the work opportunities in their areas at particular periods of the year, making it often unnecessary to take active steps to seek work. Even in industrialised countries, in non-rural areas and non-agricultural activities, there may exist similar situations in which particular groups of workers do not actively seek work because they believe that no work corresponding to their skill is available in their area or at particular times of the business-cycle.

Because it was felt that the standard definition of unemployment, with its emphasis on the seeking work criterion, might be somewhat restrictive and not fully capture the prevailing employment situation of a number of countries, the international standards allow for the relaxation of the seeking work criterion in certain situations. This provision is confined to situations where "the conventional means of seeking work are of limited relevance, where the labour market is largely unorganised or of limited scope, where labour absorption is at the time inadequate, or where the labour force is largely self-employed".

Formulating a definition of unemployment under the relaxation provision does not necessarily mean that the seeking work criterion should be completely relaxed for all categories of workers. The relaxation may be only partial. One would then include among the unemployed, in addition to persons satisfying the standard definition, certain groups of persons without work who are currently available for work but not seeking work for particular reasons.

An example of partial relaxation of the seeking work criterion, explicitly mentioned in the international standards, refers to persons temporarily laid off by their employer without maintaining a formal job attachment, i.e. to lay-offs not to be classified as employed (with a job but not at work). For countries which, depending on national circumstances and policies, prefer to relax the seeking work criterion in the case of persons temporarily laid off, the international standards contain a provision to include such persons, if currently available for work, as a separate sub-category among the unemployed.

It should be mentioned that, by using a definition of unemployment under relaxation of the seeking work criterion, the availability criterion becomes a crucial element for measurement. In contrast with the seeking work criterion, which can be tested by inquiring on concrete steps taken to find work, equivalent probes for the availability criterion are more difficult to conceive. Inquiry on seeking work is essentially an inquiry on facts, while that on availability for work is on attitudes, particularly as far as the desire-of-work aspect is concerned. Seeking work is in principle observable, while availability for work is not to the same extent. Seeking work is basically goal oriented, as the job-seeker has a more or less precise idea of the type of work he or she had sought, while the inquiry on availability for work, which may depend largely on the characteristics of the work potentially offered, is much more hypothetical. Recognising these difficulties, the

international standards caution that in "the application of the criterion of current availability for work, especially in situations where the 'seeking-work' criterion is relaxed, appropriate tests should be developed to suit national circumstances".

## 7. Underemployment

Unemployment is considered in the labour force framework as an extreme situation of total lack of work. Less extreme situations of partial lack of work are all embodied within the concept of employment, broadly defined as engagement in an economic activity for at least one hour during the reference period. It is for identifying such situations of partial lack of work and for complementing the statistics on employment and unemployment that the concept of underemployment has been introduced. According to the international standards, underemployment exists "when a person's employment is inadequate, in relation to specified norms or alternative employment, account being taken of his or her occupational skill (training and working experience)".

The measurement of underemployment has particular relevance in developing countries, notably in agricultural activities. In many developing countries, because of high prevalence of self-employment, limited coverage of workers by unemployment insurance or social security systems and other reasons, the level of measured unemployment is consistently low. This has been explained by the fact that only few people can afford to be unemployed for some period of time, whereas the bulk of the population must engage themselves in some economic activity, however little or inadequate that may be. In such circumstances, the employment situation cannot be fully described by unemployment data alone and should be supplemented with data on underemployment.

While the measurement of underemployment has mostly been recommended for describing the employment situation in developing countries, its relevance for industrialised countries is also increasingly felt. This is because in many countries, due to the recent changes in the employment situation and the rise of various forms of precarious employment, new situations have emerged that can be regarded as underemployment. In fact, the 1987 ICLS agreed on the usefulness of the concept of underemployment in relation to the employment situation of participants in certain categories of employment promotion schemes, though mentioning that the concept may need further elaboration in this context.

### Visible and invisible underemployment

The international standards distinguish between two principal forms of underemployment: visible underemployment and invisible underemployment. Visible underemployment reflects an insufficiency in the volume of employment and is thus a statistical concept which is directly measurable by surveys. Invisible underemployment is primarily an analytical concept reflecting a misallocation of labour resources or a fundamental imbalance between labour and other factors of production. The characteristic symptoms of invisible underemployment, as indicated in the international standards, might be low income, underutilisation of skill, or low productivity.

A comprehensive study of invisible underemployment involves analysis of a wide variety of data, including income and skill levels (disguised underemployment) and productivity measures (potential underemployment). Data requirements for the measurement of invisible underemployment are thus very demanding and involve a number of unresolved difficulties (e.g. evaluating the quality of jobs against the skills of the incumbents, linking data on the productivity of establishments to data on the characteristics of individual workers). Recognising the formidable measurement problems involved, the 1982 international standards state that "for operational reasons, the statistical measurement of underemployment may be limited to visible underemployment".

#### Visible underemployment

The international standards consider two elements in the measurement of visible underemployment: (a) the number of persons visibly underemployed and (b) the quantum of visible underemployment. The first element gives results in terms of number of persons, and the second element is measured in terms of time units such as working days, half-days or hours.

#### Persons visibly underemployed

According to the international standards, persons visibly underemployed comprise "all persons in paid or self-employment, whether at work or not at work, involuntarily working less than the normal duration of work determined for the activity, who were seeking or available for additional work during the reference period". Thus, the definition sets forth three criteria for identification of the visibly underemployed: (i) working less than normal duration; (ii) doing so on an involuntary basis; and (iii) seeking or being available for additional work during the reference period. For considering a person as visibly underemployed, all three criteria must be satisfied simultaneously.

The concept applies to all employed persons, not only to persons in paid employment but also to persons in self-employment, and not only to those currently at work but also to those temporarily absent from work. The underemployed being a sub-group of the employed, the concept does not apply to the population not economically active. By definition, an economically inactive person cannot be underemployed.

#### Working less than normal duration

Assessment of this criterion involves comparing the number of hours worked by a particular worker during the reference period with the number of hours that workers normally work in the corresponding activity. Visible underemployment being a characteristic of a person and not of an activity, special provisions have to be made for multiple-job holders so as to account for all of their activities.

There are essentially two approaches for identifying work of less than normal duration in a survey. One approach is to ask respondents directly whether or not they worked less than normal duration. The other approach is to obtain information on both normal and individual hours of work and compare



the two. The first approach may be suitable where the working hours of the bulk of the population are contractually regulated and survey respondents know about these regulations. Otherwise, the second approach should be used.

#### Normal duration of work

The international standards specify that, for the purpose of classifying persons as visibly underemployed, normal duration of work for an activity should be determined "as reflected in national legislation to the extent it is applicable, and usual practices in other cases, or in terms of a uniform conventional norm". Assessment of normal hours of work in surveys raises certain difficulties. In its strict sense, the notion is essentially limited to regular paid employees, whose working time is regulated by national legislation, collective agreements or at least by a written or verbal employment contract. However, such regulations may vary from one branch of activity to another, and even for a given branch they may differ among establishments or according to the occupation, age and other characteristics of the worker. This means that normal hours of work would have to be assessed on an individual basis.

Moreover, similar provisions for casual workers, multiple-job holders and self-employed persons do not generally exist, so that in such cases the normal duration of work would have to be determined on the basis of usual practices. Even this may, however, be difficult in cases where the hours of work usually spent in a given activity are highly variable among workers. This may particularly be the case in agricultural and seasonal activities.

The international standards suggest therefore, as an alternative method, to use a uniform conventional norm (e.g. 30, 35, 40 hours) for the normal duration of work. ~~This is to be defined in the light of national circumstances and to be applied for all activities and all categories of workers.~~ In assessing visible underemployment, special provisions have then to be made for workers who, though reporting working hours below the uniform norm, are nevertheless to be considered as fully employed, since full-time work in their activity does not involve more hours of work (teachers, judges, etc.).

It should also be brought to attention that certain other categories of workers, such as own-account workers and unpaid family workers in agriculture, trade or services, may not be fully employed, even if reporting very long hours of work. This is because there is a tendency for such persons to spread their work over time rather than to work short time when the demand for their products or services is low.

#### Involuntary nature

Once identified that a person is working less than normal duration, one has to assess whether this situation is involuntary or not. This may be determined in surveys by asking for the reason why a person worked less than normal duration. The importance of this second criterion of the international definition of persons visibly underemployed results from the fact that there are many different reasons for work below normal duration. In certain situations, persons are forced to do so because of economic reasons, i.e. they

are faced with a slack period, material shortages, etc., or they cannot find more work. However, there are also situations where persons decide voluntarily to work less. This is the case of many working women with children, young persons combining studies with employment, or elderly workers voluntarily participating in phased retirement schemes. Moreover, for the purpose of measuring visible underemployment, the notion of "involuntary reason" should be interpreted in the sense of "due to the economic situation" so as to exclude other involuntary reasons like illness, disablement, etc.

#### Seeking or available for additional work

For considering as visibly underemployed, a person involuntarily working less than normal duration must be seeking or available for additional work during the reference period. The purpose of this criterion is twofold. First, the criterion serves to reinforce the probe on the involuntary nature of short-time work; second, it is used to maintain consistency with the activity principle embedded in the labour force framework.

The notion of additional work is to be interpreted in a broad sense. It is meant to refer to all work arrangements and types of work that could increase a person's total working hours. Additional work may thus mean: (a) working more hours at the present job; (b) obtaining another job of the same or a different type in addition to the present one; (c) replacing the present job by another one of the same or a different type, but with more hours; or (d) combinations of these. In the case of self-employment, additional work should be interpreted so as to cover also an increase in the number of clients or orders, and not only an increase in the number of working hours.

#### Quantum of visible underemployment

According to the 1982 international standards, quantum of visible underemployment refers to the aggregate "time available for additional employment during the reference period in respect of each person visibly underemployed ... computed in units of working days, half-days or hours as may be convenient in national circumstances, depending on the nature of the data collected".

The international standards particularly mention two methods for measuring the time available for additional employment, without excluding other possibilities. The first method is based on a direct inquiry on the duration of work sought, i.e. on the number of additional days, half-days or hours of work sought or available for during the reference period up to the normal duration of work. Difficulties may however arise in the case of workers not remunerated on time rates, such as many self-employed persons, piece-rate workers, home-based workers and workers remunerated by the task. Such persons may not think in terms of duration of work sought but rather in terms of the amount of extra orders they could accept, the number of additional clients they could cope with, etc.

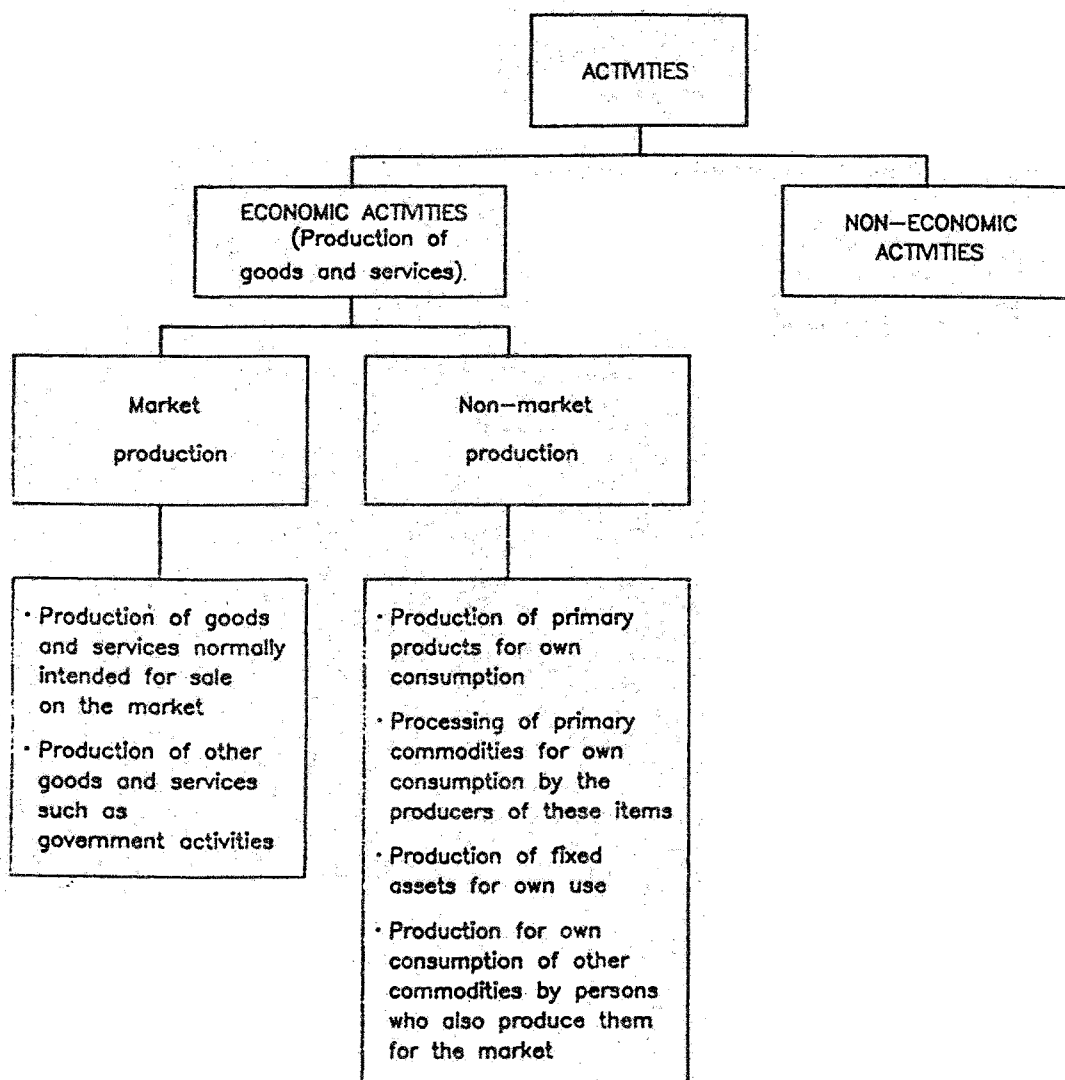
The second method, called labour time disposition, is more precise but also more complex. It consists of compiling, on a day-by-day basis, for each person concerned, a balance sheet of the total labour time potentially available, broken down into time employed (or, more precisely, time worked), time available for employment and time not available for employment during the reference period. When compiled for all persons in the labour force, the labour time disposition approach also permits derivation of a composite estimate of the quantum of current unemployment and visible underemployment. It should also be mentioned that the approach offers many other possibilities for data analysis. In particular, many different work patterns can be revealed, e.g. full-time full-week, full-time part-week, part-time full-week and part-time part-week employment.

#### 8. Employment and income relationships

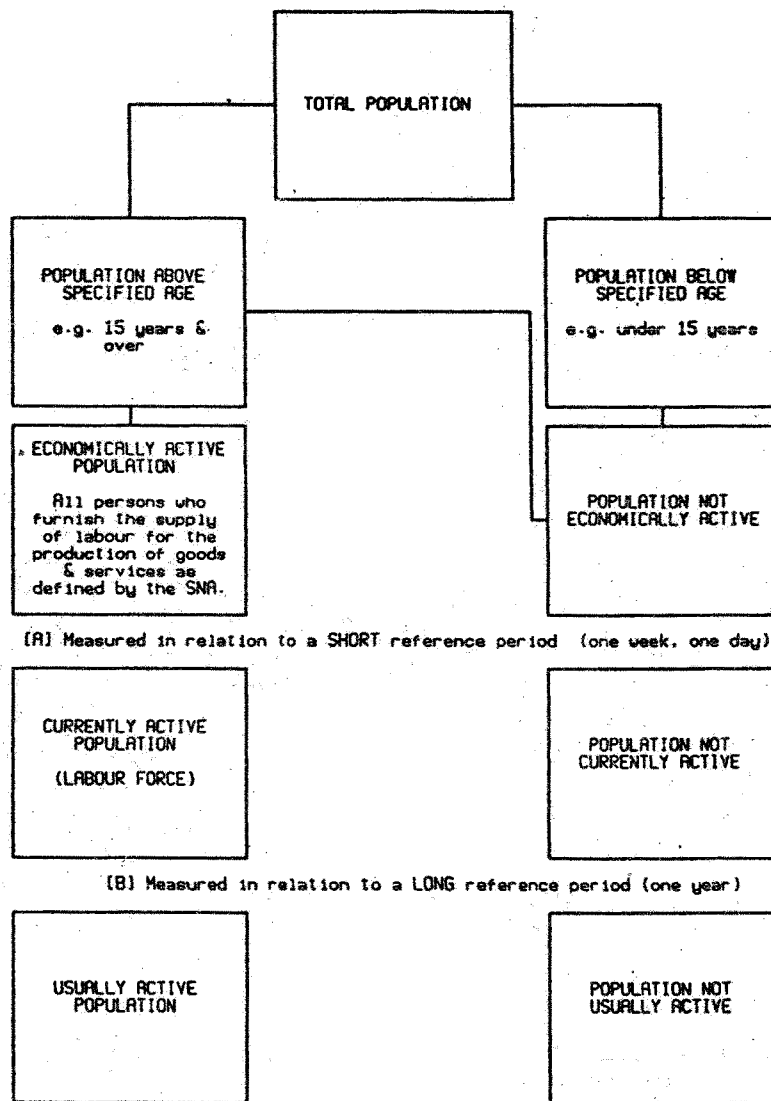
Inadequacy of employment may result from a number of different factors, among which insufficient volume of employment (in terms of time worked) and low remuneration are the two most obvious ones. Statistics on unemployment and visible underemployment provide insight only on the first of these factors. They do not provide any information on the adequacy of the incomes obtained from employment and on related social aspects. The limitation of the concepts of unemployment and visible underemployment becomes evident, for example, in the situation of persons who, though fully employed in terms of hours, have low earnings and therefore seek extra or different work. Another example applies to the situation of self-employed persons, where a lack of demand may result in low intensity of work and low income rather than in a reduction of time spent at work. Such situations are as important for employment policies as are unemployment and visible underemployment.

So as to indicate the need for supplementing statistics of unemployment and invisible underemployment with statistics that would provide insights on the income aspect of employment inadequacy, the 1982 international standards recommend that countries develop data collection programmes for the analysis of the relationships between employment and income. In particular, data should be compiled for the purpose of (a) analysing the income-generating capacity of different economic activities; and (b) identifying the number and characteristics of persons who are unable to maintain their economic well-being on the basis of the employment opportunities available to them. However, the relationships between employment and income are complex, and up to now relatively little national or international experience exists on these topics. Thus, there is still much work to be done in the future.

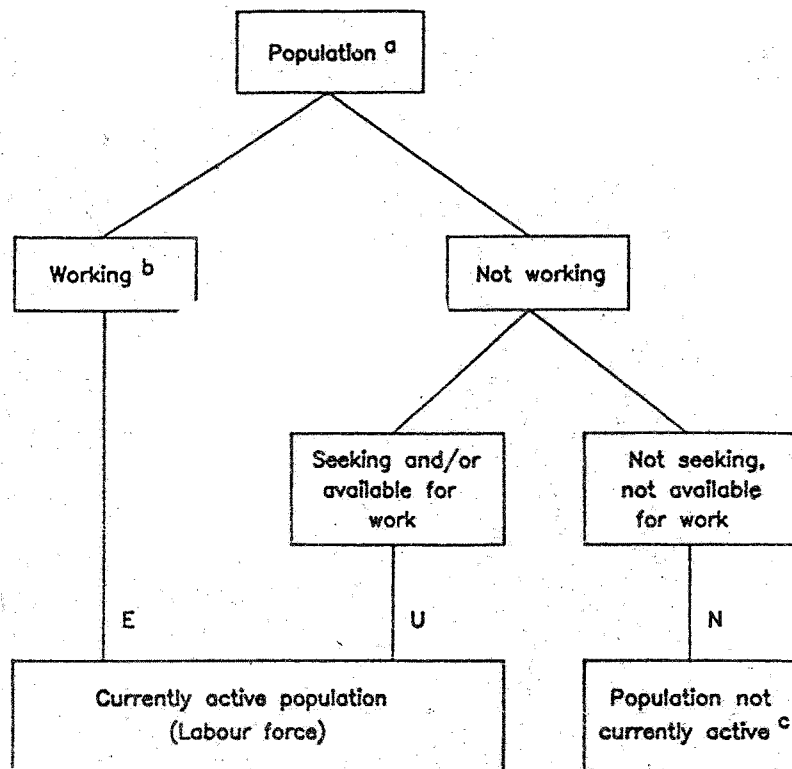
THE SCOPE OF ECONOMIC ACTIVITY  
IN TERMS OF THE PRESENT SNA CONCEPT OF PRODUCTION  
OF GOODS AND SERVICES



MAIN CONCEPTS AND DEFINITIONS OF RESOLUTION I



**DIAGRAM 2:  
LABOUR FORCE CLASSIFICATION SCHEME – BASIC ELEMENTS**



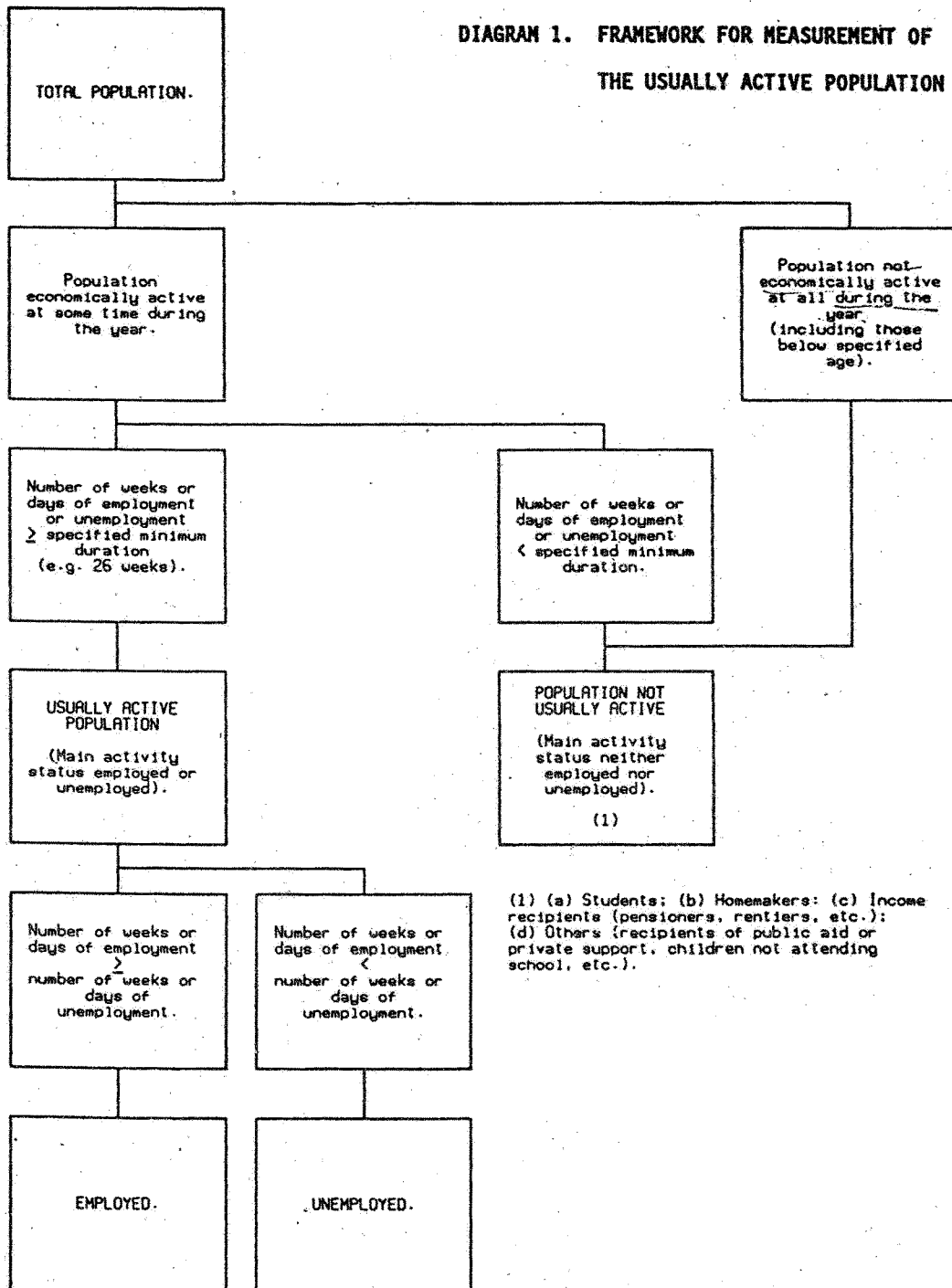
**Notes:**

- a) Or working age population.
- b) At work or temporarily absent from work.
- c) Including persons below working age.

E= Employed  
U= Unemployed  
N= Not in the labour force

ILO Bureau of Statistics  
25/05/87

DIAGRAM 1. FRAMEWORK FOR MEASUREMENT OF THE USUALLY ACTIVE POPULATION



ILO Bureau of Statistics

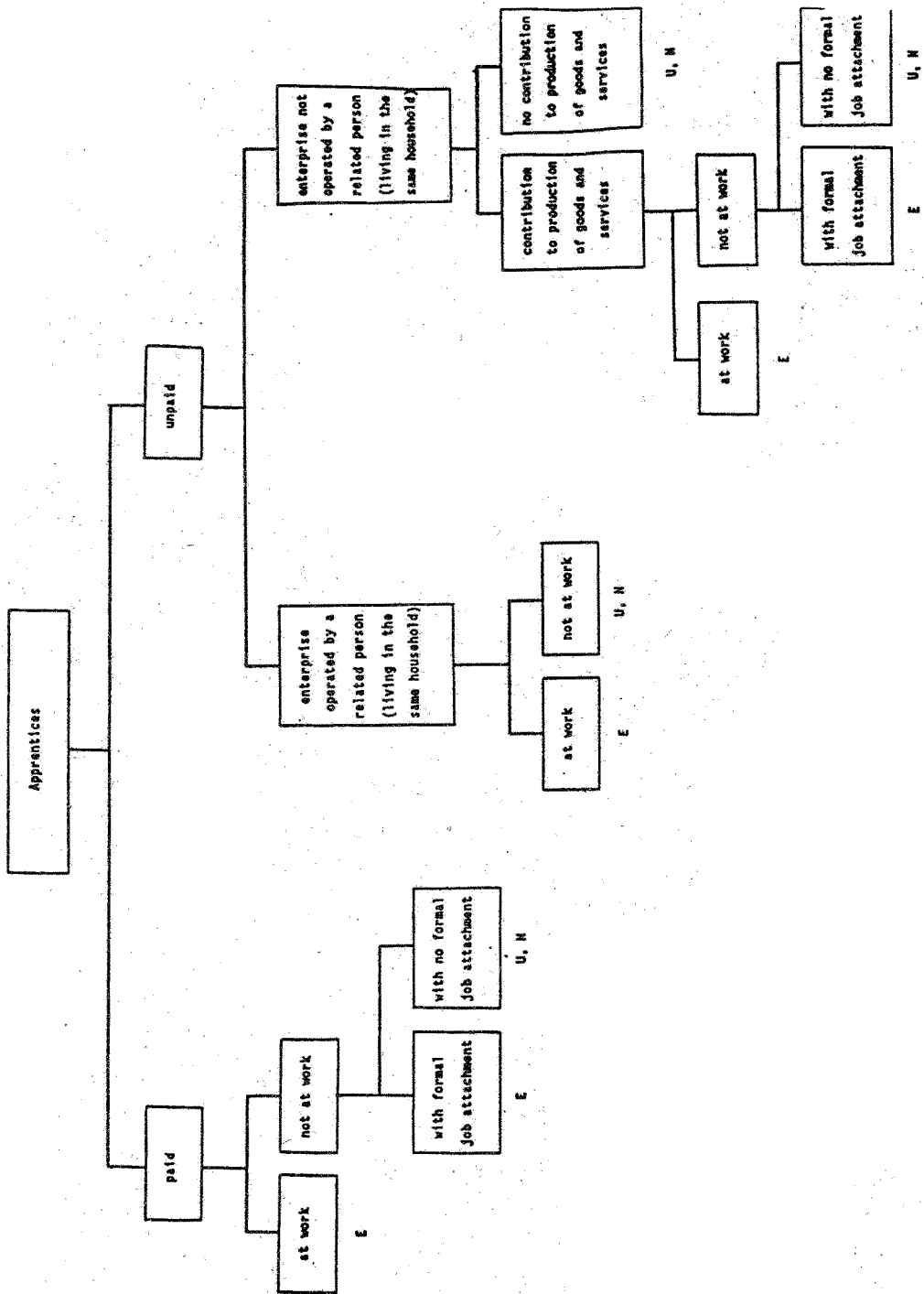
**TABLE 1. The determination of the main activity status during the year: three illustrations on the basis of the majority criterion**

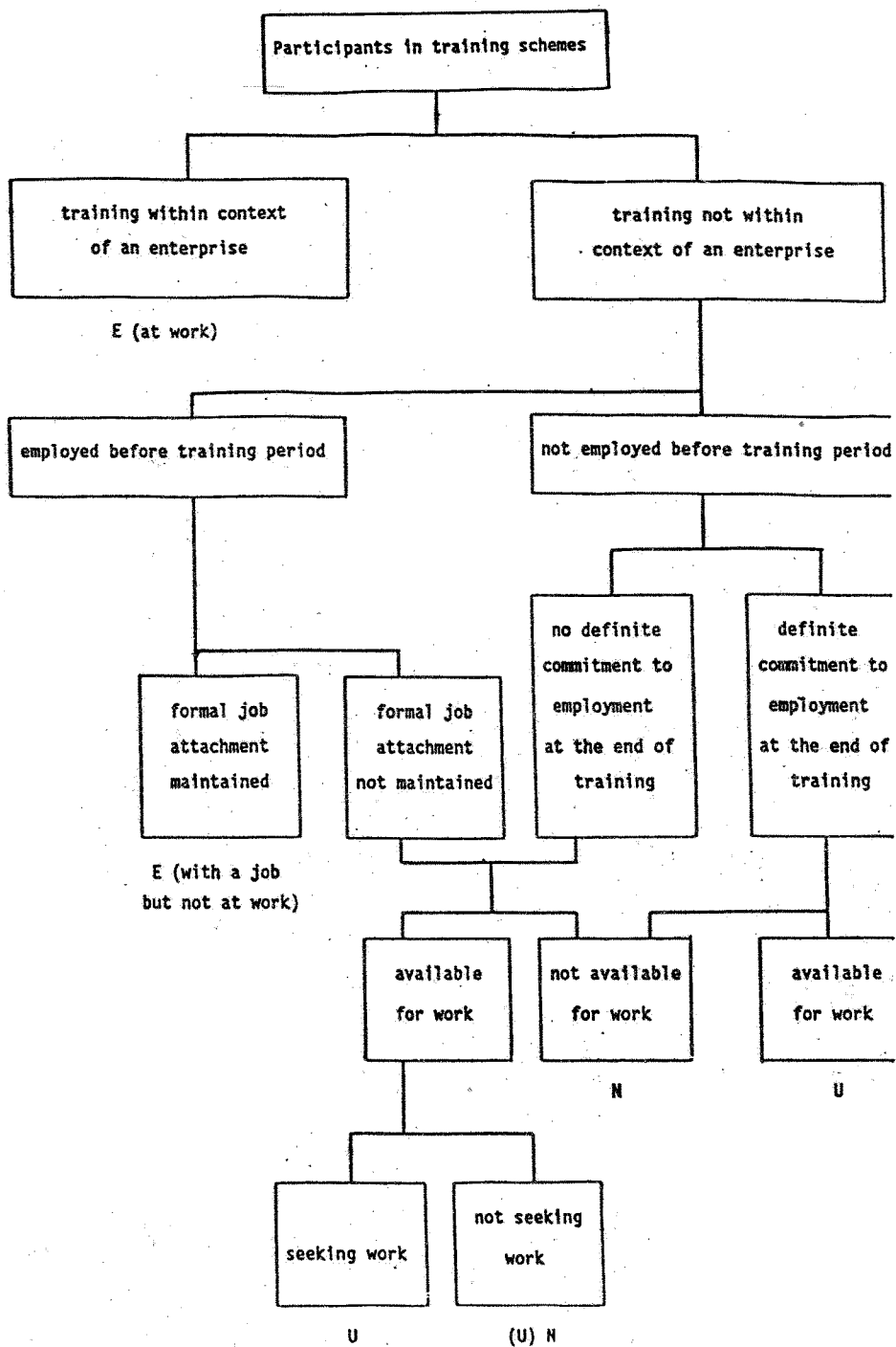
Example	Labour force experience during the year		Main activity status during the year
	Weekly activity status	Number of weeks	
1	Employed Unemployed Not active	45 0 7 <hr/> 52	Usually active, employed
2	Employed Unemployed Not active	5 10 37 <hr/> 52	Not usually active
3	Employed Unemployed Not active	13 18 21 <hr/> 52	Usually active, unemployed

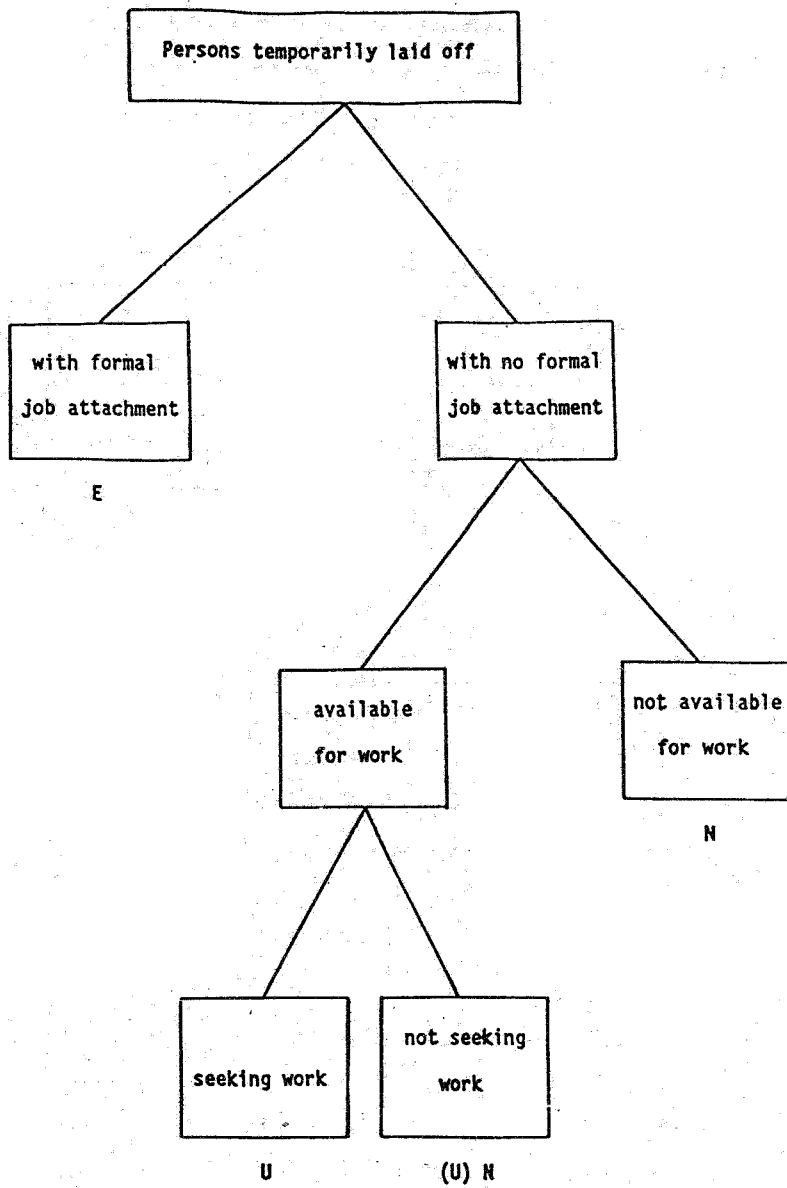


## METHODS FOR RETROSPECTIVE MEASUREMENT OF THE USUALLY ACTIVE POPULATION

- . Self-assessment of main activity status by respondents
  
- . Interviewer classification based on dialogue with respondent on the activities during the reference year  
(e.g., India, National Sample Survey on Employment and Unemployment)
  
- . Whole-year recall: inquiry on total number of weeks or days of employment or unemployment during the reference year  
(e.g., USA, Work Experience Survey)
  
- . Month-by-month recall: inquiry on the number of weeks or days of employment or unemployment in each month of the reference year  
(e.g., Canada, Annual Work Patterns Survey)
  
- . Employer-specific approach: inquiry on jobs held with different employers during the reference year, duration of jobs and periods of work interruption  
(e.g., Canada, Labour Market Activity Survey)







**Table 2. EXAMPLE OF A LABOUR-TIME DISPOSITION BALANCE SHEET**

	Mo	Tu	We	Th	Fr	Sa	Su	Total
Time worked	1	½		½				2
Time available for employment		½	1		1	½		3
Time not available for employment				½		½	1	2
Total	1	1	1	1	1	1	1	7

FOR PARTICIPANTS ONLY

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29 December 1988

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ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

ESCAP/ILO Seminar on Employment and Unemployment Statistics  
16-20 January 1989  
Bangkok

EMPLOYMENT IN THE INFORMAL SECTOR

(Item 7 of the provisional agenda)

Paper prepared by the ILO  
Bureau of Statistics, Geneva

EMPLOYMENT IN THE INFORMAL SECTOR

Paper prepared by the ILO Bureau of Statistics, CH-1211 Geneva 22

Since the concept was first introduced in the early seventies, the "informal sector" has received increasing attention by researchers and policy makers due to its importance for economic planning, supply of goods and services, employment promotion and income generation policies. As a result from the multitude of studies carried out so far, the need for regular national statistics on employment in the informal sector has been more and more recognised. Statistics on employment in the informal sector would not only serve to complement labour statistics but also to improve national accounts statistics.

Due to the elusiveness of the concept, the variety of definitions used and the serious measurement problems involved, regular official statistics on the informal sector, whether at the national or the international level, are still largely missing. International standards on informal sector statistics do not yet exist. However, the Governing Body of the ILO, recognising that most of the statistical problems envisaged are common to many countries, placed the topic for discussion on the agenda of the Fourteenth International Conference of Labour Statisticians (ICLS).

With a view to contributing to the development of international statistical standards, the ILO Bureau of Statistics prepared a document on "Employment in the informal sector" which was presented to the 14th ICLS, convened in Geneva during October/November 1987. The document, attached as Annex 1 to this paper, examined some of the major conceptual and measurement issues. It provoked a vivid discussion at the Conference. The conclusions reached by the Conference are reproduced as Annex 2 of the present paper. On the basis of its conclusions, the 14th ICLS adopted the following resolution concerning the informal sector (Resolution VIII):

"The discussions have underlined the need to measure employment outside the formal sector. This is a heterogeneous group which poses many measurement problems. It should be studied in depth in order to arrive at a definition which includes its component sub-categories. Therefore, the International Labour Office should continue to work on this subject and should include it on the agenda of the Fifteenth International Conference of Labour Statisticians" [which is planned for 1992/93].

So as to comply with that resolution, one of the present major work items of the ILO Bureau of Statistics is 'statistics on employment in the informal sector'. Due to the complexity of the subject, guidelines for the development and possible adoption of international statistical standards can only be prepared after consultation of many national statistical experts from different countries. Apart from a meeting of experts to be held possibly in 1991/92, the ILO Bureau of Statistics attempts to seize several occasions to discuss the subject at regional seminars, meetings, etc. It is hoped that the present ESCAP/ILO seminar be a first step in this direction.

ANNEX I

Extract from Fourteenth International Conference of Labour Statisticians,  
Report I: General Report, International Labour Office, Geneva 1987,  
ICLS/I4/I

CHAPTER II

EMPLOYMENT IN THE INFORMAL SECTOR

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A. Introduction

B. Informal sector and related concepts

- Informal sector
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- Concealed employment
- Non-market production

Chart 2.1: Informal sector and concealed employment: A conceptual framework

C. Employment in the informal sector

- Employed population in the informal sector
- The concept of economic unit
- Measurement variables
- Data collection

D. Conclusions

Annex: Coverage and definitions of informal sector used in 18 studies in three continents



## A. Introduction

In order to account for the informal sector activities, both in developed and developing countries, and the rural non-agricultural activities, generally carried out by households in conjunction with agricultural activities in developing countries, and given the scarcity of statistics on these topics, it is desirable that countries develop appropriate methodologies and data collection programmes on the urban informal sector and the rural non-agricultural activities. In particular, suitable definitions and classifications should be developed in order to identify and classify the economically active population in the urban informal sector and those engaged in the rural non-agricultural activities. [Paragraph 33 of the resolution concerning statistics of the economically active population, employment, unemployment and under-employment, Thirteenth ICLS, 1982.]

1. The need for regular national statistics of employment in the informal sector has long been recognised. Special studies carried out under the ILO World Employment Programme (WEP) in developing countries in the early seventies, have all called for the development of statistics on the informal sector to serve in particular the need for balanced economic planning, promotion of self-employment activities, and employment and income generation policies.<sup>1</sup> Informal sector statistics have also been sought to improve national accounts statistics and to complement labour statistics, particularly with respect to women's economic activities.<sup>2</sup>

2. Referring to a largely uncharted area of statistics, the term "informal sector" has been used in many different senses, giving rise to a multiplicity of concepts, often closely associated with each other and thus difficult to distinguish without further qualifications. For a given concept, there may also be many competing definitions, thus adding another dimension to the complexity of the subject. The elusiveness of the concept, compounded by the formidable measurement problems involved, has contributed to the limited development of informal sector statistics, whether at the national or the international level. However, many empirical studies on the informal sector have been conducted during the past 15 years or so. Most studies in the developing countries were carried out on an ad hoc basis and were often limited to the capital city, covering one or a few branches of economic activity and generally based on a small number of sample units.<sup>3</sup> In industrialised countries, ingenious survey techniques and analytical methods have been developed, also mostly on an experimental basis, and mainly to estimate the size of the informal sector in the context of the so-called "underground economy", primarily for national income account purposes.<sup>4</sup> However, most of these estimates, which may vary greatly even within one country and for a given time period, have been obtained by researchers and do not have the status of secured official statistics. Informal sector statistics have yet to be integrated into the regular national statistical programmes.

3. Because many of the statistical issues are common to a number of countries, the Governing Body of the ILO decided to place this topic for discussion on the agenda of the Fourteenth International Conference of Labour Statisticians, with a view to contributing to the development of international statistical standards. Such standards may serve as points of reference for the development of national definitions and classifications, as well as for limiting unnecessary differences and facilitating international comparisons. There are at present no international standards concerning statistics of the informal sector.

4. The purpose of this chapter is to focus in particular on the statistics of employment in the informal sector and consider certain principles which may be helpful in the development of international standards on the statistics of the informal sector in general (including statistics of production, value added, income, etc.). Section B contains a brief review of the concept of the informal sector and certain related concepts already introduced at the international level: traditional sector, concealed employment and non-market production. Section C defines the concepts of employed population in the informal sector and of the economic unit. It also examines certain measurement issues, namely, the choice of measurement variables and the sources of data collection. Finally, section D brings together certain specific points for discussion.

## B. Informal sector and related concepts

### Informal sector

5. One of the important findings of the studies undertaken in developing countries in the seventies by the ILO World Employment Programme mentioned earlier, particularly the Kenya report, was that a substantial proportion of urban workers was employed in small-scale self-employed activities and had, typically, significantly lower earnings than those employed in large industrial and commercial establishments and in public services. It was also observed that the overflow of the urban labour force, resulting especially from rural-urban migration which could not be employed in the modern undertakings, tended to be absorbed in such small economic units, many of them creating their own employment, others working as employees in those units while waiting to obtain better and more remunerative jobs in the modern sector.

6. On closer examination, it seemed that these small economic units were subject to severe constraints and restrictive public policies which prevented them, in one way or another, from realising their full growth potential and benefiting satisfactorily from the opportunities provided by the general economic development. The units generally appeared to have limited or no access to modern technology, credit and other resources, facilities for skill development, modern infrastructure and market outlets for their products, etc. The restrictive public policies, notably with regard to their location, also seemed to have, directly or indirectly, inhibited their growth and forced them into slum and squatter areas, with many of them operating under conditions which are not strictly legal. These preliminary findings led to the conclusion that more attention should be focused than in the past on a target group defined in terms of such small-scale, self-employed activities. This target group has been termed the informal sector.<sup>5</sup>

7. In industrialised countries, the focus of attention on informal sector activities has been somewhat different. A major concern has been the concealed or illegal aspect of these activities, with their many negative consequences, including the loss of taxation revenue and social security contributions, abuse of welfare benefits, unfair competition, incitement to illegal migration, exploitation of workers and erosion of respect for the law.<sup>6</sup> Another concern has been the effect of the undeclared aspect of these activities on the reliability of national income and other economic statistics. This has been discussed in the light of the possible impact of distorted data on macro-economic policy formulations and international comparisons.

8. The employment aspect of the informal sector has also been taken into consideration in the industrialised countries, but with a different emphasis. While it is acknowledged that the creation of self-employment activities in the informal sector may absorb to some extent the lack of job opportunities in the formal sector, as is the case in developing countries, the main issue in this respect in industrialised countries, however, has been the extent to which some of the concealed activities may actually be hampering the development of regular employment, at least in certain branches of economic activity.

9. There has also been some concern regarding ecology. Recent criticism of the detrimental ecological consequences of modern industrial activities involved in mass production, has led in some countries to the creation of small-scale, economic units with alternative modes of production and distribution, some of these units bearing similarities to the informal sector.

10. Although the precise meaning of "informal sector" remains elusive, whether in the context of developing or industrialised countries, it might nevertheless be possible to agree on a concept which is sufficiently broad to cover the essential aspects which occur in all countries and to serve as a basis for developing an operational international definition. Such a broad concept may perhaps be formulated along the following lines: The informal sector consists of small-scale, self-employed activities, with or without hired workers, typically operating with a low level of organisation and technology, with the primary objective of generating employment and incomes for their participants; to the extent these activities are carried out without formal approval from the authorities and escape the administrative machinery responsible for enforcing tax and minimum wage legislation and other similar instruments concerning fiscal matters and conditions of work, they are concealed.

11. In the remainder of this section, this concept is contrasted with the related concepts of the traditional sector, concealed employment and non-market production. The discussion should help to clarify the concept of "informal sector" and situate it in relation to the other concepts. A comprehensive framework of statistics on the informal sector should aim at incorporating these related concepts and, if possible, make their inter-relationships explicit.

#### Traditional sector

12. The United Nations System of National Accounts (SNA 1968) has introduced the term "traditional sector" in relation to "modern sector" to distinguish between traditional and modern modes of production in agriculture, manufacturing, construction and, where relevant, wholesale and retail trade and transport. The proposed criteria for classifying establishments according to mode of production are:

... resources, facilities and technology used in the activities, the manner in which production is organised and managed, and the scale of the operations. All production carried on in household premises should be classed as traditional; traditional-type establishments will often be part of unincorporated units. In the case of mining, manufacturing and construction, the use of power equipment of 2 horsepower or less might also be taken to indicate traditional modes of production. Little power equipment of course indicates a lack of capital equipment and the reliance on hand labour. Though the criterion of size should vary from one kind of activity to another, and perhaps from one country to another, the engagement of less than five persons might frequently be a suitable dividing line between the two modes of production. This criterion should be of value in drawing the distinction between the traditional and modern-type establishments in the case of all of the kinds of activity to which the classification is to be applied.<sup>7</sup>

13. Note that the three basic criteria mentioned earlier in relation to the informal sector (scale, organisation and technology) can also be found in the above SNA characterisation of the traditional sector. Thus, the two concepts as formulated here are closely related. They have, however, different significance. The concept of "traditional sector" is meant to apply to developing countries, whereas the concept of "informal sector", though equally characterised in terms of scale, organisation and technology, has a broader significance and is to be understood in the context of both developing and industrialised countries. Even with respect to developing countries, the two terms may have different meanings. The term "traditional sector" implies that the economic activities are carried out generation after generation without any significant change in the mode of production, whereas many of the economic activities in the informal sector are new and arise from urbanisation. Furthermore, although both concepts, in principle, cover agricultural as well as non-agricultural activities, "traditional sector" emphasises agriculture whereas "informal sector" emphasises non-agriculture.

#### Concealed employment

14. The Organisation for Economic Co-operation and Development (OECD) has recently examined the issue of concealed employment because of its perceived growing importance in the industrialised market-economy countries. The OECD report defines concealed employment as:

... employment (in the sense of the current international guide-lines on employment statistics) which, while not illegal in itself, has not been declared to one or more administrative authorities to whom it should be made known; thereby leading to the evasion of legal regulations, the evasion of taxes, or the evasion or a reduction of social security entitlements.<sup>8</sup>

This definition implies that: (a) concealed employment is a characteristic of a job; (b) it arises wittingly in relation to the enforcement of administrative rules and regulations; but (c) the activity is legal in itself though conducted in an illegal context (this is to be distinguished from activities which are illegal in themselves, such as drug pushing, poaching, etc.).

15. The concept of "concealed employment" is different from that of "informal sector". One applies to jobs and the other to economic units. Moreover, they have different scopes. There may exist concealed activities performed in formal economic units. An example is undeclared work of a self-employed dentist. Another example arises when a company in the formal sector hires certain workers without work permits. Conversely, there are many activities performed in informal sector units without necessarily being concealed. This is particularly the case in many developing countries where administrative regulatory schemes are not well rooted. An example is the situation of a rural migrant setting up a small shoeshine stall in the city. He is clearly not expected to know all the relevant regulations. In fact, even if he knew and tried to fulfil the requirements, the administration would probably not be prepared to cope. Thus, this person's activity cannot really be regarded as concealed in the sense described earlier.

16. Though the two concepts of "concealed employment" and "informal sector" differ, a relationship between them may be established. This may be done, first, by introducing the additional concept of "concealed economic unit" (an economic unit which is concealed as a whole); second, by considering all such units as belonging to the informal sector. Then, concealed employment would consist of all employment carried out in concealed economic units belonging to the informal sector and the concealed part of employment carried out in other units, whether in the formal or the informal sector, which are not concealed themselves. It should be noted that though concealed employment may occur both in the formal and the informal sector, it is more likely to be found in the informal. This is because there is a better opportunity to work clandestinely in activities requiring a moderate amount of capital and materials and which are undertaken by small-scale units.

#### Non-market production

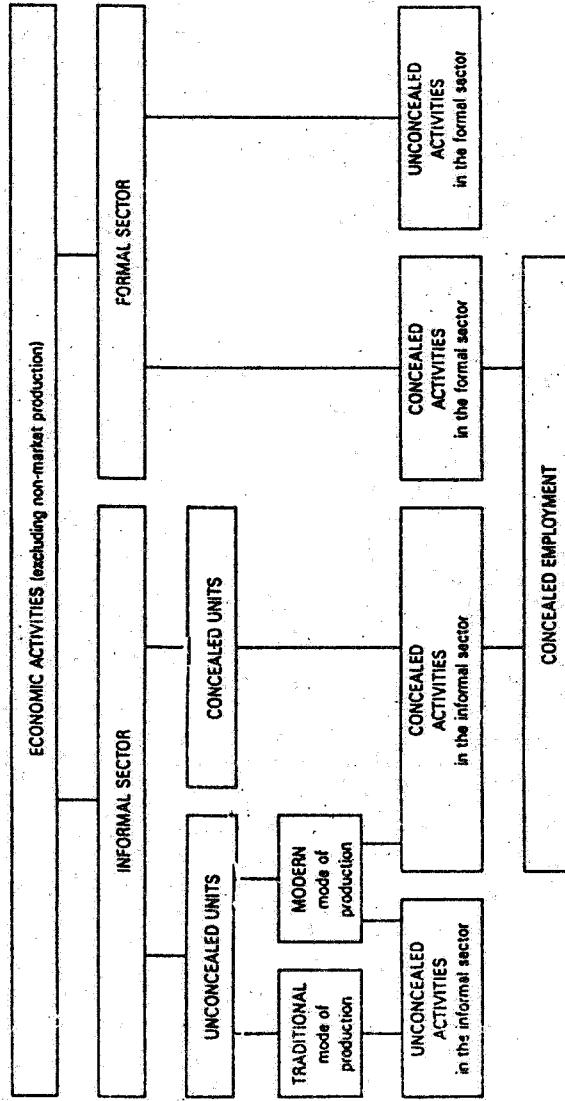
17. The concept of "informal sector" and the informal/formal distinction involves an understanding not only of what is "informal" or "formal", but also of the scope of activities to which the distinction is to apply. One issue is whether production of goods and services for own consumption should fall within the scope of the informal sector. The question also arises of whether the scope should cover non-economic activities, such as housework, do-it-yourself activities, etc.

18. According to the production boundary of the System of National Accounts (SNA 1968), economic activities cover all production for the market as well as certain types of non-market production. "Non-market production" includes production and processing of primary products for own consumption, own-account construction (including production of fixed assets for own use) and that part of production of non-primary products which is kept for own consumption by those who also produce for the market. "Primary production" consists basically of agricultural and allied activities. "Non-primary production" consists of manufacturing, construction, trade, transportation, communication, and all services. These activities carried out for own consumption are generally to be found in the rural areas, but may also arise to a significant degree in urban areas of many developing countries.

19. Units engaged in non-market production are typically household enterprises (farm or non-farm) and are, by nature, small, often operating with low levels of technology and organisation. Thus, they generally have the basic characteristics of the informal sector as formulated earlier. However, to the extent that these activities do not essentially result from lack of job opportunities, and are not intended to be concealed, they do not really fit the two aspects of informal sector measurement mentioned here, namely, concealment and employment generation. Non-market production should, therefore, perhaps be excluded from the scope of informal sector activities; its inclusion could dilute the concept of "informal sector". None the less, it should be added that many economic units that, in addition to market production, also produce for own consumption may actually fall into the informal sector but for reasons other than non-market production.

20. A similar argument may be given for other activities, such as unpaid domestic activities, child care, do-it-yourself, and volunteer community services that fall at present outside the boundary of economic activities, as defined by the SNA (1968). These activities and all non-economic activities in general may thus be excluded from the scope of "informal sector". The various concepts discussed in this section and their relationship are depicted schematically in the following chart.

Chart 2.1: Informal sector and concealed employment: A conceptual framework



Note: For the sake of simplicity in presentation, it is assumed that the distinction between traditional and modern modes of production applies mainly to unconcealed units in the informal sector and that traditional sector units are generally engaged in unconcealed activities.

### C. Employment in the informal sector

#### Employed population in the informal sector

21. A fundamental consideration throughout this chapter has been the notion that the characteristic "informal" relates above all to "economic unit", i.e. units which carry out the economic activities. Thus, a person would be considered as employed in the informal sector only if he or she is employed in an economic unit belonging to the informal sector. A corollary to this principle is that two persons working in the same economic unit are to be classified in an identical manner, independently of their personal characteristics, such as income, education, occupation, or status in employment.

22. Another corollary is that a person working at two jobs in different economic units may be in the informal sector with respect to one job and in the formal sector with respect to the other. The employed population in the informal sector may thus be defined as comprising two groups: (a) those whose main employment is in the informal sector; and (b) those whose main employment is in the formal sector, but who have a subsidiary activity in the informal sector.

#### The concept of economic unit

23. Since the informal sector is regarded as a subset of all economic units and not of individuals, the basic unit for informal sector classification is the economic unit. The term "economic unit" is used here essentially in the same sense as that of "establishment-type unit" or "kind-of-activity unit" in the International Standard Industrial Classification of all economic activities (ISIC 1968).<sup>9</sup> According to ISIC 1968, "the establishment is, ideally, an economic unit which engages, under a single ownership or control, i.e. under a single legal entity, in one, or predominantly one, kind of economic activity at a single physical location, e.g., an individual farm, mine, factory, workshop, store or office". "The kind-of-activity unit differs from the establishment in that there is no restriction in respect of the geographic area in which a given kind of activities is carried on by a single legal entity." The term "economic unit" is preferred here because of the ambiguity of the concept of "legal entity" in the case of certain economic activities in the informal sector and because of the connotation associated with the term "establishment", which in everyday parlance generally reflects a regular industrial unit, such as a factory, a store or an office.

24. In the context of informal sector measurement, a shoeshine worker, a lottery ticket seller, an itinerant vegetable seller may each constitute an economic unit by himself. A single individual may even constitute two or more economic units. For example, a person working on his own account, both as a shoeshine worker and as a local tourist guide, would constitute two distinct economic units, both of which in this case may belong to the informal sector. Similarly, a carpenter employed during the week in a construction firm and moonlighting on weekends would be creating a new single-person economic unit when moonlighting, as distinct from the construction firm. Although in this example the occupation and industry are the same in both economic units, the construction firm may belong to the formal sector, while the weekend economic unit may be in the informal sector. Note that all the examples given here (shoeshine work, local tourist guide, carpentry on weekends, carpentry in a construction firm) are distinct jobs, as well as distinct economic units. This does not necessarily mean that, in general, each distinct job constitutes a distinct economic unit. Two family members, one baking cakes at home and the other selling the products in the market-place, belong to the same economic unit (the household enterprise), though performing different jobs.

#### Measurement variables

25. The distinction between economic units belonging to the informal sector and other economic units should be based on certain well-defined variables. A review of 18 studies conducted in Africa, Asia and Latin America during the past 15 years or so reveals a wide range of variables used in defining the informal sector (see Annex). The variables most often used, alone or in combination, were: (i) size (e.g. no regular wage earner, less than

five or less than ten employees); (ii) organisation (e.g. no clerical or accounting staff, simple management system with minimum of documented controls, not required to have licence or permit to operate); (iii) skill required (e.g. educational level of most workers low, required technical know-how and operating skills obtained mostly outside the formal education system); (iv) location (e.g. temporary structure or premises; home-based or itinerant); (v) social benefits (e.g. no paid holiday, no pension, not covered by medical service schemes); (vi) and other (e.g. low income, temporary or casual contract, no union affiliation, no access to the capital market or bank credits).

26. Other studies have emphasised the need for parsimony, using a single variable, such as productivity, technology, or size.<sup>10</sup> Others have devised combinations of variables already available in regular household surveys and population censuses, such as, industry, occupation or status in employment.<sup>11</sup>

27. While all of these variables may be relevant, certain ones relate to the individual worker rather than to the economic unit (e.g. income, occupation, status in employment, union affiliation; type of contract); and others are either not specifically indicative of how the economic unit actually functions (e.g. location), or impractical for large-scale application (e.g. productivity). Note that the first three sets of variables (size, organisation and skill required) are essentially the same as the three basic characteristics mentioned earlier, namely, scale of operation, level of organisation and level of technology.

28. These basic characteristics, however, cannot be measured directly. Measurement should be based on one or more proxy variables. An example of such an operational definition, applied by the ILO as part of two methodological surveys on the measurement of employment and unemployment in Costa Rica and Kerala, India, in 1983-84, is the following: employment in the informal sector comprises all persons who were employed during the reference week in either: (a) an unregistered economic unit; or (b) a registered economic unit with characteristics similar to the unregistered economic units in the corresponding branch of economic activity.

29. Registration of an economic unit referred to a legal instrument enacted by a legislative body, for example, the Factories Act, Shops and Establishments Act, and professional groups' regulatory acts. A trade licence or a permit for commerce, issued by municipal and local government authorities under by-laws without legislative acts, was not considered as constituting "registration". "Similarity" of registered economic units with corresponding unregistered units was established at the processing stage on the basis of the three basic characteristics mentioned earlier. The level of organisation was measured on the basis of adherence to a social security or pension scheme (Kerala) or the issuance of invoices (Costa Rica). The scale of operation was measured (both surveys) on the basis of the number of regular employees. The level of technology was measured (both surveys) on the basis of skill required for non-manufacturing activities and type of power used for operating the main productive equipment (manual, mechanical, etc.) for manufacturing activities.

30. Registration was used as the primary discriminatory variable because (a) it was found to correlate highly with the three basic characteristics; (b) it was considered conceptually clear-cut; and (c) based on it, the characteristics of unregistered units would serve to determine the benchmark for devising cut-off points for the level of organisation, scale of operations and level of technology of the registered units which were to be included as part of the informal sector. It was thought that registration might also provide a desired element for linkage with the related concept of concealed employment or, more particularly, of concealed economic units. The two-tier aspect of the definition was designed to safeguard against total dependence on the criterion of registration. The definition, however, does not preclude the possibility of omitting the two-tier feature for certain types of economic activities (e.g. medical services, accounting services).

31. The inclusion in this chapter of the definition used in the two ILO methodological surveys is only meant to serve as a basis for discussion. Its underlying principles should be carefully examined with respect to its applicability, both in household and establishment surveys and in other national or international contexts.

### Data collection

32. Household surveys may provide an appropriate source of data to obtain global information on the level and trend of employment in the informal sector and on its economic and socio-demographic structure. They enable a comprehensive measurement of employment in the informal sector covering, in principle, the entire economically-active population. They provide the only single source of data for collecting joint information on main and subsidiary employment of individuals, required for measuring the "employed population in the informal sector", according to the definition given earlier. Furthermore, household surveys allow for the analysis of employment in the informal sector with a wide variety of other personal characteristics, such as sex, age, marital status, occupation, branch of economic activity, status of employment, as well as household and family characteristics, such as consumption expenditures, household income, type of family, etc. Through household surveys, such data can be directly contrasted with corresponding information on individuals working in the formal sector. Another particular advantage of household surveys is the possibility of obtaining data on underemployment in the informal sector and especially on persons seeking employment in the formal sector.

33. Conventional household surveys, such as labour force surveys and household income and expenditure surveys, can provide the starting point for collecting regular data on employment in the informal sector. These surveys are already part of the national statistical system of many countries. Most lend themselves to inclusion of supplementary questions on informal sector employment with relatively low additional cost. The inclusion of informal sector information may even enhance the relevance of conventional labour force and household income and expenditure surveys in developing countries.

34. Such an enlargement of conventional labour force and household income and expenditure surveys would, however, have certain implications on their designs and operations. For example, their sample designs may have to be re-examined to ensure proper representation of non-standard housing units, such as in slum and squatter areas, where most inhabitants are likely to be in the informal sector. Also, their data collection procedures may have to be reviewed so as to minimise problems of obtaining specific information from respondents on the economic units in which they work. This is particularly important in the case of employees and, in general, when proxy responses are involved.

35. In-depth studies of employment in the informal sector may, however, require specially designed surveys with direct inquiry of the economic units. The economic units of the informal sector are not usually covered in the regular establishment surveys of many countries. These surveys are often confined to establishments of a certain size, expressed in terms of employment, capital or sales, and sometimes combined with other criteria, such as use of motor power, maintenance of a formal accounting system, registration with a government administrative agency, etc. The United Nations Statistical Commission is considering draft recommendations for a statistical programme for household and small-scale industries to expand the coverage of regular industrial surveys to cover all industrial units relating to mining, manufacturing, and electricity, gas and water.<sup>12</sup> Since the informal sector covers not only industrial units but, in principle, all branches of economic activity, the household and small-scale industries programme would need to be supplemented accordingly.

36. One possibility would be to use the conventional household surveys to identify the economic units belonging to the informal sector, on the basis of which special surveys could be conducted to obtain the more detailed information necessary. According to whether these economic units are of a household type (household enterprise) or of an establishment type, they may be covered by specially designed household surveys or specially designed establishment surveys. For this purpose, it may be convenient to divide the economy into two mutually exclusive operational sectors: the establishment sector and the household sector. The establishment sector may be defined as comprising all economic activities carried out with the assistance of regular paid employees. The household sector may be residually defined as comprising all economic activities carried out by households or individual members of households on an own-account basis with the possible assistance of unpaid family labour or casual paid employees. This distinction between household and establishment sectors was originally proposed in the context of surveys of household economic activities.<sup>13</sup>



37. Administrative records are another source of data collection but have limited use for obtaining data on the informal sector since, by definition, economic units in the informal sector are generally outside the scope of administrative rules and regulations. Administrative records, based on municipality permits for street vendors, sales licences for shopkeepers and other similar authorisations may, however, be useful where available.

38. In general, the very nature of the informal sector makes data collection difficult. Since they are often small or unregistered, the economic units in the informal sector are not well covered, or not covered at all, in many statistical directories of establishments. Also the high incidence of births and deaths of these units makes them, in general, intractable for statistical follow-up. Furthermore, many of the units do not have recognisable external features, which makes them hard to locate. The concealed aspect of certain informal sector activities also means that respondents may be reluctant to provide reliable information. When concealed employment is a major measurement objective, particular surveys, such as time-use surveys and users' surveys of concealed activities designed to obtain indirect information on concealed employment, may be the only feasible means of data collection. Even where concealment is not an issue and respondents are willing to provide the required information, they may not be able to do so adequately, due to the lack of record keeping and failure of memory. Various attempts have been made to deal with some of these issues.

#### D. Conclusions

39. The discussion in this chapter suggests that, although the topic of "informal sector" is complex, it might nevertheless be possible to generate a consensus on the broad outline of the concept and on appropriate strategies for data collection with a view to formulating international standards and incorporating informal sector statistics into the regular national statistical programmes.

40. With this dual aim in mind, certain specific questions arising from the chapter are brought together below to stimulate further discussion (the relevant paragraph numbers of the text are indicated in each question):

- (i) Does the formulation of the concept in paragraph 10 adequately describe the essential content of the informal sector? Does the proposal in paragraph 10 to exclude non-market production contribute to sharpening the concept?
- (ii) Should a link between "informal sector" and "concealed employment" be established? Is the linkage described in paragraph 16 acceptable?
- (iii) Should the informal sector be defined in terms of characteristics of economic units (as opposed to characteristics of individuals, jobs, etc.)? Is the concept of economic unit described in paragraphs 23 and 24 adequate for this purpose?
- (iv) Is the definition of "employed population in the informal sector" given in paragraph 22 sufficiently comprehensive?
- (v) Can the measurement of the informal sector be based on the criterion of registration, supplemented by other operational variables measuring scale of operation, level of organisation and level of technology of the economic units concerned (paragraphs 28-30)?
- (vi) Does the set of proposals made in paragraphs 32-38 provide a feasible strategy for integrating the collection of data on employment in the informal sector into the existing national statistical programme?

## Notes

<sup>1</sup> ILO employment mission reports: Towards full employment: A programme for Colombia (Geneva, 1970); Matching employment opportunities and expectations: A programme of action for Ceylon (Geneva, 1971); Employment, incomes and equality: A strategy for increasing productive employment in Kenya (Geneva, 1972); Employment and income policies for Iran (Geneva, 1973); Employment and unemployment in Ethiopia, Report of the Exploratory Employment Policy Mission (Geneva, 1973); Sharing in development: A programme of employment, equity and growth for the Philippines (Geneva, 1974); Generación de empleo productivo y crecimiento económico: El caso de la República Dominicana (Geneva, 1975); Growth, employment and equity: A comprehensive strategy for the Sudan (Geneva, 1976).

<sup>2</sup> United Nations Statistical Commission: Progress report on the review of the system of national accounts (Geneva, 1985); Jacques Charmes: "Comment mesurer la contribution du secteur non structuré à la production nationale dans les pays du tiers monde?", in The Review of Income and Wealth, Series 29, No. 4, Dec. 1983, pp. 429-444; and United Nations: The Nairobi Forward-Looking Strategies for the Advancement of Women (Nairobi, 1985).

<sup>3</sup> For summary descriptions of some of these surveys conducted in developing countries, see: K.M. Bashir: "Statistics concerning the urban informal sector", in Bulletin of Labour Statistics, (Geneva, ILO), 1980-1, pp. XIII-XXVI; PREALC (Programa Regional del Empleo para América Latina y el Caribe): Sector Informal - funcionamiento y políticas (ILO, Santiago-Chile, 1978); JASPA (Jobs and Skills Programme for Africa): Informal Sector in Africa (ILO, Addis Ababa, 1985); and Direction de la statistique (Maroc), Insee, Orstom (France) et Association internationale des statisticiens d'enquêtes: Séminaire sur les statistiques de l'emploi et du secteur non structuré, Rapport des sessions et communications, tomes 1 et 2, Rabat, 10-17 Oct. 1984.

<sup>4</sup> For a review of some measurement methods used in industrialised countries, see Bruno S. Frey and Werner W. Pommerehne: "The hidden economy: State and prospects for measurement", in The Review of Income and Wealth, Series 30, No. 1, Mar. 1984, pp. 1-23.

<sup>5</sup> For further details on the origin of the concept and an analysis of the evidence from Africa, Asia and Latin America, see S.V. Sethuraman, (ed.): The urban informal sector in developing countries: Employment, poverty and environment (Geneva, ILO, 1981).

<sup>6</sup> OECD: Employment Outlook (Paris, Sep. 1986), Ch. III, p. 77.

<sup>7</sup> United Nations: A System of National Accounts, Studies in Methods, Series F, No. 2, Rev.3 (New York, 1968), paras. 9.14-9.17.

<sup>8</sup> OECD, op. cit., Ch. III, p. 67.

<sup>9</sup> United Nations: International Standard Industrial Classification of All Economic Activities, Statistical Papers, Series M, No. 4, Rev.2 (New York, 1968).

<sup>10</sup> Sethuraman, op. cit., Ch. II., pp. 17-18; Hans C. Haan: "The urban informal sector in developing countries and the collection and analysis of labour market information - issues and priorities", ILO E/POPLAN Technical Study No. 4, Aug, 1986; and J. Charmes: "Le secteur non structuré, l'emploi et le sous-emploi. Quelques réflexions sur les concepts utilisés dans les enquêtes", in Séminaire sur les statistiques de l'emploi et du secteur non structuré, op. cit., pp. 108-122.

<sup>11</sup> PREALC (Programa Regional del Empleo para América Latina y el Caribe): Mercado de trabajo cifras. 1950-1980 (ILO, Santiago-Chile, 1982). Also, Colombia, Departamento administrativo nacional de estadística (DANE): Encuesta Nacional de Hogares, Etapa 44, June 1984, published in Boletín de estadística (Bogotá, DANE, 1986).

<sup>12</sup> United Nations Statistical Commission: "Draft Recommendations for a statistical programme for household and small-scale industries", Provisional ST/ESA/STAT/SER.M/80 (New York, Aug. 1986).

<sup>13</sup> United Nations Economic and Social Commission for Asia and the Pacific: Household economic activities: Definition, scope, concepts, survey methods, data analysis and evaluation, STAT/SHEA/5, Paper prepared by M.V.S. Rao, SIAP/ESCAP Expert Group Meeting on Developing Statistics of Household Economic Activities, Bangkok, 23-28 Sep. 1985.

ANNEX

Coverage and definitions of informal sector used in  
18 studies in three continents

Africa

1. Congo (Brazzaville) 1979

Coverage: 77 enterprises; agriculture (1); commerce (36); handicraft (19); services (21).

Definition: enterprises having less than ten workers.

2. Ghana (Kumasi) 1975

Coverage: 298 economic units; fitting (74); welding (20); blacksmithing (9); carpentry (34); tailoring (71); wood carving (7); cane-weaving (9); carpet-making (5); footwear (69).

Definition: small-scale, non-factory enterprises with no more than ten wage-earning journeymen (skilled labour), with an internal organisation similar to the traditional artisan system, and with the owner-craftsman in control of all operations, from production to sales, and operating from a fixed recognisable location.

3. Ghana

Coverage: 212 auto-repair enterprises; vehicle repair (general) fitting of engines (102); welding, straightening and body building, vehicle spraying (57); miscellaneous blacksmithing, including coal pots, cutlasses and hoses (30); bicycle repair (4); batteries and auto electric work (6); refrigeration work (2); miscellaneous metalwork, such as bolts and nuts (11).

Definition: enterprises where the mode of production was relatively unorganised, wage-employment was an exception rather than the rule, technology was relatively simple, and work was performed in small, rudimentary workshops with little use of electricity and no clerical or accounting staff.

4. Kenya (Nairobi) 1977

Coverage: 93 enterprises; furniture industry.

Definition: enterprises operating out of temporary structures or premises.

5. Nigeria (Lagos) 1976

Coverage: 2,074 enterprises; primary industries (18); food, beverages and tobacco (17); textiles and leather (549); wood and furniture (108); paper and paper products (58); fabricated metal and machine equipment (51); other manufacturing (48); utilities (44); construction (22); wholesale trade (116); retail trade (526); transport and storage (74); communication and social and personal services (320); undefined (123).

Definition: enterprises employing not more than ten workers, whose owners were not highly educated (the owner, at most, would possess school certificate standard of education) and had no access to the capital market in the formal sector.

6. Rwanda (Kigali) 1977

Coverage: enterprises; woodworking; metalworking; building; mechanical and electrical repairs.

Definition: "modern" informal sector: activities with permanent or semi-permanent location, with characteristics, such as to exclude them from the modern sector: type of construction, internal structure (organisation and management of workplace). The criteria defining the informal sector enterprises concern the composition of the labour force of the enterprise, the level of training of the labour force, the level of capitalisation and production of the enterprise, the rate of growth of the force, the productivity of capital and labour, the method of management, respect of legislation, access to banking facilities and modern sector assistance.

7. Senegal (Dakar) 1974

Coverage: 467 enterprises; metalwork (78); woodwork (74); electrical repair (47); mechanical repair (88); mouldering (19); bricklaying (54); upholstering (45); watch repair (44); other (18).

Definition: artisans, retailers, transporters and those who provide services which are not included in the handicraft sector, including those without legal status as required by the formal industrial sector and those with workers earning less than the legal minimum wage and not benefiting from social security.

8. Sierra Leone (Freetown) 1976

Coverage: 967 enterprises; manufacturing (195); construction (20); trade (628); transport (37); services (87).

Definition: self-employed persons of both sexes, aged ten years and over.

9. Sudan (Khartoum, Khartoum North and Omdurman) 1974

Coverage: based on 2,614 households, from which are sorted out working members of the households who stated that they were self-employed in a business whose activity was connected with manufacturing, repairing or construction.

Definition: enterprises screened according to the following criteria: (a) place of work; (b) location of work (home or elsewhere); (c) number of regular paid workers; and (d) level of education of most of the workers employed in the enterprise.

10. United Republic of Tanzania (Dar es Salaam) 1981

Coverage: 71 establishments; wood processing (21); tailoring (18); leatherwork (14); metalwork (13); food processing (5).

Definition: productive and repair activities employing less than ten persons; the units had to have some fixed capital investment and a significant degree of value added.

Asia

11. Indonesia (Jakarta) 1975

Coverage: subsample of household survey; 4,367 heads of informal sector enterprises in manufacturing, construction, transport, trade and services.

Definition: economic units that produce goods or services, whether using capital or not, having a fixed or variable location, with ten or fewer workers, including head of enterprise.

12. Philippines (Manila) 1976

Coverage: 3,507 enterprises; manufacturing, construction, commerce, trade and services.

Definition: enterprises employing ten or fewer persons.

13. Sri Lanka (Colombo) 1976-77

Coverage: 1,200 enterprises; trade, commerce, manufacturing and processing, services, transport, construction, cultivation and sale of leafy vegetables, sea fishing by operators living in northern coastal wards of the city.

Definition: enterprises employing less than five persons, where employment is informal in character, often in family enterprise; investment in buildings and equipment, low and technology labour-intensive; management system simple with minimum of documented controls; technical know-how and operating skills required for enterprise most frequently obtained outside formal educational system.

14. Thailand (Bangkok) 1981

Coverage: subsample of 1,000 households with at least one member working in the informal sector - 880 from 14 slums and 120 from seven flats.

Definition: household with at least one of its members having one or more of the following characteristics:

- self-employed or own account;
- in an enterprise or business firm with less than ten employees;
- average pay less than 54 baht per day, the legal minimum wage for Bangkok area in 1981;
- employed not on a permanent basis (as the enterprise or firm hires its workers on a daily basis, or it has no definite job description for its workers and no regular working hours).

Latin America

15. Argentina (Córdoba) 1976

Coverage: about 1,500 establishments with 0-50 persons employed, of which 203 classified as informal sector (and 346 quasi-formal): furniture and woodwork (2); turnery (1); miscellaneous manufacturing (3); retail food, beverages, cigarettes, etc. (73); prepared food (14); retail of wearing apparel and other clothing articles (23); retail of household and electric appliances (1); other retail sales (20); repair of shoes and tyres (13); barber-shop and other personal services (41); other services (12).

Definition: establishments with 0-5 employed persons with activities, such as unskilled manual work and sales activities with easy entry. Quasi-informal sector: establishments with 0-5 employed persons with activities requiring skills and some capital accumulation, semi-skilled and sales activities with some oligopolistic incomes, and self-employed professionals. In practice, the informal sector was identified as those activities which generated low income. For establishments with fixed location, gross income was used, while net income was used for those without fixed location. The cut-off point was derived on the basis of an analytical method.

16. Brazil (Campinas) 1976

Coverage: 500 units; 21 per cent industry (of which metallurgy 30 per cent, carpentry and woodworking 13 per cent, tailoring and seamstresses 12 per cent, and other 45 per cent); 42 per cent commerce (of which snack bars, bakeries, groceries and greengrocers 44 per cent, news-stands 12 per cent, clothing shops 11.5 per cent, and other 37 per cent); 37 per cent services (of which barber/hairdressers 29 per cent, repair of vehicles and motors in general 18 per cent; shoe-makers 16 per cent, and others 37 per cent).

Definition: own-account workers who use their own labour force or unpaid family labour and small enterprises employing from one to ten wage earners.

17. Costa Rica (San José) 1979

Coverage: based on an enlarged subsample of the regular household labour force survey; 628 individuals; manufacturing (242); construction (35); commerce (132); services (199); retail of meals (21); mechanical repair (35); transport (27); other services (116).

Definition: own-account workers and employers with less than five employees.

18. Mexico (urban areas) 1976-77

Coverage: based on household survey with a sample of about 14,000 households, of which about 19,000 are employed persons.

Definition: employees and own-account workers with at least three of the five selected characteristics. Unpaid family workers were all included in the informal sector. Employers were excluded because their number was too small in the sample.

(a) The five selected characteristics regarding employees:

- monthly salary less than 110 per cent of the regional minimum monthly wage;
- not covered by medical services scheme;
- no paid holiday, no pension, no right to housing loans, life insurance or other enterprise schemes;
- type of contract; temporary or casual;
- not affiliated to a union.

(b) The five selected characteristics regarding own-account workers:

- net weekly income x 4.3 equals less than 110 per cent of the regional minimum monthly wage;
- no private medical insurance, no life insurance and no social security;
- not affiliated to a union;
- not required to have a licence or permit to operate;
- not utilising bank credits, despite need for credits.



ANNEX 2

Extract from Fourteenth International Conference of Labour Statisticians,  
Report of the Conference, International Labour Office, Geneva 1988,  
ICLS/I4/D.I4

Chapter 2: Employment in the informal sector

36. The Conference considered this topic on the basis of Chapter 2 of Report I, General Report: "Employment in the informal sector". In the history of the International Conference of Labour Statisticians, this was the first time that the subject had been placed on the agenda.

37. The Vice-Chairman of the Conference chaired the session. In her introductory remarks, she explained that the objective was to discuss the subject in broad terms rather than to come up with international standards on statistics of employment in the informal sector.

38. The Assistant Secretary-General presented a summary of the chapter, referring to the background of the study, the relevance of the concept of the informal sector in both developing and industrialised countries, the relationships of the concept of the informal sector with those of the traditional sector, concealed activities and non-market production. He concluded by highlighting the main issues concerning the concept and definition of the informal sector, its scope, the choice of measurement, unit and variables, and the difficulties involved in data collection.

39. In its discussions, the Conference recognised that informal sector statistics were needed, in particular, to formulate employment and income-generation policies, to promote self-employment activities, to improve national accounts, and to enrich labour statistics and other related statistics. It also recognised that statistics on employment in the informal sector constitute only part of the entire range of informal sector statistics. Mention was made of the need to co-ordinate such statistics with the United Nations System of National Accounts (SNA), the International Standard Classification of Occupations (ISCO), the International Standard Industrial Classification of All Economic Activities (ISIC), the International Classification of Status in Employment, and for the development of statistics on the contribution of women and of national household survey programmes.

40. Many delegates welcomed the ILO initiative in bringing this topic to the Conference for its consideration. The comments made on the main issues identified are summarised below.

41. Terminology. While the term "informal sector" was widely accepted and used in the course of the discussion, other terms, such as "small-scale enterprises", "marginal sector", "unstructured sector" (secteur non-structuré in French), "individual economic activities", and "business under the open sun", were suggested as alternatives which might better reflect the nature of the underlying phenomena in certain countries.

42. Concept and definition. It was recognised that collecting statistics on the informal sector was a complex task and the formulation of a universal definition of the informal sector was difficult. The notion itself varied among countries according to the prevailing employment structure and, in a certain sense, depended on the source of data collection.

43. While it was acknowledged that there was some overlap between the concepts of "informal sector" and "concealed activities", there was general agreement that the two concepts were not identical and therefore should be considered separately. Each of these concepts reflected a different socio-economic concern with its own measurement objective.

44. A substantial part of the discussion on definitions centred on the formulation of the concept of informal sector, given in paragraph 10 of the chapter under consideration. Concern was expressed about the second part of this formulation where reference was made to activities that "are carried out without formal approval from the authorities".

45. It was suggested that "provision of cheap goods and services" should be included as one of the primary objectives in the formulation along with "employment and income generation".

46. There was also discussion as to which criteria should be chosen for characterising the informal sector. While many delegates expressed their agreement with the three criteria given in paragraph 10 (scale, organisation and technology), particularly with respect to the criterion of scale of operation as measured in terms of number of workers, others suggested a number of alternative or additional criteria, including location, amount of capital, access to financial resources and qualification of workers engaged. Others expressed reservations about the appropriateness of the criterion of level of technology, since it was mentioned that informal sector activities were sometimes carried out with modern machinery. There was, however, a warning about the practical difficulties that definitions based on multiple criteria might entail.

47. Mixed reactions were expressed regarding the use of registration as a criterion for defining the informal sector. It was mentioned that if used alone, it might raise difficulties with respect to international comparability. Registration was governed by legal provisions which varied from one country to another.

48. Scope and coverage. There was a divergence of views regarding the need to include non-market production within the scope of informal sector activities. The argument forwarded for its inclusion was that the scope of informal sector activities should be consistent with the production boundary of the United Nations System of National Accounts, the more so because non-market production did involve employment and contributed to income. In this connection, certain suggestions were made that the scope could even be extended to cover unpaid domestic activities so as to reflect better the contribution of women to social and economic development.

49. It was mentioned that in certain countries many children below the minimum age set for measuring the economically active population were engaged in informal sector activities. The question was raised as to whether such working children should be included among the employed population in the informal sector.

50. Measurement unit. There was virtual unanimity that the "economic unit" was the most appropriate measurement unit for defining the informal sector. It was mentioned that for this purpose the concept of economic unit should be defined in accordance with the most recent revision of ISIC. It was, however, stressed that tabulations should also be made for individuals and occupations in the informal sector.

51. Employed population in the informal sector. It was recognised that the definition of the employed population in the informal sector given in paragraph 22 of the chapter was meant to identify all persons engaged in an economic activity in the informal sector but not to classify the economically active population into the informal and formal sectors, as this would involve a double-count of persons who were engaged in both sectors during the reference period.

52. Sub-classifications. It was recognised that the informal sector was very heterogeneous with respect to types of activities in any given country. Therefore, the need for further sub-classification by various characteristics was stressed. Certain examples were given, including sub-classification by location of the economic unit to distinguish between the localised and the non-localised part of the informal sector and to identify outworkers, household enterprises, ambulant activities, street outlets, etc.

53. It was also stressed that it was important to sub-classify the employed population in the informal sector by socio-demographic characteristics, for both sexes.

54. Data collection. Various sources for collecting data on employment in the informal sector were mentioned, including household and establishment surveys, population and establishment censuses, and administrative records. Different views were expressed on the particular advantages and disadvantages of each source.

55. At the end of the discussion, the delegate of Mexico moved an oral resolution on "the need to measure employment outside the formal sector". At the request of the Conference, a written text was subsequently submitted for consideration. Following an amendment to clarify the role of the ILO in future statistical work concerning the informal sector, the Conference adopted the resolution, which is presented as Resolution VIII in Appendix I of this report.

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ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

ESCAP/ILO Seminar on Employment and Unemployment Statistics  
16-20 January 1989  
Bangkok

THE LABOUR MARKET INFORMATION SYSTEM\*

(Item 8 of the provisional agenda)

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\* This paper was prepared by Mr. A.M.A.H. Siddiqui of the ILO Asian and Pacific Centre for Labour Administration (ARPLA) Bangkok. The views expressed in it are those of the author and do not necessarily reflect those of the United Nations. This paper has been reproduced as submitted.

Seminar on Employment and Unemployment Statistics  
(Bangkok, 16-20 January 1989)

Organised by ESCAP, Bangkok

Labour Market Information System

In recent and past discussions on labour market information system in developing countries in the region, several deficiencies continued to be mentioned and these include; inadequate coverage, inadequate response and inordinate delay in processing the data collected. In these discussions, questions were raised on the relevance of concepts and definitions used in the labour market information system. The objectives of the labour market information programme also came up for discussion indicating the need to distinguish the 'operational' and 'planning' objectives. The responses to these deficiencies, conceptual and definitional problems and the need for clarity in objectives have also been varied. Attempts to extend the coverage, improve the response, and reduce delay, through among others, computer application, simplification of questionnaires and forms, tripartite consultations, introduction of unconventional methods such as key informants approach, and similar other measures have also been noticed. Conceptual problems have been dealt by redefining concepts and various terms like "gainfully employed", 'civilian labour force', "economically active population", "labour force" have emerged on the scene. Methodological variations have also been noted, in suggestions like recording "current status" and "usual status" of employment of the respondents, in strengthening household surveys, in introducing supplementary instruments for data collection such as tracer study, labour turn over study, newspaper vacancy study etc. The objectives of the labour market information system have also undergone changes, in as much as, the system is being considered more relevant to manpower planning and more necessary to capture the characteristics of the labour market particularly to provide information on how the market operates, operated in the past and is likely to operate in future.

These responses notwithstanding, the deficiencies and the debates relating to concepts and objectives continue, and is likely to continue in the future as well. The main reason seems to be lack of attention to the identification of users of LMI, their needs and the manner they can benefit from the use of labour market information system. "Labour market information should not be collected for its own sake nor it is a panacea for all the ills of the labour market". It should be user-specific and include separate

component for different users, with possibly a core component of common interest. If this is acceptable, the system should specify the analytical framework as well so that the users can relate the information to their respective work areas. Administrative arrangements for analysis, discussion and action programmes may also be indicated as part of the labour market information system.

In what follows, the need for such a system with emphasis on analysis of data, will be illustrated in respect of employment programmes. This is not to say that conceptual, definitional and methodological issues are not relevant. It is common knowledge that the current system does not capture the larger segment of the labour market, namely the rural and urban informal labour market and that concept, definitions and methodologies are yet to be developed to suit the situations in this segment. Even basic tools like standard classification of occupations and of economic activities are not suitable to local labour market situations. The present system has not been able to capture variation in the occupational requirements of various sizes of establishments producing the same goods and services. Government interventions and age-old traditions of job-preference, wage determination, biased recruitment, training and staffing patterns distort the labour market and such distortions are lost in the aggregated picture. The purpose of this paper, however, is to show the possible improvement in the system that can be bought about, by incorporating an analytical frame in the system of labour market information.

Labour market has been defined as an imaginary market in which wages, salaries and conditions of employment are determined in the context of supply and demand of labour.

The analysis should therefore begin with the context in which wages, salaries and conditions of employment are determined. In other words, the system of labour market analysis should begin with analysis of demand and supply of labour. Matching the supply and demand, as far as possible, will involve periodical variation in policies like economic development, wages and income, monetary and fiscal, population, education, besides changes in labour administration services such as employment service, labour relations services, wages administration services, safety, health services, social security services and the services for IMI itself.

In most countries in Asia-Pacific region, there are arrangements of data collection on both demand and supply situation in a systematic manner through use of standardised tools like national classification of economic activities,

the national classification of occupations and mainly through household surveys, establishment surveys, supplemented by survey of educational and training facilities, vacancy surveys, earnings and wages surveys, consumer expenditure pattern surveys and the like.

In India for example, the statistical activities include, besides the population census, surveys like

- (i) labour force surveys covering the rural labour force as well, which also provide data on wages and earnings;
- (ii) establishment enquiries and enquiries conducted under labour legislations, providing data on employment level, labour turn over, wage level, vacancies notified, filled and unfilled, for the modern sector of the economy;
- (iii) surveys of industries registered under Factories Act, providing also data on labour cost, labour productivity, absenteeism, working conditions;
- (iv) occupational wage survey for the modern sector;
- (v) consumer price index for industrial workers, for agricultural labourers, non-manual employees and index number of whole sale prices; and
- (vi) operational statistics of industrial relations services, inspection services, safety and health services, employment services and other units in relation to their respective jurisdictions.

The organisational arrangements include specialised units like the Labour Bureau at Simla, and statistical unit in the Directorate General of Employment and Training as well as in other units of Labour Ministries, besides the National Statistical Offices and its network of units, branches and operations.

The above general pattern is applicable to many other countries. The arrangement to compile and publish, these and other data on general economic environments, also appear to exist in most countries of the region. For example, the Labour Studies and Planning Division of the Department of Labour, Thailand, has a programme of obtaining data and indicators from outside the

Department of Labour, covering the following:

Population:	Local Administration Department
Labour Force:	National and Economic and Social Development Board
National Accounts:	Bank of Thailand
Index of Production:	"
Money and Banking:	"
Balance of Payment:	"
Balance of Trade:	"
External Public debt:	"
Exchange rates:	"
Price Indices:	Business and Economics Department
Consumer Price Index:	Ministry of Commerce
Producer Price Index:	Ministry of Commerce
Minimum Wages:	Ministry of Interior
Trade and Investment:	Board of Investment of NESDB

A Labour Information Centre at the Headquarters with branches in the region is in the process of being established. Similar arrangements may be available in other countries as well in varying degrees.

Despite these arrangements for data collection, compilation and dissemination, the policies affecting labour market, have by and large, been taken in some countries with no reference to the data collected and compiled. This is more so, in case of employment policies or measures related to supply and demand for labour, as well as in areas like wages and income, industrial, fiscal, monetary, and other policies. In recent measures, adopted for



responding to problems of rising debt-service ratios, deteriorating terms of trade, the non-recognition of indications seen consistently in the labour market data for several decades past has been more pronounced. The economic development plans, in most Asian countries, do not include any bold programme for employment creation despite consistent existence of massive underemployment in most countries. Despite indications that labour cost constitutes a small portion of the total product cost (from 6 to 15 per cent), cost saving measures have mostly been applied to these areas. Reinvestment of profit has not been a major policy concern despite the need for capital to utilise surplus labour. The taxation policies have somehow permitted generation of 'black money' in several Asian countries, which allowed subsequent declaration of such assets on payment of nominal taxes. Import policies have adversely affected the low income group resulting in low domestic savings. Education policies have seldom taken note of labour market indications.

There may be sporadic instances of response to labour market indicators, but a comprehensive analysis of the situation has not been seen in many developing countries. For example, integrated rural development programme has been adopted in many countries to deal with underemployment, seasonal unemployment and unemployment in rural areas. The employment impact of the programmes adopted, in the context of the prevailing situation was ignored in determining the size of the programme. Similarly industrial dispersal policy, regional development programmes, agricultural credit programmes, have been adopted without taking note of their impact on labour market. The monitoring of employment impact has remained weak and the framework will need substantial improvement, showing short and long term impact on labour market and policy options, for each element of changes in the supply and demand situation.

This non-use of labour market indicators is largely due to absence of an appropriate analytical component. Presentation of LMI indicators, without bringing in the context of economic situation has not served the purpose. The manner of analysis should be such that, it attracts greater attention of policy makers. It is necessary to establish the benchmark situation and take into account the total economic situation before recommending operational policy measures. Examples of such measures may be seen in the subsequent paragraphs.

Based on the figures of job lost (650,000), increase in number of jobless persons (by 197,300) during 1981-85 and the current (1986) unemployment rate (10.4 per cent) of which about a third were long-term unemployed (the rest being employable with retraining measures), the estimated

maximum number of jobs expected to be created annually based on past trends (200,000) and the estimated number required to be created annually (3,000,000), France has adopted a comprehensive plan for coping with unemployment, with special component for the long-term unemployed.

This plan recognised that:

- (i) Modernisation of enterprises is indispensable.
- (ii) It is illusory to expect economic growth to do away with unemployment.
- (iii) Long-term unemployment has very serious social and psychological implications and that fight against unemployment entails the mobilisation in support of an overall plan, of authorities at all levels and of the social and economic partners.

For the long-term unemployed, special programmes of interview, vocational guidance and retraining, (resulted in 277,000 placement out of 600,000 interviewed in 1987) local level job programmes (14,000 additional places in 1987) and employment creation associations (numbering 500 employing 3,000) are some of the measures adopted.

Based on figures that real earning losses of workers in 1986-87 was in the range of 10-12 per cent, the austerity programme imposed in Greece in 1986 was relaxed by:

- (i) Permitting a 4.5 per cent pay increase.
- (ii) Allowing freedom for employers to give productivity bonuses at the end of 1988 based on performance throughout the year.
- (iii) Income tax reduction, rent subsidies and a freeze on price of public utilities and fuel for the first four months of the year.

While introducing the above measures, the Government in Greece has maintained the system of compulsory arbitration of disputed pay claims.

Trade unions in several financial institutions in UK, have agreed to:

- (i) Scrap the across-the-board pay increase system.
- (ii) The introduction of performance pay on two levels - individual and group performance, the latter being linked to profit-sharing.

Employees stock ownership plans (ESOP) was accepted by trade unions in USA, in firms where workers were faced with the loss of their jobs unless they provided financial assistance by buying shares of their troubled firms. However AFL-CIO, after analysing a survey of 8,000 ESOP firms, have called for greater representation of workers on the Board as the survey revealed that only 4 per cent of companies had workers represented on the Board.

The LMI operated by labour administration in many developing countries of the region, do not come up with analytical reports on current employment situation, although other agencies present more concise pictures as can be seen from the following extract on a report on Indonesia:

- (i) During 1980-85, "major labour market disequilibrium in terms of aggregate unemployment" has been avoided, as employment kept pace with labour force growth.
- (ii) The new entrants were absorbed in agriculture, low wage employment in rural non-farm and urban informal sector.
- (iii) Labour earnings in the informal sector have been adversely affected.
- (iv) Concentration of labour force in low productivity and low-earning activities has become larger.

The same report also anticipates 1.7 million persons to enter the labour force annually during the 1990s.

The situation in Singapore also provides interesting guidelines for identifying operational measures.

- (1) In 1979 -- higher wage policy was adopted for encouraging higher value-added enterprises.
- (2) In 1985 -- two years wage freeze was imposed to cope with recession.

- (3) 1988 - Employment Act: Flexi wage system was introduced keeping the basic wage, constant and making the annual bonus variable through negotiations, the amount of which was frozen in 1972 at the level of one months salary.
- (4) Guidelines for wage policy introduced periodically, include variation in
  - (i) CPF contribution by employer - (reduced in 1985 from 25 to 10 percent).
  - (ii) CPF contribution by worker - (reduced to 24 per cent).
  - (iii) Basic salary.
  - (iv) Year end bonus.

These decisions were taken in the context of tight labour market, characterised by job-hopping and a slow decline in productivity.

As most developing economies suffer from labour surplus, the shortages existing are usually not noticed in policy formulation. In developed countries, the first factor, in a shortage situation, in countries where employers have arrangement to train or retrain workers, is the labour force participation rate. It happens sometimes that female labour force participation has potential to be raised to a higher level. So various measures to draw higher number of housewives into labour market are taken. Part-time jobs, suiting the convenience of housewives, homeworkers scheme to allow them to work at home, incentives for delayed marriages, arrangements to look after small children etc. are some such incentives. These situations apply where the shortage is mainly numerical and not qualitative. Extending the retirement age or drawing the retired persons into the labour force are also considered in such situation. Part-time work for standards, complementing the training or schooling period with work experience are some other measures to enhance the participation rate in the labour force.

Shortages arising out of technological developments, in particular occupations or industry which occurs in developing countries, as well, will call for retraining measures, to which recourse is taken very often by employers in the developed countries. Fiji, is an example, among the developing countries, where industry training arrangements in several occupations were made through National Training Council. The shortage

pertaining to sectors like:

- . Preventive health services
- . Rural jobs
- . Plantations sector jobs
- . Replacement of expatriate workers
- . Domestic household jobs.

are also faced by developing countries like Bangladesh, Pakistan, PNG, Fiji, Malaysia, India, Sri Lanka. These are usually dealt in the developed countries, by remedies like additional payments for such jobs, training and retraining, improvement of working conditions including special provisions for housing, leave, family maintenance, food subsidy, recreation. In many cases these are not enough for jobs like those in plantation, rural or domestic sectors. Several countries in Asia, like Hong Kong, Malaysia, Singapore have resorted to hiring workers from labour surplus countries. The surplus situation in the developed countries were almost entirely managed by demand management till the inflationary pressure experienced during the recent oil shocks. Money supply, interest rates and taxation measures were the instruments to stimulate consumer's demand leading to additional economic activities and employment. Those who remained unemployed because of frictional causes, or social, physical and other disabilities were a small proportion of the labour force and unemployment insurance schemes and target group oriented employment schemes were adopted by these countries.

Since the oil shocks, demand boosting is being avoided in fear of inflation and special employment scheme have been resorted to with substantial resource allocation (Pound 2.1 billion in 1984-85 in UK). The situation is being monitored very closely particularly since the recent stock market problems in USA. The share market has to be prevented from "selling spree" for which dividends have to be paid to the shareholders at a rate higher than the bank interest on deposits. In August 1988, interest rate in Italy, UK, Canada, and USA has moved to 11.5, 12.1, 10 and 7.5 per cent respectively which is causing concern in the policy circle and measures to reduce money supply are being recommended.

There is another group of economists who would like to resort to so-called supply side measures like reducing the bargaining strength of the union, wage freeze and restraint, reduced public sector spending, weakening or removing minimum wage laws, reducing security of employment etc. Life-time job, which was once considered to be the cornerstone of Japanese economic miracle, is no longer being considered that sacrosanct. Unions are losing their members in many countries including USA and UK.

Because of inadequate analysis of LMI, many areas deserving attention, go unnoticed, as may be seen from the situation in Bangladesh, quoted below:

- (i) Setting up institutions for vocational training is given priority over apprenticeship training or training in industry, despite LMI indication that only 25 per cent of the employed skilled workers are trained in institutions while the rest were trained on-the-job.
- (ii) In the public sector, including public enterprises, centrally determined and an operated recruitment rules and practices, cause inordinate delays in recruitment keeping more than 70,000 jobs vacant at any point of time in a country where unemployment and underemployment embraces a third of the labour force. This finding of LMI has not been used disseminated to influence change in recruitment rules and practices.
- (iii) Scope for mobility of skilled workers to technical and professional positions is so limited and the wages and incentive structures are so unfavourable that it is extremely difficult to attract suitable persons to skilled occupations in the production process. This has gone unnoticed by the planners.
- (iv) Bangladesh produces more doctors than nurses, paramedics and laboratory technicians, mainly because of the staffing pattern in the hospitals and health services. Such imbalance exist in other sectors, which have not been noticed by the policy makers so far.
- (v) No programme to meet seasonal shortages in agriculture, geographical imbalance within the country in supply and demand situation, increased absenteeism in manufacturing process in harvesting season and to replace foreign professional workers in garments, airlines, shipping, road transport, hotels, have been adopted, despite indications in the LMI.

Investment in LMI will be justified, only if they influence the policy measures affecting labour market and if the information so collected and disseminated, are used for allocation of development resources for special programmes for

- (i) underemployment reduction with specific targets and agency responsibilities, within the planning framework and with adequate resource allocation;
- (ii) productivity improvement in specifically identified sectors, enterprises with predetermined targets, through training, manpower planning at plant level and technological development; and
- (iii) identification of mismatch between supply and demand and relocation of workers through training, retraining, incentives and subsidies.

It may be noted that the employment measures like the livelihood programme in Philippines and similar programmes in Bangladesh, India, Indonesia, Nepal, Pakistan, PNG, Sri Lanka and Thailand, have not been based on the analysis of labour market. The labour market information programme in most Asian countries, lack arrangements to organise inter-departmental and intra-departmental discussion and policy-making forums to utilise the findings of the labour market information programme for employment programmes. This situation deserves to be remedied through presentation of the findings and their analysis in a manner capable of securing greater attention from policy makers. The development of capability in labour administration to undertake such analysis showing short and long term policy implications, therefore, deserve very high priority.

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ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

ESCAP/ILO Seminar on Employment and Unemployment Statistics  
16-20 January 1989  
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AN INTEGRATED PROGRAMME OF CENSUSES, SURVEYS AND  
OTHER REPORTING SYSTEMS FOR COLLECTING STATISTICS  
OF EMPLOYMENT, UNEMPLOYMENT AND UNDEREMPLOYMENT

(Item 9 of the provisional agenda)

AN INTEGRATED PROGRAMME OF CENSUSES, SURVEYS AND  
OTHER REPORTING SYSTEMS ON EMPLOYMENT AND UNEMPLOYMENT

This paper was prepared by the United Nations Statistical Office.



AN INTEGRATED PROGRAMME OF CENSUSES, SURVEYS AND OTHER  
REPORTING SYSTEMS ON EMPLOYMENT AND UNEMPLOYMENT

(Prepared by the United Nations Statistical Office)

1. Introduction

Statistics of employment and unemployment are generally available from various sources such as population, agricultural and establishment censuses, household surveys generally described as labour force surveys, industrial and commercial enquiries, employment or labour market systems, employment service statistics and a wide range of administrative records, reports and returns. Historically, in many countries, each of these systems has been designed to serve its own specific objectives, has had its own concepts and definitions, and has largely been operated independently. In any overall assessment of the data, such as for employment and manpower planning, one is therefore often confronted with statistics that do not always tie up well and, hence, do not help presentation of a consistent and composite picture of the situation. Standardization of concepts, definitions and classification systems does help, to some extent, reconciliation of the data available from various sources, but not entirely. Differences in the methodology of statistical operation, including the timing, units and methods of inquiry, persist and contribute significantly to the apparent inconsistencies in the resulting statistics. An integrated programme of censuses, surveys and other reporting systems, that would enable establishment of appropriate links between the various systems, could improve the overall usability of the statistics for planning, policy formulation and programme implementation.

2. Population Census

The population census usually provides, in addition to demographic and other social statistics, a large body of economic statistics on the type of activity, employment, unemployment, industry, occupation and status in employment. Some of the censuses also provide information on place of work, time worked and income.

Most countries collect economic statistics on a universal basis and some on a sample basis. Either way, the census provides sub-national data at the required regional and sub-regional levels. The census data also lend themselves readily to the generation of detailed cross-tabulations, which may be obtained by relating economic topics with demographic characteristics such as age, sex, marital status, migration status, etc. and social characteristics such as literacy, educational attainment, etc.

Against this advantageous potential of geographic detail and comprehensive cross-tabulations associated with the population census, it should be noted, however, that the census data on

employment and unemployment suffer in quality, particularly in developing countries, for a variety of reasons, which include, inter alia, the conceptual limitations of the definitions of employment and unemployment used, the structural peculiarities of the agricultural and informal sectors which dominate the economies of developing countries, and the operational problems of data collection associated with a massive operation such as a population and housing census. The quality of the census data is often difficult to determine in view of the non-availability of and/or comparability with other sources of employment and unemployment statistics.

The resolution of the Thirteenth International Conference of Labour Statisticians, 1982,(1) on statistics of the economically active population, subsequently adopted by the International Labour Organisation (ILO), has taken into account the prevalent economic conditions of developing countries and enlarged the concept of economic activity to include (a) all production and processing of primary products, whether for the market, for barter or for own consumption; (b) the production of all other goods and services for the market, and (c) in the case of households which produce such goods and services for the market, the corresponding production for home consumption.

In relation to the enlarged concept of economic activity, the new resolution recommends two useful measures viz., (a) the "usually active" population, measured with reference to a long period such as one year, and (b) the "currently active" population (or the labour force), measured with reference to a short reference period of say, one week. The economically active population includes the employed and unemployed persons, above a specified age, enumerated in accordance with the definitions adopted for that purpose.

The choice of the measures adopted for enumerating the employed and unemployed persons in population censuses is fundamental to the quality of data and their comparability with similar statistics obtained from other sources. The simultaneous adoption of both the measures viz., "usually active population" and "currently active population" would no doubt be advantageous but difficult in population censuses. Countries are therefore advised to take into account the relative merits of the two measures in the light of prevailing economic conditions, available national sources of employment and unemployment statistics, and the possibilities of integrating effectively the various sources of statistics with a view to enhancing their usability for planning, policy formulation and projections.(2).

The concept of currently active population based on a short reference period of one week may be appropriate for countries where the economic activity of people is largely non-agricultural and, therefore, not influenced much by seasonal factors. It may not, however, be equally appropriate for countries where the economic activity of people is predominantly

agricultural and hence widely subject to seasonal factors and where people are likely to be engaged in more than one activity or are seasonally unemployed. Seasonal variations may occur in employment and unemployment not only in agricultural economies but also in industrial economies. But such variations are less wide-spread and are generally measured by developed countries through monthly or quarterly surveys. Where no such survey programme exists, it is important that the economic activity of people be measured on a more stable basis by referring to a long reference period as in the case of the usual activity status.

The advantage of the concept of usually active population based on a long reference period such as the preceding 12 months is that it can provide information on the activity of major consequence to each individual over the year as a whole. It provides an opportunity for collecting information needed, not only on the principal activity but also on the secondary activity, if any, over the year. It is also possible to obtain useful information on the intensity of activity over the year and relate it to household income. Above all, as a stable measure of the economically active population and its structural distribution, the measure of usually active population provides a sound benchmark for long-term projections and development planning.

In view of the importance of both measures for employment and unemployment studies, countries enumerating the currently active population in censuses should endeavour to obtain supplementary data covering at least a count of persons who were usually employed or unemployed during a specified 12-month period through, say, a post-censal survey. Similarly, countries using the measure of usually active population should endeavour to obtain supplementary data covering at least the size of the currently employed and unemployed population with reference to a week. Further, to achieve comparability and integration with other data sources, attempts should be made to identify separately and/or prepare special tabulations based on the census in respect of those groups which are covered by other specific sources.

### 3. Household Surveys

Next to the population census, a household survey is potentially the most comprehensive source of information on the economically active population, the only exclusion from its coverage being the non-household population, which may include the armed forces, the institutional population and the homeless. Information relating to the armed forces may be available from the Government, or may not be available at all for general use if it is regarded as confidential. The institutional and homeless populations being of marginal relevance, household surveys could potentially cover almost the whole of the economically active civilian population.

Moreover, like the Population Census, the household survey could provide information not only on the employed population but also on the unemployed population as well as the economically inactive population; and unlike establishment or institutional surveys which could provide information only on the employee population, household surveys could provide information on employers, own account workers, producer cooperatives and unpaid family workers also. Further, unlike establishment and institutional surveys which count each employee, whether full-time or part-time, regular or casual, as an employee, thus permitting a possible overlap through enumeration of each individual in more than one establishment or institution, a household survey would count each person as an individual only once and avoid an overlap, irrespective of the number of jobs he may be holding and enterprises he may be operating. Household surveys are therefore of utmost importance as sources of information on employment, unemployment and under-employment. They could provide the basic information needed for planning, policy formulation and programme implementation, as well as current information needed for the assessment of progress in the implementation of plans, policies and programmes.

The ILO recommendations of 1982 have substantially widened the scope of statistics relating to employment, unemployment and under-employment, that can be collected through household surveys, i.e. surveys of the economically active population or labour force surveys as commonly referred to. They can provide data on the usual activity as well as current activity. In particular, they can provide data on:

- characteristics of employment, both usual and current;
- unemployment, both usual and current;
- characteristics of the currently unemployed;
- current visible underemployment; and
- current labour time disposition.

They can be used for a thorough analysis of the employment situation and the pattern of employment. They can be used for an in-depth analysis of the unemployment situation with specific attention to usual unemployment, current unemployment and current under-employment, and a composite two-dimensional estimate of unemployment and under-employment can be derived as a measure of the visible under-utilization of the labour force.

The latest ILO recommendations have, however, stopped short of prescribing appropriate methods for the measurement of invisible under-employment - both disguised and potential. They have also kept the field open for the development of appropriate methods for the study of employment-income relationships. Pending development of appropriate methods, one has necessarily

to fall back on other sources of information such as, establishment surveys for data on employee-earnings and productivity.

Household surveys are also subject to certain limitations imposed by sampling. They do not usually provide the requisite geographical, industrial and occupational break-down of the data with adequate precision, for which again, one has to take recourse to other sources of information such as establishment surveys, however partial and limited in scope they may be. While labour market information systems usually seek to cater to the local needs, other establishment surveys often provide reasonably comprehensive information on the industrial and occupational breakdowns of employment in respect of the organized sector of non-agricultural activities.

Notwithstanding the above-mentioned limitations, household surveys still constitute the most important and comprehensive source of information on employment, unemployment and under-employment. On unemployment, in particular, they usually constitute the only reliable source of information, although the conceptual limitations of the definition of unemployment used in such surveys are often questioned. The only other source of information on unemployment available in some developing countries is the employment service. It too has its own limitations, often more serious than those of the household surveys.

For a comprehensive system of statistics on employment, unemployment and under-employment, periodic household surveys are, therefore, an essential requirement. Two types of surveys can be envisaged: a comprehensive survey once in five years to provide the basic data required for planning, policy formulation and programme implementation; and a current survey which may be on a less comprehensive but more frequent basis for a current assessment of progress in the implementation of plans, policies and programmes.

As the population census, generally undertaken at decennial intervals, usually contains some basic information on the economically active population, a comprehensive survey of the type proposed above needs to be taken only around the mid-point of the inter-censal decade. However, the census information, though comprehensive in terms of coverage and potential for detail, is not generally adequate for purposes of planning and policy formulation for want of data on the quantum of employment, characteristics of unemployment and the nature, degree and distribution of under-employment. The population census should, therefore, be immediately followed by an intensive post-censal survey on employment, unemployment and under-employment.

The comprehensive inter-censal survey, as well as the intensive post-censal survey, should preferably cover a whole year each, in order to get a clear and representative picture of

the seasonal variations in current employment, unemployment and under-employment. They should also try to establish the links between usual activity and current activity. The post-censal survey should, in addition, seek to establish appropriate links between the census data and the survey data taking into account the conceptual, definitional and operational differences, if any, between the census and survey methodology.

In particular, as the census is usually taken at a point of time, it should be possible for the survey to provide comparable data for the same point of time, or for a short period such as a month or a quarter immediately following that point of time, for comparative purposes, so that the census could be seen as a benchmark for the survey data. That is possible if the census, as well as the survey, adopts the current status approach. If, however, the census adopts the usual status approach and the survey adopts the current status approach, such a link would not be possible, unless the census seeks supplementary data on the current status also. Alternatively, the survey should obtain data on usual status as well as current status, at least for the month or quarter immediately following the census. In fact, it would be advantageous if the survey could collect data on both the usual status and the current status for the entire sample so as to facilitate study of the inter-relationships between usual status and current status. In that case, it would be possible to establish links with the census irrespective of the approach adopted in the census, and also establish links between the two approaches within the survey context. Comprehensive inter-censal surveys, as well as post-censal intensive surveys should, therefore, preferably adopt both the usual status and current status approaches.

For many of the developing countries quinquennial surveys of employment and unemployment would be adequate for most purposes of planning, policy formulation and programme implementation. Some of the faster developing countries may, however, need more frequent information on employment and unemployment to keep a current watch on the changes in employment and unemployment, especially if the development plans involve quantitative targets for employment generation and unemployment reduction. Short-term changes in employment and unemployment may not, however, always be measurable, especially if the national economy is largely agricultural, the structure of employment is dominated by self-employment, and the expected generation of additional employment is essentially aimed at keeping pace with the expected additions to the labour force. One has, therefore, to examine carefully the measurability of current changes in employment and unemployment and their meaningful interpretation in relation to the current economic changes, in deciding on the institution of a current survey of the economically active population. In most cases, where such surveys may be considered feasible and useful, annual surveys of employment and unemployment may be instituted on a smaller scale than the quinquennial surveys. Those surveys should, preferably, be year-round surveys, capable of producing half-yearly or

quarterly estimates; if so desired. The surveys may, as in the case of quinquennial surveys, seek data on current activity as well as usual activity if resources permit; or else, they should focus attention on current activity, as that permits better estimates of current unemployment.

In countries with a predominantly non-agricultural economy, where the development is more dynamic, more frequent labour force surveys of the type usually conducted in the developed countries may be well in order and serve a useful purpose. They may be conducted on a quarterly basis as in Hong Kong, Singapore and the Republic of Korea. From the viewpoint of manageability, the surveys may have to be confined to comparatively small samples and, for the precise measurement of changes, the samples may have to be repeated from round to round, subject, of course, to partial replacement or rotation.

Although many countries, even in the developing world, have often conducted surveys of employment and unemployment on the one hand and surveys of household incomes and expenditures on the other, precise data on employment-income relationships are generally not available because employment and unemployment surveys do not usually cover income while income and expenditure surveys do not usually cover employment in a manner in which employment and income can be related. It is advisable therefore that special surveys on employment and income be undertaken as ad hoc exercises from time to time, as proposed in Sri Lanka.

#### 4. Establishment Surveys

It has already been noted above that household surveys, though comprehensive, do not provide all the data required for employment and manpower planning and labour administration. Statistics are often required for manpower planning on employment by industry and occupation, and sometimes by occupation and education. For labour administration, data are also required on earnings from employment, hours worked and productivity. Such statistics can best be collected through establishment censuses and/or surveys.

Establishment censuses covering all non-agricultural establishments are conducted periodically in countries such as Japan. Some of the developing countries, such as India, have also been conducting periodically similar censuses, called Economic Censuses. Some others have been conducting industrial and commercial censuses at least once in ten years. Many others have had comprehensive industrial censuses at some time or another. The decennial World Programme of Industrial Statistics recommended by the United Nations envisages organization of comprehensive industrial censuses.<sup>(3)</sup> The 1983 World Programme, for instance, recommends that countries should attempt full coverage of all recognizable industrial establishments, not necessarily through complete enumeration but in such a way that satisfactory estimates can be prepared for the entire universe on at least a few basic items of data.

While the information collected in establishment censuses is usually minimal, the data collected in economic censuses and industrial censuses are generally more comprehensive. Invariably, however, they include some data on employment. Even the minimum programme recommended for industrial censuses includes data on employment, wages and salaries, value of shipments and receipts. The employment data under the minimum programme distinguish all employees from working proprietors and unpaid family workers and refer to the number engaged during a week towards the end of the reference year.

Like population censuses, establishment censuses, whether they are confined to industrial establishments or extended to cover all non-agricultural establishments, are of great value as benchmark data for establishment surveys. They are also useful as sampling frames for establishment surveys. In the absence of any other information, industrial censuses can provide some data on average earnings and productivity for various industries.

Ideally, establishment censuses covering all non-agricultural establishments should be undertaken at least once in ten years. However, a number of countries both in the developed and developing world have found it useful to carry out such censuses once in five years. If resources do not permit a quinquennial census, it is usually desirable that an intercensal sample census be undertaken midway between the decennial censuses. It would be useful if, along with such a census, a well designed sample representing various divisions and subdivisions of economic activity, could be surveyed to provide supplementary data on the occupational distribution of employment and educational attainments of the employed in each such division and sub-division. That would greatly facilitate manpower planning.

Establishment surveys, usually confined to industrial establishments, are undertaken in many developing countries at annual intervals mainly for the generation of industrial statistics. More frequent surveys are undertaken (monthly or quarterly) in some cases for the construction of indexes of industrial production. While the latter do not usually provide any statistics of employment, the former generally do.

Some countries undertake independent surveys of employment, possibly including some other items of information such as earnings and hours worked, often confined to industrial establishments but sometimes covering other non-agricultural establishments also.

The sampling frames used, the sampling methods employed, the methods of estimation and the adjustments for non-response made, if any, in establishment surveys are not always satisfactory. The statistics of employment thus generated may not, therefore, be always usable, although the data on average earnings and hours worked may be.



Current statistics of industrial employment are extremely useful, especially in countries with a sizeable industrial sector. In such countries, it would indeed be good if reliable establishment surveys could be developed at least on an annual basis. As statistics of industrial production are equally important, these two requirements should preferably be taken together and met through an integrated annual survey of industries. In such a survey, the employment data would refer to a single week towards the end of the reference year if the approach suggested for the minimum World Programme of Industrial Statistics were to be used. In most cases an annual series of employment statistics based on such data would be adequate to study the growth in industrial employment. However, in countries where the industrial activity is largely based on agricultural production, dominated by seasonal industries, industrial employment at the end of the year may not be an appropriate indicator of the level of employment during the year. In such cases, alternative measures such as the average daily employment or an average based on one week from each quarter as recommended in the World Programme of Industrial Statistics may be attempted.

If annual surveys of employment and unemployment based on household samples are established, there may not be a pressing need for establishment surveys on employment covering other non-agricultural sectors, as reasonably good data on employment for the major divisions of economic activity will be available from the household survey. However, if there is no such survey, there may be a case for an annual sample survey of non-agricultural establishments to provide current data on employment. That would, of course, be an extensive and hence expensive undertaking.

Nonetheless, some countries such as India do have such surveys. The Indian survey organized under the Employment Market Information Programme on a quarterly basis, covers (a) all public sector establishments, (b) all private sector establishments employing 25 workers or more and (c) a voluntary sample of private sector establishments employing 10 to 24 workers. If a survey of this type is to be successful, the directory of establishments needs to be continuously updated, appropriate multipliers used for the sampled sector, and the coverage extended to smaller establishments. As one cannot be sure of complete response in a survey of such a large magnitude, appropriate procedures need to be established for the correction of the effects of non-response.

Although an annual household survey may be less cumbersome than an establishment survey of that magnitude, the latter has the advantage of being able to provide some data for national as well as local use and may be undertaken on an annual basis if resources permit. It may be regarded, appropriately, as an essential part of the Employment Market Information Programme.

## 5. Employment Service

Associated with the employment market information programme, are the operational statistics generated by the employment service, wherever it exists and operates on a larger scale. Employment exchanges, as the employment service units are sometimes called, register applicants for employment assistance. The number of applicants on the live registers is generally taken in some countries as an indicator of unemployment. If the employment service has national coverage and is widely used for recruitment, both in the public sector and the private sector, its live register can perhaps be regarded as a significant indicator of active job search, if not strictly of unemployment. However, employment services are apparently not so well developed, not widely used for recruitment, and hence not too popular with the potential clientele in many developing countries. Even where they are, the statistics based on the live register suffer from various limitations:

- (i) every unemployed person does not necessarily go to the employment exchange;
- (ii) those interested in seeking employment through employment exchanges may register themselves with more than one exchange;
- (iii) every person registered with the employment exchange is not necessarily unemployed.

In practice, therefore, the statistics based on the live register have often been found to be unusable, except for agitational purposes.

Attempts have, however, sometimes been made to study the live registers by investigating the characteristics of the applicants in order to derive a more realistic figure of unemployment. Attempts have also been made sometimes in household surveys to investigate the characteristics of persons found to be unemployed to check whether they are registered with employment exchanges and, if not, why not. Investigations of this type may help to establish appropriate links between household surveys and employment service statistics, and may thus improve the usability of the latter. In the development of an integrated programme of statistics on employment and unemployment, one has necessarily to take into account the statistics generated by the employment services as a byproduct, wherever they are available and found usable. It is not, however, envisaged that an employment service system should be established primarily to develop this type of statistics.

6. To sum up:

An integrated programme of censuses, surveys and other reporting systems for statistics on employment and unemployment for the developing countries should include as a minimum:

Decennial -

Population census  
Intensive post-censal  
survey on employment  
and unemployment.

Establishment census  
Supplementary sample  
survey of establishments  
on occupation and  
education.

Inter-censal (mid-decade) -

Comprehensive household  
survey on employment  
and unemployment.

Establishment census  
or sample census  
Supplementary sample  
survey of establishments  
on occupation and  
education.

Annual -

Household survey of employment  
and unemployment (if needed).

Sample survey of  
industrial establish-  
ments.  
Sample survey of other  
non-agricultural  
establishments (if no  
household survey).

This paper has not dealt with employment (or labour) market information systems fully as they are discussed under another item. The recommendations emerging from the consideration of that item, insofar as they concern statistical operations, may be added to the above minimal programme.

In discussing statistics of employment and unemployment, one should not perhaps ignore the decennial agricultural censuses and similar inter-censal surveys as sources of data on agricultural employment. These are, in a way, complementary to establishment censuses and surveys covering the non-agricultural sector, insofar as they provide corresponding data for the agricultural sector. They are not, however, used for employment and man-power planning in the same way as establishment censuses and surveys are used, largely because usable data on agricultural employment are generally available from the population census and household surveys of the economically active population.

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DATA COLLECTION WITH HAND-HELD COMPUTERS:  
CONTRIBUTIONS TO QUESTIONNAIRE DESIGN

## Data Collection With Hand-held Computers: Contributions to Questionnaire Design

*Alois van Bastelaer,<sup>1</sup> Frans Kerssemakers,<sup>1</sup> and Dirk Sikkel<sup>2</sup>*

**Abstract:** The newly designed Netherlands Labour Force Survey is conducted with hand-held computers on a continuous basis from January 1987. In March 1986 hand-held computers were tested in a pilot study; over 1 400 respondents from 700 households were interviewed. The test confirmed earlier findings that hand-held computers are accepted without any problems by interviewers as well as interviewees. Consistency checks were specified in some parts of the questionnaire. Inconsistencies had to be corrected by the

interviewer. The quality of the questionnaire can be assessed by observing the interviewer's corrections and their paging backwards in the questionnaire (these manipulations were recorded by the computer). Inconsistencies remaining in the data when the interview was completed also suggest how the questionnaire can be improved.

**Key words:** Data editing; questionnaire design; CAPI; CATI; survey research.

### 1. Introduction

In March 1986 the Netherlands Central Bureau of Statistics conducted a pilot study to test a newly developed questionnaire for the Continuous Labour Force Survey with a hand-held computer (HHC). This experi-

ment can be considered from two viewpoints. First, it was the logical continuation of two earlier experiments, described in Bemelmans-Spork and Sikkel (1985a, 1985b), where HHCs were tested in the Price Survey and the Consumer Expectations Survey. Second, the experiment was a preparation for the Continuous Labour Force Survey which started in 1987. This survey aims at measuring labour market flows. The monthly sample size is 10 000 addresses.

The questionnaire in the pilot study consisted of two distinct parts. The first part on household composition was more structured than the household section in common paper-and-pencil questionnaires. Because the "head of household" concept had to be

<sup>1</sup> Department for Statistics of Employment and Wages, Netherlands Central Bureau of Statistics, 6401 CZ Heerlen, The Netherlands.

<sup>2</sup> Research International Nederland B.V. The views expressed in this paper are those of the authors and do not necessarily reflect the policies of the Netherlands Central Bureau of Statistics.

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avoided, a sequence of questions was designed to establish the relations between the household members. In the second part, all household members age 15 or older were interviewed about their current labour market statuses and (retrospectively) about their statuses in the past 12 months; no more than three jobs within the past 12 months could be described. These labour market histories are reconstructed by starting from the current labour market status and then going back in time. Many consistency checks were included in the questionnaire on household composition; consistency checks were not yet included for the labour market questions.

In this paper we describe some results of the pilot study, focusing on interviewer behaviour and questionnaire design. Section 2 sketches a short history of computer assisted data collection. In Section 3, the pilot study and the software for the data collection are described. Section 4 deals with the acceptance of the HHC by interviewers and respondents. In Section 5 the inconsistencies in the data are discussed and conclusions are drawn from an analysis of these inconsistencies. An example of the detection of an ill-defined concept from an analysis of inconsistencies is described in Section 6. Section 7 deals with paging backwards in the questionnaire. Section 8 concludes.

## 2. History

The history of computer assisted interviewing goes back to 1971, when AT&T sponsored a CATI (Computer Assisted Telephone Interviewing) survey to measure customer evaluations of telephone services (Nicholls and Groves (1986)). Since then, CATI has developed rapidly throughout the world. Today it is a common tool for commercial market research, governmental statistics, and scientific purposes. Despite its 17 year history, little research has been done on the methodology and data quality of CATI. In

market research it seems that the main consideration for the introduction of CATI is cutting costs compared with face-to-face interviews, which usually implies that a CATI system must be flexible and very simple to use. Once such demands are fulfilled the users are satisfied and feel no need for further research. This experience was confirmed by Groves and Nicholls (1986), who in their comprehensive paper, stated that "... there is little reliable empirical evidence that CATI affects data quality. This absence is especially noteworthy in the context of the frequent expectation of data quality improvement of CATI."

CAPI (Computer Assisted Personal Interviewing, interviewing with HHCs) began its development when computers that were small and powerful enough appeared on the market. As observed by Shanks (1983) and Shanks and Tortora (1985), CAPI questionnaires have much in common with CATI questionnaires. CAPI and CATI are in essence a sequence of displays which depend on previous responses. This dependence may be complicated. In this way the construction of a questionnaire closely resembles the development of a computer program. House (1985) and Jabine (1985) observe that the design and documentation of a CATI questionnaire requires the same approach as ordinary computer software. A significant difference between CAPI and CATI is that CAPI does not impose extra limitations on the complexity of the questions and response categories and that CAPI allows for visual aids such as display cards.

The first test of HHCs that we are aware of was carried out by Statistics Sweden, in their Price Survey, using a pocket calculator sized computer (Danielsson and Maarstad (1982)). Later the Netherlands Central Bureau of Statistics started experimenting with HHCs. In Holland too the Price Survey was used for tests with a larger HHC, the size

of a telephone directory (Bemelmans-Spork and Sikkel (1985a)). Both experiments were successful in that they proved that the use of HHCs was possible, although the hardware needed improvement. From there on the strategies of Holland and Sweden diverged. Statistics Sweden formulated demands for an HHC that corresponded to its needs and found a manufacturer to develop this computer (Lyberg (1985)). The Netherlands Central Bureau of Statistics continued experiments with HHCs that had been developed for a more general market. Around Christmas 1984 a trial was carried out with a simple household survey, the Consumer Expectations Survey, see Bemelmans-Spork and Sikkel (1985b). In this experiment one group was interviewed with HHCs, and another with paper-and-pencil. Both groups consisted of about 175 respondents. The comparison showed no differences in unit nonresponse or item nonresponse for sensitive questions. Nor were there significant differences between the groups in the frequency distributions of the relevant variables. The first CAPI survey for production purposes was conducted in 1983 in a rather different context. Bus passengers in Durham, U.K., were asked simple questions to which the answers were entered into a computer that was a little larger than a pocket calculator. Hamilton (1985) reports that this survey was satisfactory with respect to the fieldwork as well as to economic aspects; the investments paid for themselves within a year.

### 3. The Pilot Study and the Software for Data Collection

Since the findings from the previous experiment were felt to be satisfactory, the pilot study of the Continuous Labour Force Survey was not designed to measure subtle differences between two different groups.

Instead more quantitative evidence was sought about the acceptance of CAPI by interviewers and respondents and about any problems connected with the use of hand-held computers for data collection. A second objective was to obtain information on the data resulting from interviews with a complex questionnaire. The reduction of measurement errors was also analysed by comparing earlier false entries with the final correct entries in the same interview. In this way the pilot study was highly useful for the design of the final questionnaire to be used from 1987.

During the last three weeks of March 1986, 23 interviewers visited 1 224 addresses in ten municipalities. They had received a training of one full day and two half days. The interviewers used an HHC, type NEC PC-8201A with two memory banks of 32Kb RAM each. One bank contained the questionnaire and answers. The BASIC-program QUEST2 that interprets the questionnaire and a module for data communication were loaded on the other bank. QUEST handles the display of the question-texts and the response categories; it handles data entry and data storage in a compressed form which is to be decoded into fixed field records after the data are received by the central host computer. It checks the specified data inconsistencies and it manages the branching and skipping. It is the hardware, not the software that limits the number of questions. The definition of a question consists of four sections: in Section 1 the question type (precoded, numeric, open ended, etc.) was defined and the question text entered; Section 2 contained the response categories or the response range; Section 3 specified edit checks; and Section 4 contained the codes for branching and skipping. These codes can depend on the logical or numerical operations of previous entries. Text strings are often defined as variables for repeated use, also depending on previous answers. Besides saving memory, this allows



the clear-cut phrasing of questions and response categories. The detection of an inconsistency with prior answers causes the relevant questions to be displayed one after the other for confirmation or correction until the answers are reconciled.

The interviewers had a number of special programmable keys at their disposal in addition to the regular data-entry keys: return to the immediately preceding question (programmable key 1), return to any previous question (shift + programmable key 1), confirm a previous entry after having returned to a previous question (key 2), add remarks (shift + key 2), no choice in a multiple choice question (key 3), return to the current question while displaying all intermediate questions that have already been answered (shift + key 3), do not know (key 4), immediate return to the current question skipping intermediate questions (shift + key 4), refusal (key 5), refusal further cooperation with the interview (shift + key 5), consult table with household data (cursor right) and display question number and bytes still free (cursor left). Some programmable keys were confusing (e.g., return to the current question with and without displaying intermediate questions) and some were redundant (confirming an entry with key 2 whereas the enter/return key was used for the current question). In the revision of QUEST this user interface was redefined.

Each HHC was programmed to automatically phone the central host-computer at the office at a specified time during the night. These times were different for each HHC and distributed uniformly throughout the night. The data transmission took a few minutes, and the quality of the data transmission was examined through check sums. If the data transmission was successful, the data were released from the HHC so that the HHC could be used for new interviews. Following some problems during the first few

days, the communication ran smoothly for the remainder of the test. This led to the conclusion that communication by phone works well (at least given the quality of the Dutch telephone network, which is fairly high). The value of tailor-made software for communication, however, should not be underestimated.

Due to the short fieldwork period, the total response rate was rather low: 56%, i.e., 1 407 persons of age 15 or older participated.

#### 4. Acceptance by Interviewers and Respondents

Danielsson and Maarstad (1982) and Bemelmans-Spork and Sikkel (1985a, 1985b) gave the impression that the HHCs were readily accepted by interviewers and informants. Due to the relatively large sample in our experiment, we now are able to confirm these impressions with more solid results from two evaluation forms filled in by the interviewers. One form was filled in for each responding household, the other after each week of interviewing.

The following questions were answered by the interviewer following each interview.

- Did the respondent's attitude change noticeably when you showed him or her the hand-held computer? (Table 1)
- Did the respondent comment on the use of the hand-held computer?
- If so, how?
- Did you feel that the hand-held computer caused any inconvenience for the respondent when answering the questions? (Table 2)
- Did the respondent inquire about the data processing or about confidentiality?

In addition to questions about the structure and content of the questionnaire the interviewers had to answer the following questions every week.

- Did typing texts for questions on economic activity or occupation interfere more with the interview than writing the answers on a paper-and-pencil questionnaire? Why?
- Did the hand-held computer refuse any answers (e.g., was the message "are you sure?" displayed)?
- Did you have to return to previous questions to correct mistakes?
- Were there any problems with returning to previous questions?
- Were there any problems with the hand-held computer?
- Could you enter answers that you already knew (e.g., on the composition of a household) fast enough?
- Did the hand-held computer cause any delay when you wanted to ask a new question or enter the answers?
- Which questions caused problems?
- Were there any problems with the modem?
- Was the readability of the screen sufficient?
- Do you prefer working with a hand-held computer or a paper-and-pencil questionnaire? (Table 3)

First we shall give some results of the forms that were filled in per household. The interviewers were instructed to show the HHCs only after the respondent had agreed to the interview. In the evaluation form there was a question about the respondent's reaction, see Table 1.

Table 1. Respondents' first reaction to the HHC

	1986		1984	
	Absolute	%	Absolute	%
No reaction	667	92.4	113	65.3
Positive reaction (e.g., interested)	36	5.0	34	19.7
Neutral reaction (e.g., surprised)	9	1.2	21	12.1
Negative reaction (e.g., suspicious)	10	1.4	5	2.9
Total	722	100	173	100

Here the results are compared with the previous experiment in 1984. In neither was there any extra nonresponse due to the HHC. The negative reactions were almost negligible, and the following are typical examples: "automation strikes again" or "can we be recorded?" Examples of favourable reactions are: "very interesting," "called her husband because she thought it was fantastic," "how nice, is that a tape-recorder (or typewriter)?" and "will we be on television?" Most surprising, however, was the increasing number of respondents who did not react at all. This suggests that there is a growing acceptance of the computer as a common

tool. A second question was: "Did you feel that the hand-held computer caused any inconvenience for the respondent when answering the questions?" The answers are displayed in Table 2.

Table 2. Did the HHC cause any inconvenience for the respondent?

	Absolute	%
No	701	97
A little	20	3
Very much so	1	0.1
Total	722	100

The vast majority of interviews presented no problems. Another question concerned confidentiality. About 100 respondents asked about this but most of their comments would also have been valid for paper-and-pencil interviews. They were the normal questions on the method of data processing, data protection, the retention of anonymity, and the possibility or probability of linking interview responses to names and addresses. Other comments were more specifically related to the use of the HHC. Respondents expressed distrust of the way the answers were recorded, approval that the answers could not be changed once they had been entered in the HHC, and curiosity over how the data were transmitted to the office (a frequent question). Most respondents could be convinced that CAPI guaranteed confidentiality better than paper-and-pencil questionnaires because the answers are stored in a compressed form separate from the questions and because the answers are recoded, these new codes are not identical representations of the (alpha)numerical entries.

In the weekly evaluation forms, the interviewers were questioned about several aspects of CAPI. In the 1984 test it appeared that the quality of the light in the respondents' houses affected the readability of the HHC screens. In the current test there was a specific question about readability; about one in five interviewers complained about the poor readability of the screen.

In the first week, six interviewers felt that

using the keyboard to enter text strings interfered more with the interview than writing answers on paper questionnaires. In the second and third weeks only two or three interviewers retained this opinion. The interviewers gradually became more accustomed to the keyboard for data entry.

During the first week almost half the interviewers complained about the slow speed of the program, especially when data had to be entered that did not need to be asked or were already known. This combined with complex skipping patterns and consistency checks slowed down the response time of the program to about two seconds. In the second and third weeks fewer interviewers complained about the speed; here too they grew familiar with the hand-held computer and the questionnaire. Meanwhile better hardware and other software (a Pascal instead of Basic program) have considerably improved the performance of an interview with the hand-held computer.

The hand-held computer did fail now and then, mostly because of lack of electrical power or because of program bugs or disconnected chips.

The reported problems may suggest that the interviewers had a bad attitude towards CAPI. This, however, was not the case as appears from a general comparison of hand-held computer and paper-and-pencil questionnaire (Table 3). Here we distinguish between the first and the third week of the experiment.

Table 3. Comparison of CAPI and paper-and-pencil

	Week 1		Week 3	
	Absolute	%	Absolute	%
CAPI better	11	52	10	71
Neutral	4	19	1	7
Paper-and-pencil better	6	29	3	21
Total	21	100	14	100

The percentage of interviewers who preferred CAPI to paper-and-pencil increased from 52 in the first week to 71 by the third week (the different totals of interviewers are caused by the fact that not every interviewer participated every week). Some favourable comments by the interviewers: "after two weeks better, after three weeks good, no longer uncertain," "much more convenient, no more paperwork," and one negative: "the interview is less natural."

## 5. Exploring the Questionnaire Design

### 5.1. Introduction

For each interviewer, the HHC also recorded important information about the flow of the interview, for example, returns to previous questions to consult the answers or to correct errors and answers prior to corrections. These data describe the error-checking and may point out ill-defined or poorly understood concepts in the questionnaire.

Error checks specify that the answer to question R must be in range Y if the answer to a previous question Q lies in range X. If such a condition is not satisfied, the HHC queries "are you sure?" and asks question R again. If the interviewer confirms question R, then the previous question Q is asked again. Only after confirming this question and once again confirming question R is the

interviewer permitted to enter an inconsistency.

### 5.2. True value: the number of household members

A true value can be assessed if two different questions with a common content are asked and if the answer to the second question is redundant. The latter information can then be used as a check to the former answer and vice versa to determine the true value. A simple example from the household questionnaire illustrates how error checks can be defined on two questions with a common content. These questions are "how many household members are there?" and "is there anyone else in the household?" The latter question is asked repeatedly after the data for each person are completed. The answers must be consistent with the previously given number of household members.

Another error check consists of two questions about the number of household members and the household composition. A couple with children consists of at least three members, a couple with children and others of at least four. The purpose of the questions about the number of household members and the household composition is to give the interviewer a preliminary overview before she proceeds with the questions for each household member. The response categories

Table 4. Broad composition of the household

	Absolute	%
• Single household	193	28
a. (Un)married couple alone	180	26
b. (Un)married couple + child(ren)	264	38
c. (Un)married couple + child(ren) + other(s)	6	1
d. (Un)married couple + other(s)	1	0.1
e. Single parent + child(ren)	30	4
f. Single parent + child(ren) + other(s)	2	0.3
g. Other (household core not: (un)married couple or single parent)	10	2
Total number of households	686	100

and the corresponding frequency distribution of the second question are given in Table 4.

In this question the concept of the household core instead of the head of the household was central. In cases *a* to *d* this consisted of the couple, for *e* and *f* it was the single parent. The interviewers were instructed first to enter the data of the household core, then those of the children (of one or both members of the household core) and finally those of the others. The family relations were always a relative of a member of the household core, where possible the respondent.

The conflicts that actually occurred and

the reactions of the respondent are displayed in Table 5. It appears that 46 conflicts were detected, 2 of which remained in the final data (confirmed twice). In one case the household was reported to consist of 4 members, after which the data of only 2 persons were entered. In the second case 33 members were reported followed by data on 3 persons. Altogether 36 conflicts involved the related questions of the number of household members and the question of whether there was still another household member. Of these, 33 were immediately resolved by changing the answer to the latter question.

Table 5. Conflicts with the number of household members

Current question	Conflicting answer to current question		Confirmation current question	Confirmation previous question	Total number of conflicts
	yes	no			
Another person in household after					
person 1	6	17	0	0	23
person 2	3	2	1	1	5
person 3	0	4	1	1	4
person 4	3	0	0	0	3
person 6	1	0	1	0	1
Composition household					
	Couple without children	Couple with children			
	9	1	0	0	10
Total			3	2	46

5.3. True value: the household composition

Another illustration applies to error checks on the household composition. If there are children in the household according to the preliminary household composition reported, then the third (for single parent families, the second) person should be a child. Actually the questionnaire was programmed in such a way that the interviewer had only to confirm that the next person was indeed a child. If this was denied, the conflict had to

be solved. Also if there were no "others" then all persons not belonging to the household core must have been children. If categories *a* to *d* of the household composition (Table 4) were entered, then it could not be denied later without a conflict that there was a couple in the household, et cetera. The various categories of the household composition resulted in equally varied patterns of conflict, as described in Table 6. The question on the couple's marital status was asked

Table 6. Conflicts with the household composition

Current question	Conflicting answer to current question			Confirmation current question	Confirmation previous question	Total number of conflicts
	married couple	unmarried couple	no couple			
Unmarried or married couple	0	0	3	0	0	3
Child of person 1?	yes	no				
person 2	0	3		1	1	3
person 3	0	4		3	2	4
person 4	0	2		2	1	2
Relation to person 1	child	other				
person 5	2	0		1	0	2
Total				7	4	14

only when the household composition indicated that there was a couple. The answer "no couple," therefore, always created a conflict which in the pilot study was always solved. All remaining inconsistencies were between the reporting of children in the household composition and the not reporting of these children later on in the household box.

5.4. Other conflicts

The number of other conflicts was so small that we do not present them in a table. These conflicts concern the network of relations established within the household box. In five cases it appeared that the relation of person B to person A was in conflict with the marital status of person A. This relation was corrected three times; the marital status was corrected once; one inconsistency was confirmed. This concerned a remarried widower who still wanted to be considered a widower. Finally two conflicts appeared between the marital status of person B and the question about a married or unmarried couple. In both cases the marital status of person B was changed to "married."

5.5. True value: the date of an event

The software can handle a variety of labour market histories with a maximum of three jobs in the past twelve months. One respondent may have had a single job for a few years already, another respondent may have changed jobs twice in the past twelve months while being unemployed between two jobs. These event histories were established in the questionnaire by introductory questions which determined the correct path through the questionnaire. The response categories of the introductory questions were three or six month periods. After the introductory questions, the specific dates of beginnings and terminations of jobs were asked. Obviously, these dates have to satisfy certain order relations. A new job should have started after a previous job started, et cetera. However, no error checks were specified. In the absence of error checks some inconsistencies remained (Table 7).

The inconsistencies of cases 3, 4, and 10 are violations of the order relations of the dates. They are caused mainly by respondents who usually do temporary work and therefore have a complicated labour market

Table 7. Inconsistencies of dates with the introductory questions and violations of chronology

General labour market history	Inconsistencies and violations	Specific labour market history
1. B	start current job less than 1 year ago (4x)	C
2. C	start current job more than 1 year ago (2x)	B
3. C	start current job after date of interview (1x)	
4. D	start last job coincides with end last job (5x)	
5. D	end last job precedes start last job (1x)	
6. F	start previous job more than 1 year ago (1x)	G
7. G	end previous job coincides with start current job (1x)	
8. H	start previous job more than 1 year ago (1x)	I
9. J	start earliest job more than 1 year ago (1x)	K
10. K	start previous job coincides with start current job (1x)	

For the meaning of the capitals indicating the type of history, see the Appendix.

history. Case 7 is not a violation of an order relation, but rather a false entry. The end of a previous job coincides with the start of a current job even though data are also provided on the intermediate period.

The inconsistencies of cases 1, 2, 6, 8, and 9 are of another type. Here the broad indication does not correspond with the specific dates.

Table 7 may give the impression that the number of inconsistencies is insignificant. This is true if compared with the total sample of 1 407 respondents. However, if there are, say, 6 inconsistent records among the 19 records with a single job in the last 12 months that started and ended within these 12 months (labour market history D), then error checks are necessary for more complex labour market histories.

### 5.6. Interpretation

In CAPI and CATI, consistency checks have two purposes. First, they serve to ensure that the answers are entered correctly. If any errors are detected by the HHC program, they can be rectified during the interview. Consequently, the resulting data set is error

free and may even be statistically processed directly. Second, with computer assisted interviewing, data consistency is essential because responses or series of responses lead to intricate branching and skipping patterns later in the interview. Interviewers are expected to perform better because the hand-held computer takes care of the routing of the questions and because questions are displayed one at a time, thus focusing the interviewers' attention on that particular question. From time to time, however, inconsistencies are inevitable. Our most striking example was the married man who insisted on being registered as a widower. The HHC must allow for such a conflict, but it makes the task of the questionnaire designer far from easy.

A study of the conflicts that occurred in the field can contribute to developing the methodology of questionnaire design. In this way the designer may develop an intuition about the effects of error checks. The results of our pilot study are insufficient to draw definite conclusions, but they are sufficiently suggestive to generate a few recommendations. These recommendations may be generally valid, i.e., independent of the interviewing mode.

If error checks are specified between two different questions with common content, a true value can be assessed. When a true value is assessed during the interview, the measurement error is reduced. The pilot study of the Labour Force Survey provides evidence about the assessment of a true value. Because error checks can be specified between two questions with common content, both questions should be retained in the questionnaire. Error checks are also effective when the answers to general and detailed questions have to be reconciled.

The number of corrections per interview may be interpreted as an indicator of the quality of a questionnaire. However, questionnaires on different topics cannot be compared since some topics are simply more complex than others. Hence a questionnaire – *ceteris paribus* – with the least number of corrections needed, is preferred.

If a survey organization wants to test a questionnaire, the software for computer assisted interviewing should be able to keep a record of all interviewer actions or, even better, to produce summary statistics on consistency checks.

#### 6. Detecting Ill-defined Concepts

The occurrence of inconsistencies sometimes indicates an ill-defined or poorly understood concept. A surprising and important example is the parent-child relation in our definition of household. Many conflicts and most remaining inconsistencies had to do with this relation.

The concept "child" may have more than one interpretation in an interview and should therefore be well-defined. There are different reasons for confusion. The word "child" may be interpreted as the opposite of "grown up" or "married child." This may also create confusion in determining the household core (e.g., a single parent household core implies

the presence of a child). Moreover there is the problem of adopted children or stepchildren, e.g., whether for a married couple a child of the second partner from a former marriage and thus of the household core according to the first question, will also be considered a child of the first partner to whom the relation is determined in the second question (by confirmation).

#### 7. Detecting Deficiencies in a Questionnaire: Paging Backwards

A difference between computer assisted interviewing and paper-and-pencil interviewing is that the interviewer loses her overview to some extent because she can see only one screen at a time. With the HHC the interviewer could page backwards, question by question, using a programmable key. This option not only gives the interviewer an overview when necessary, but is also used to correct previous answers. In this way, paging backwards can be considered a form of error checking that was not specified by the designer of the questionnaire. The HHC kept a record of the interviewer's backwards steps in the questionnaire.

Table 8. Number of steps needed to reach the desired question

Steps	Number	Percentage	Cumulative
1	664	85.46	85.46
2	67	8.62	94.08
3	21	2.70	96.79
4	8	1.03	97.82
5	6	0.77	98.59
6	1	0.13	98.72
8	4	0.51	99.23
9	2	0.26	99.49
11	1	0.13	99.62
12	1	0.13	99.74
17	1	0.13	99.87
29	1	0.13	100.00
Total	777	100.00	



Table 9. Questions that were referred back to more than 10 times

Question no.	Short description	Number of times back to	Number of times asked	Percent back
1	Result household: response/nonresponse?	12	686	1.75
2	Number of members of household?	14	686	2.05
107	Which member of the household answers questions?	17	1400	1.21
109	Activities of respondent (multiple choice)?	44	1407	3.13
111	Do you have a paid job?	12	787	1.52
112	Have you ever had a paid job?	11	733	1.50
121	Name of the company where you work?	15	598	2.51
122	Address of the company where you work?	18	598	3.01
124	In which department or place of the company do you work?	16	598	2.68
169	What is your occupation?	10	598	1.67
170	What are your main activities?	13	598	2.17
179	How many hours do you work (SWW <sup>1</sup> )?	27	281	9.61
180	How many hours do you work (no SWW <sup>1</sup> )?	18	306	5.88
181	Did you work longer last week?	22	598	3.68
184	Full time or part time?	11	598	1.50
213	Did you have another job before this one?	11	656	1.95
343	How long have you been looking for this (2nd) job?	10	77	12.99
372	How long have you been looking for a job?	13	60	21.67
423	Have you been looking for a job during the last months?	13	630	2.06
445	Sequence number address?	10	686	1.46
448	Number of households at this address?	14	686	2.05
459	Day of first visit?	18	686	2.62
460	Time of first visit?	14	686	2.05

<sup>1</sup> SWW = shorter working week.

The average number of times per household an interviewer paged backwards was 1.132. Table 8 shows how many steps the interviewers had to take to reach the desired question. In most cases one step was sufficient. In 67% of the cases paging backwards served to correct a previously given answer, and in 33% of the cases the previous answer was confirmed. This is consistent with findings in the CATI case reported in Groves and Nicholls (1986).

Since the "previous question" key could be used anywhere in the questionnaire, it is impossible to list all the 172 questions that were paged back to without reproducing a substantial part of the questionnaire. We therefore restrict ourselves to those questions to which the interviewers jumped back 10 times or more. In Table 9 these questions are de-

scribed briefly. An indication is also given of how many times the question was asked (obviously you cannot go back to a question that was not asked). Moreover, the percentage of "back jumps" is indicated. This leads to some remarkable results. The question that was most frequently jumped back to (109) has a relatively low "back jump" percentage because this question was asked to everyone. The percentage is much higher for questions 343 and 372 because only few respondents answered these questions.

A first conclusion of the analysis of paging backwards may be that the interviewers are concerned with the quality of their work. This is apparent from their frequent use of the "previous question" key. It was most often used to correct previously given answers. Given the preliminary status of the

questionnaire we shall restrict ourselves to only a few topics.

In question 109, the respondent was asked to report his activities in a multiple choice question (paid work, student, housewife et cetera). In question 110 the respondent had to make a single choice from the same alternatives (the most important activity). The fact that the interviewer paged back 44 times shows that this construction was poorly understood. In the questions determining the respondent's occupation the interviewers often paged back, indicating that this is a difficult subject. But on the other hand it is hard to improve such questions. Questions about working hours also cause problems especially when there is a shorter working week (questions 179-181). The retrospective questions 343 and 372 have the highest percentage of referrals to the "previous question." Apparently it is difficult to answer questions about a complicated labour market history.

The relatively low number of referrals to the "previous questions" in the household box is remarkable, but it may be explained by the relative simplicity of the subject. An alternative explanation is the abundance of consistency checks in the household box. Detected inconsistencies mostly lead to correction (see Section 5), so that there will be less need for correction by paging back.

Consistency checking and paging back are probably not independent processes. Also, when certain questions are spontaneously corrected by the interviewer, these questions may be identified as error prone, or, from another perspective, questions where error checks are effective.

It may also be asked whether the number of times the interviewers paged back is a good indicator of the quality of the questionnaire. As with error checking, the answer is not a simple "yes." The frequency of paging back is probably a good indicator of the difficulty of a questionnaire. Of course it is important to keep questionnaires as simple as possible,

but there are simple topics as well as difficult topics, such as occupation or economical activity, about which we have to gather information. Therefore, the preferred questionnaire is one in which the interviewers page back least often, given the complexity of the subject.

#### 8. Conclusion

This paper had two goals. First, it aimed at presenting new findings about acceptance and appreciation of CAPI by interviewers and respondents. Acceptance by respondents is no problem; to them CAPI circumvents rather than arouses suspicion about confidentiality. Interviewers' attitudes are also favourable: the majority of the interviewers consider a hand-held computer more convenient than paper-and-pencil.

The second goal was to contribute to the development of a methodology for CAPI. The results suggest that error checks in CAPI are necessary. This is consistent with Tortora (1985) who compared the use of error checks for CATI and paper-and-pencil. Moreover, keeping a record of the interviewer's consistency checks and movement through the questionnaire is one step in evaluating the quality of the questionnaire.

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Appendix. The types of labour market histories and their distribution; having a job is indicated by x; not having a job by -.

Labour market history	n	1 year before interview	Date of interview
A	682	-----	-----
B	536	xxxxxxx	xx
C	63	-----	-----xxxxxxxxxxxxxxxxxxxxxxxx
D	19	-----	-----xxxxxxxxxxxxxxxxxxxx
E	44	-xxxxxxxxxxxxxxx	-----
F	6 [1] <sup>1</sup>	-----	-----xxxxxxx-----xxxxxxxxxxxx
G	46 [35]	-xxxxxxx	xxxxxxxxx-----xxxxxxxxxxxxxxx
H	2 [1]	-----	-----xxxxxxxx-----xxxxxxxx
I	3 [2]	-xxxxxxx	xxxxxxxxxxxxxxx-----xxxxxxxx
J	1 [1]	-----	-----xxxxxxxx-----xxxxxxx-----xxxxxxxx
K	4 [2]	-xxxxxxx	xxxxxxxx-----xxxxxxx-----xxxxxxxx
L	1 [1]	-----	-----xxxxxxxx-----xxxxxxx-----xxxxxxx

<sup>1</sup> Two jobs may succeed each other immediately from labour market history F; this distinction is not made in the figure, i.e., a period indicated by “-” may be empty. The number in [...] indicates the number of persons with immediately succeeding jobs.

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**FOR PARTICIPANTS ONLY**

**20 January 1989**

**ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC**

**ESCAP/ILO Seminar on Employment and Unemployment Statistics**

**16-20 January 1989  
Bangkok**

**DRAFT REPORT**

## I. ORGANIZATION OF THE SEMINAR

1. The Seminar on Employment and Unemployment Statistics, organized jointly by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) and the International Labour Organisation (ILO), was held at Bangkok from 16 to 20 January 1989. It was funded by the Government of the Netherlands.

2. The Seminar was attended by 40 participants from the following 26 member and associate member countries: Australia, Bangladesh, Bhutan, Brunei Darussalam, Burma, China, Fiji, France, Hong Kong, India, Indonesia, Islamic Republic of Iran, Japan, Malaysia, Nepal, the Netherlands, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Samoa, Singapore, Sri Lanka, Thailand, Tonga and Viet Nam. Representatives of the United Nations Statistical Office (UNSO), and the ILO also attended.

3. In his inaugural address, the Deputy Executive Secretary and Officer-in-Charge of ESCAP welcomed the large attendance of senior-level government officials, which signified the interest of member countries in the subject matter of the Seminar. He expressed his gratitude to the Government of the Netherlands of its support to the secretariat's activities in the field of statistics. He also expressed appreciation for the co-operation between ILO and the ESCAP Statistics Division and hoped that such collaborative efforts would continue in the future.

4. The Deputy Executive Secretary emphasized the importance of reliable and timely statistics related to employment, unemployment and underemployment for economic and social development planning in most countries. Such statistics could be generated from various sources such as censuses, household surveys and administrative records. While censuses were an important source of bench-mark statistics on employment and unemployment, household surveys and administrative

records provided current information. He hoped that, to promote greater international comparability, questions related to concepts and definitions of employment, unemployment and underemployment would be discussed by the Seminar, especially in the light of the revised international recommendations adopted by the thirteenth ILO International Conference of Labour Statisticians in 1982.

5. The Deputy Executive Secretary observed that the Seminar needed to examine the collection of statistics on employment in the informal sector which was important for planning balanced economic growth, promotion of self employment and other income-generation activities. The Seminar would also consider the topic of employment information systems. He concluded with the hope that the deliberations of the Seminar would generate conclusions that would be useful in developing and improving statistics on the employment, unemployment and underemployment in ESCAP countries.

6. The representative of the Netherlands expressed his satisfaction with the impressively large number of participants at senior level. His Government was glad to support the activity which, he considered, was useful in providing guidance to the developing countries in this statistical programme. A representative of ILO thanked the Government of the Netherlands for its financial support to the Seminar. ILO was happy to be associated with ESCAP in its organization. He regretted, however, that the post of regional adviser on household surveys, funded by ILO, was vacant at the time of the Seminar.

7. The Seminar elected Mrs. Sonia H. Castro (Philippines) Chairperson, Mr. Tate Simi (Samoa) first Vice-chairman, and Hojatol-Eslam Seyed Fakhrudeen Hashemi (Islamic Republic of Iran) second Vice-chairman, Mr. Paul Jacob (India) was elected Rapporteur.

8. The Seminar adopted the following agenda:

1. Opening of the seminar.
2. Election of officers.
3. Adoption of the agenda.
4. Review of the existing sources of statistics on labour force, employment, unemployment and underemployment.
5. Comparative evaluation of the concepts and measures of unemployment and underemployment used in countries of the Asian region.
6. Review of international recommendations concerning statistics of the economically active population, employment, unemployment and underemployment and their application to national conditions.
7. Employment in the informal sector.
8. The labour market information system.
9. An integrated programme of censuses, surveys and other reporting systems for collecting statistics of employment, unemployment and underemployment.
10. Adoption of the report of the seminar.

9. The documents submitted to the Seminar are listed in the annex to the report.

## II. REVIEW OF THE EXISTING SOURCES OF STATISTICS ON LABOUR FORCE, EMPLOYMENT, UNEMPLOYMENT AND UNDEREMPLOYMENT

10. On the basis of country papers presented, participants informed the Seminar of their commitment to providing to planners and other users statistics relating to employment, unemployment and the labour force. The Seminar reviewed country practices and experiences in collecting and compiling the required data, the problems involved, and the innovations introduced to overcome the difficulties faced. It noted that since statistics on <sup>employment and</sup> unemployment had sensitive political implications, the timeliness and accuracy of the data were of paramount concern to planners and decision makers; thus the producers of the statistics needed to exercise special care.

11. The Seminar was informed of the various sources from which statistics on employment, unemployment and underemployment were derived. The major sources identified were population censuses, household surveys, establishment surveys and administrative records. The Seminar discussed the limitations of data associated with the source of data collection. It noted that for some countries, especially the smaller developing ones, the population census was the main source of information. Data from the census were supplemented where possible by information collected from other sources. For some other countries, however, relevant statistics were collected from all available sources at regular intervals to obtain comprehensive information for short and long-term planning needs.

12. The Seminar noted that almost all the countries represented regularly carried out decennial population censuses, but some of them had only recently introduced questions on employment and the related industry and occupation details into their census questionnaire. The Seminar was informed that the large number of enumerators involved and the time constraint in population census



operations limited the quality of employment statistics collected through the census. Further, changes in the definitions adopted for different censuses affected the comparability of data over time. It noted also that in view of the workload involved in census processing, data on employment and other statistics derived from the population census could not be made available as readily as the users would like. Population censuses nevertheless gave comprehensive coverage in terms of employment and unemployment and provided useful bench-mark figures for small administrative areas. Such data were increasingly required by policy makers.

13. The Seminar noted that household surveys were the most important source from which the statistics under review were derived. In some countries, relevant information was collected as a supplementary output of socio-economic or income and expenditure surveys. In many countries, regular labour force surveys were conducted on a quarterly or monthly basis. While in <sup>some</sup> others, surveys were undertaken annually or quinquennially. It observed that most countries attempted to follow, as far as possible, the concepts and classifications recommended by the International Conference of Labour Statisticians, with adaptation to suit local conditions where necessary. The Seminar also noted that in view of the high cost of field enumeration and to reduce the need for call-back, some countries had adopted the proxy-interview approach whereby answers provided by any responsible adult within the selected household were accepted. In order to solicit better-quality results, efforts were also made to deploy local enumerators considered more acceptable to the respondents, including female enumerators to interview female respondents.

14. Only a few countries reported that statistics on underemployment were compiled. The Seminar noted that though comprehensive labour force surveys could provide relevant statistics for the study of underemployment, the criteria for the classification of underemployment posed some problems. It also noted that

some statistical offices had decided to provide more detailed tables on the relevant variables to enable users to draw their own conclusions on the incidence of underemployment.

15. The Seminar noted that employment data were also collected from establishments through economic surveys and censuses, or were compiled from administrative records such as those maintained by the labour or tax department or generated through the social security system. It appreciated that because of different methodologies and modes of data collection, statistics derived from different sources could not be easily reconciled. Those sets of statistics were however useful to complement one another in providing a comprehensive picture of the labour situation prevailing in the country.

### III. COMPARATIVE EVALUATION OF THE CONCEPTS AND MEASURES OF UNEMPLOYMENT AND UNDEREMPLOYMENT USED IN COUNTRIES OF THE ASIAN REGION

16. The Seminar considered the item on the basis of a document entitled "Concepts and Measurement of Unemployment and Underemployment in Asian Countries: A Comparative Study" (STAT/SEUS/5) prepared by a consultant to the ILO Asian Regional Team for Employment Promotion (ARTEP).

17. It recognized that the critical problems in the available statistics centred around

- (a) the plausibility of the estimates of the level of unemployment;
- (b) a proper assessment of underemployment or the unutilized labour time of those classified as employed, that could be harnessed for economic and social development;
- (c) the need to adjust the available estimates of labour force for the discouragement caused by paucity of employment opportunities; and
- (d) inadequate communication with policy-makers and analysts about the use of the results of labour force surveys for planning for socio-economic development.

18. The Seminar noted that the employment and unemployment statistics of ESCAP countries did not appear strictly comparable because of different practices in terms of periodicity and frequency of surveys, as well as the length of the reference period and the criteria used to classify a person as employed or unemployed. There was a rich experience which needed careful documentation and assessment in close collaboration with the national statistical agencies. The Seminar felt that ILO and ARTEP should continue their review of national practices to understand the implications of different approaches; further dialogue on those issues would help to promote comparability. It cautioned that it was sometimes difficult to apply international recommendations at the national level

because of the need to maintain comparability with past estimates; the highest priority should none the less be given to the need to generate statistics of use in national planning.

19. Some participants highlighted problems in measuring unemployment. The concept of "seeking work" was easy to understand but did not fully take into account the structure of unemployment or the behaviour of the unemployed. The concept of "available for work" was less precise, and responses relating to the willingness of the unemployed to accept work under the prevailing conditions of work or wage rates might not be confirmed by subsequent behaviour. Some respondents might be confused by hypothetical questions, and moreover, the responses might be affected by the timing of the survey or the reference period. It was however recognized that the quantum of inactive unemployment among the self-employed, (including unpaid family helpers), the seasonally inactive and those classified as home-makers could make a substantial difference to the estimates and to the nature of necessary policy interventions. An attempt to measure it was therefore vital for most countries for improving the quality of their unemployment statistics.

20. The Seminar noted that in most developing countries the concept of unemployment alone was not considered adequate to understand the real structure of the labour market situation. It stressed the importance of attempting to measure underemployment. It also acknowledged operational difficulties and subjectivity associated with the measurement of visible and invisible underemployment; ~~even visible underemployment was not easy to capture.~~ There were many reasons associated with conditions of employment, income and attitudes that might lead people to report availability for additional work. Detailed questions and tabulation of answers could help to identify such factors and to determine the

extent to which underemployment was associated with disadvantage or poverty, requiring policy interventions.

21. With all the various measures of employment, unemployment and underemployment there were practical and conceptual problems in classifying borderline activities, in the categorization of unpaid family workers and in treatment of them when they were temporarily absent from work. Those classification problems could be mitigated by seeking additional information. The Seminar felt that some attempt should be made to collect information on hours (where possible) or days worked when adopting the "current activity" approach. The Seminar also felt that it would be advantageous to obtain information on the multiple work statuses of the employed in order to improve the national accounts and the estimates of labour productivity, as well as to understand the actual utilization of available labour time.

22. The Seminar also recognized the need to broaden the scope of labour force surveys to understand the constraints on the economic activities of many part-time workers and to identify those who dropped out from the labour force because of the presumed non-availability of work opportunities. Such labour force surveys would become more realistic and would help to enhance the plausibility of data. The Seminar also noted the need to improve communication between those engaged in the collection and compilation of data and the users such as policy-makers, planners and social scientists.

23. The Seminar recognized that greater flexibility needed to be built into labour force surveys. To assist in interpretation and to facilitate comparison between countries, it was desirable that the various components of the unemployed, distinguishing those actively seeking work, those not actively seeking but available for work and those seasonally inactive and available for work were cross-classified by relevant correlates such as sex, age, educational attainment, and key

characteristics of the household indicating its economic status, rural-urban residence or the asset base. It was also important that comprehensive tabulations and reports were available more readily to both national and international users. Attention might be focussed on the employment situation of special groups such as women and youth.

24. The usefulness of simultaneous collection of data in terms of both usual and current activity was recognized, but assessing and evaluating the potential of such data could only be undertaken by the countries of the region. The Seminar urged the ILO, ARTEP and the countries concerned to devote some resources to the necessary methodological research and its dissemination, which would make labour force surveys more cost-effective and useful.

IV. REVIEW OF INTERNATIONAL RECOMMENDATIONS CONCERNING  
STATISTICS OF THE ECONOMICALLY ACTIVE POPULATION, EMPLOYMENT,  
UNEMPLOYMENT AND UNDEREMPLOYMENT AND THEIR APPLICATIONS  
TO NATIONAL CONDITIONS.

25. The item was discussed on the basis of a paper prepared by the ILO Bureau of Statistics entitled "International Standards on the Measurement of Economic Activity, Employment, Unemployment and Underemployment" (STAT/SEUS/1), describing the international standards adopted by the Thirteenth International Conference of Labour Statisticians in 1982. The main features of those standards were: (a) the concept of economic activity, defined in terms of the production of goods and services as set forth in the United Nations System of National Accounts; (b) the conceptual frameworks for measuring the currently active population (the labour force) and the usually active population; (c) the definition of employment, based on the "one hour" criterion for all categories of workers and distinguishing between paid employment and self-employment; (d) the notion of temporary absence from work on the basis of formal job attachment; (e) the standard definition of unemployment and the provision for relaxation of the "seeking work" criterion in particular situations; (f) the definition of visible underemployment and its measurement as part of statistics on employment; and (g) the recommendations to collect data for the analysis of the relationships between employment and income in order to supplement statistics on employment, unemployment and visible underemployment.

26. The Seminar noted some of the major issues that might arise in survey applications concerning measurement and the appropriate statistical treatment of particular categories of workers, such as self-employed persons, unpaid family workers, casual workers, seasonal workers, apprentices, persons laid off and persons engaged in the production for own and household consumption, who were sometimes at the borderline <sup>between labor categories.</sup> ~~of the labour force.~~

27. The Seminar discussed the application of the international standards in particular situations. It noted that for workers temporarily residing abroad who made regular remittances to the households being surveyed, resident status should determine their inclusion in the national survey. They were to be considered as part of the labour force in their country of origin if they fell within the scope of the survey in terms of the residence criteria adopted for determining household membership. In many surveys, a cut-off point of six months or one year was used for the length of stay abroad. It was felt that there might be practical problems in classifying such workers into further sub-categories, such as employed at work, employed not at work, or unemployed, due to the lack of knowledge of the household member responding to the survey questionnaire.

28. The concept of work for the measurement of the economically active population was examined in detail. A number of participants reported on their national practices and raised issues concerning the exclusion of activities such as unpaid household chores, fetching water from a natural source, activities leading to production of income for others and investing money in a business without contributing to its operation. Among those activities, fetching water and own-account repair were being reconsidered for inclusion within the production boundary of the forthcoming revision of the SNA. Regarding that part of production for own and household consumption which was included in the present concept of economic activity, the "important contribution" provision of the international standards was examined and alternative measurement methods in terms of labour input or production output were discussed.

29. As to whether production on own-account, as defined in the SNA, included unpaid work for communal development, it was pointed <sup>out</sup> that, under the present system, voluntary activities were generally not considered as economic activity. However, the forthcoming revision of the SNA might reconsider the issue,



making a distinction between voluntary activities leading to the production of investment goods (e.g., construction of schools, hospitals, roads) and those which rendered services such as teaching in schools or helping in hospitals on a voluntary basis.

30. Concerning the classification of persons into labour force categories, several participants reported their experiences regarding the treatment of working students and, in particular, of students combining their studies with work on a family farm. The Seminar noted that according to the labour force framework, any work activity should have precedence over other activities in the measurement of the currently active population. Such students should therefore be classified as employed. It was observed, however, that the classification of working students might be different on the basis of the usual activity framework, depending upon the criteria used for determining the main activity status. It was felt that the issue of working students provided a strong case for measuring both the current activity status and the usual activity status in the same survey.

31. The Seminar recalled that according to the international standards, persons in military service for less than three months were not to be considered employed unless they maintained a formal attachment to their previous job. Thus persons who resigned from their jobs in order to participate in military camp training for a short period were to be treated as unemployed *or not economically active*.

32. It was pointed out that unpaid family workers not at work should not be considered as employed when absent from work ("with an enterprise but not at work") on the ground that they did not have an enterprise of their own. It was emphasized, however, that the status in employment classification of couples jointly operating an enterprise should be carefully examined so as to avoid inconsistencies through classifying one member as employed when absent from work and the other as not *economically active* *Employment*.

33. The Seminar recalled that, in the measurement of unemployment, a strict application of the international standards required that the current availability criterion be assessed in relation to the survey reference period. Attention should also be paid to implementing the criterion in survey applications in a way that reflected the intent of the international standards. It was suggested that skill level criterion was necessary to an understanding of unemployment, but the Seminar agreed that any addition should be made by enlarging the sub-classification of the unemployed rather than by changing the definition.

34. In the discussion on the measurement of underemployment, certain issues were raised concerning the use of a uniform conventional norm as opposed to hours of work fixed by national legislation or usual hours of work for persons not covered by such legislation. It was recalled that in using a conventional norm special provisions had to be made for persons (e.g., teachers) whose working hours were below that norm but whose jobs were nevertheless considered as full-time. The Seminar noted the limitations of the concept of visible underemployment, and in that context discussed the measurement of invisible underemployment, in particular with respect to skill underutilization and income inadequacy.

## V. EMPLOYMENT IN THE INFORMAL SECTOR

35. For consideration of the item, the Seminar had before it the paper prepared by the ILO Bureau of Statistics (STAT/SEUS/2) entitled "Employment in the Informal Sector". Appended to the paper were a report on the topic presented at the 14th International Conference of Labour Statisticians, held at Geneva in October/November 1987, as well as the conclusions of that Conference. The Seminar was informed that the topic of employment in the informal sector was likely to be included in the agenda of the next International Conference of Labour Statisticians in 1992 or 1993, with the objective of developing appropriate statistical standards for identifying the economically active population in the informal sector so as to provide global information on the level and trend of employment in that sector and on its economic and socio-demographic structure. Discussion at the 1987 Conference had led to certain conclusions which could form the basis for further development: (a) the concept of "informal sector" should be distinguished from that of "concealed activities", since the two reflected different phenomena; (b) the "economic unit" as opposed to the individual should be regarded as the appropriate measurement unit for defining the informal sector; (c) provision for sub-sectoring of the informal sector should be considered in data compilation and tabulation, since the informal sector was highly heterogeneous in respect to types of activities and other characteristics.

36. The Seminar was also informed that for the purpose of international standards and for generating the widest unanimity possible, the ILO Bureau of Statistics was considering an indirect approach to the measurement of the informal sector. That approach involved defining firstly a larger "self-employment" sector, and then eliminating from it those categories which were commonly agreed to be outside the informal sector. The self-employment sector, under that framework,

would cover all economic units operated by the self-employed including employers and own-account workers, as well as their employees and unpaid family workers.

37. In the ensuing discussion a number of country experiences in collecting data on employment in the informal sector or in estimating the size of the sector by analytical procedures using existing data were recounted. The Seminar recognized that the cost of new data collection programmes might be prohibitive in many countries; it was thus important that the basic information on the sector should be obtained through ongoing surveys.

38. The relationship between the informal sector and the traditional sector defined in the SNA was recalled, and the distinction between concealed and illegal activities on the one hand and the informal sector on the other was reiterated.

39. The Seminar concurred that the term 'economic unit' should be regarded as covering all units engaged in economic activities, including units with permanent or temporary structures and with fixed or moving location, as well as household enterprises, and individuals such as shoeshine workers, lottery ticket sellers, and so on. Regarding the scope of the self-employment sector, it reiterated that wage employees were also covered if they were engaged in an economic unit operated by a self-employed person. In that regard, the difficulty of obtaining accurate data on the characteristics of economic units from employees in household surveys was noted.

40. The criterion of size of the economic unit for identifying the informal sector was considered by the Seminar. It expressed some reservations in that regard since certain establishments might be underreporting their size so as to fall outside the coverage of certain labour laws. There was also concern about the usefulness of the size criterion in the case of household handicraft enterprises

which might be organized on a communal basis involving many workers while maintaining the features of an informal sector unit. The problem of measurement with respect to agricultural activities was also noted.

41. On the issue of data collection procedure, the Seminar considered both household-based and establishment-based approaches. It also noted the difficulty of constructing and maintaining a frame of small economic units or establishments.

## VI. THE LABOUR MARKET INFORMATION SYSTEM

42. The Seminar had before it document STAT/SEUS/3, entitled "Labour Market Information System" submitted by the ILO Asian and Pacific Project for Labour Administration (ARPLA). The document summarized a number of issues relating to collection, analysis and dissemination of statistical and qualitative information for the assessment of the labour market operation.

43. The Seminar noted that to meet the varied needs of policy makers, labour market information obtained from censuses and from labour force and employment surveys was supplemented by special statistical investigations in many countries of the region. Studies such as tracer studies and analysis of newspaper vacancy announcements were also undertaken to provide essential information on the labour market. Despite those developments, the Seminar noted that long-standing problems persisted, including weak coverage (particularly in the rural sector and urban informal sector), poor response and inordinate delay in data processing. Some of those problems were due to conceptual inadequacies, resource constraints, shortage of trained staff and poor dissemination.

44. A few countries reported measures to improve labour market information. One country had introduced changes in the presentation of its statistical report, especially through improved analytical content. The introduction of electronic media had also improved labour market information by facilitating faster dissemination. Other improvements included the introduction of employment exchanges to improve registration of the unemployed, and the introduction of measures to improve monitoring of the employment situation.

45. The Seminar endorsed the idea that labour market information systems should be further developed, for wider use in both government and non-government sectors. Such systems should focus upon important policy areas such as employment, wages and income and productivity.

VII. AN INTEGRATED PROGRAMME OF CENSUSES, SURVEYS AND OTHER REPORTING SYSTEMS FOR COLLECTING STATISTICS ON EMPLOYMENT, UNEMPLOYMENT AND UNDEREMPLOYMENT

46. The Seminar had for its consideration a paper on "An Integrated Programme of Censuses, Surveys and Other Reporting Systems on Employment and Unemployment (STAT/SEUS/4) prepared by the Statistical Office of the United Nations. The Seminar was informed that there was no internationally accepted or recommended programme of an integrated nature to cover all statistics of employment and unemployment and underemployment, and that the paper presented only certain tentative suggestions for consideration.

47. The Seminar noted in that context that among the various sources of data on employment and unemployment were population and agricultural censuses, establishment and/or economic censuses, household surveys, industrial and commercial enquiries, employment service statistics, administrative records, reports and returns. Apart from conceptual integration involving, in particular, standardization of concepts, definitions and classifications, which was essential for the proper use of the statistics generated by those systems, an integrated programme involving the co-ordinated implementation of censuses, surveys and other reporting systems would enhance the ultimate utility of the statistics for planning, policy formulation and programme implementation.

48. It was recognized that the decennial population census, which usually included an enumeration of the economically active population and its distribution by industry, occupation and employment status, was of basic importance for the development of an integrated system of employment and unemployment statistics in relation to the demographic and social structure of the population. It noted that the recent recommendations of the United Nations for the 1990 round of population censuses permitted the adoption of the usual status approach or the



current status approach as might be appropriate for the local situation, or both if feasible, and supplementation of the data wherever necessary through post-censal surveys. The Seminar discussed in that context the relative merits of the two approaches and the situations in which they would be considered appropriate. It also discussed the limitations of the current status estimates arising from seasonality, the feasibility of deriving estimates of unemployment and underemployment on the basis of the usual status approach, and the usability of the latter for purposes of planning and policy formulation. While emphasizing the advantages of the population census as a source of comprehensive information in terms of geographic, industrial and occupational detail, the Seminar recognized, none the less, the limitations of the census as a basis for in-depth analysis and in terms of quality of information.

49. The Seminar noted that apart from the population census, a household survey was potentially the most comprehensive source of information on the economically active population, covering, as it did, the employed population as well as the unemployed and the economically inactive, and employees as well as the self-employed. The ILO recommendations of 1982 had substantially widened the scope of the statistics that could be collected through household surveys and included potentially useful innovations such as the labour time disposition. The Seminar agreed that for purposes of planning, which usually had a five-year cycle, a comprehensive household survey, preferably based on a large sample, would have to be conducted at least once in five years, except in countries where the population census was itself a quinquennial event. If the decennial population census were to be followed by a comprehensive household survey as earlier proposed, another comprehensive survey could be envisaged as an inter-censal survey around the mid-point of the decade. The Seminar suggested that the comprehensive quinquennial survey should include questions on both the usual

status and current status, and provide information on such aspects as seasonal unemployment and current underemployment.

50. The Seminar emphasized that a current household survey would also be needed, maybe on a less comprehensive but more frequent basis, for a current assessment of progress in the implementation of plans, policies and programmes. It noted in that connection that the Thirteenth International Conference of Labour Statisticians (1982) recommended the development of annual statistics on employment and unemployment. The Seminar therefore recommended that wherever feasible, a current survey system be developed to generate at least annual estimates of employment, unemployment and underemployment in order to provide a usable time-series. It agreed, however, that short-term changes in unemployment and underemployment might not always be measurable, especially if the national economy was largely agricultural, the structural employment dominated by self-employment, and the expected generation of additional employment inadequate to make any significant impact on the unemployment situation. The Seminar noted that apart from the developed countries of the region, some of the developing countries with fast growing economies already had more frequent labour force surveys in operation.

51. It was appreciated that even household surveys, useful as they were, had their own limitations imposed by sampling and did not usually provide the requisite geographic, industrial and occupational breakdown of the data with adequate precision. Similarly they did not provide the employment-related data that establishment surveys generated, such as on hours worked, earnings and productivity in respect of various industrial groups and subgroups. The Seminar therefore recognized the imperative need for the development of a well-designed system of establishment surveys to supplement the data available from population censuses and household surveys. In that context, the Seminar noted the United

Nations recommendations for the World Programme of Industrial Statistics, which envisaged full coverage of all recognizable industrial establishments, not necessarily through complete enumeration but in such a way that satisfactory estimates could be prepared for the entire universe or at least a few basic items of data. It noted in that connection that industrial censuses and surveys usually included some data on employment, wages and salaries. It also noted that in several countries data on employment, earnings and hours worked were also separately collected for purposes of labour administration, and emphasized the desirability of integrating such surveys wherever possible and conducting them at least at annual intervals.

52. The Seminar noted that in several countries of the region establishment censuses and/or surveys covering the entire non-agricultural sector had been undertaken, and that those provided some basic data on employment in such establishments. Of late, some countries had developed systems of economic censuses and surveys, covering the entire non-agricultural sector in a more comprehensive manner. The Seminar considered such censuses a useful basis not only for benchmark data on paid non-agricultural employment but also for the development of current establishment surveys for the collection of statistics on paid employment.

53. Accordingly, the Seminar recommended the institution of comprehensive establishment censuses to cover all non-agricultural establishments at least as a decennial exercise, and if possible as a quinquennial exercise, to provide, as a minimum, basic data on paid employment in non-agricultural establishments. It also suggested that, unless a household survey of employment and unemployment had already been established as an annual feature, an annual survey of non-agricultural establishments be developed on a sample basis to provide current data on paid non-agricultural employment.

54. It was observed that for purposes of manpower planning, data on employment would be required by occupation and education in sufficient detail, and suggested that the requisite data be collected through well-designed sample surveys linked to the establishment censuses at least once in five years.

55. The Seminar also discussed the usability of statistics provided by employment services as indicators of unemployment, and the possibility of establishing appropriate links between the employment service statistics and household surveys in order to render the former more usable. It took note of the suggestions and comments made by the various participants in that connection for making employment service statistics more useful.

56. The Seminar noted that an integrated programme of censuses and surveys on the lines proposed above would also provide statistics on employment in the informal sector, partly through establishment censuses and surveys and partly through household surveys. Attention was drawn in that connection to the ESCAP Seminar on Statistics of Household Economic Activities held in 1985, which provided some guidance for the organization of surveys of household economic activities.

Annex

LIST OF DOCUMENTS

<u>Title</u>	<u>Symbol No</u>
Provisional Agenda	STAT/SEUS/L.1
Review of International Recommendations Concerning Statistics of the Economically Active Population, Employment, Unemployment and Underemployment and their Application to National Conditions	STAT/SEUS/1
Employment in the Informal Sector	STAT/SEUS/2
The Labour Market Information System	STAT/SEUS/3
An Integrated Programme of Censuses, Surveys and Other Reporting Systems for Collecting Statistics of Employment, Unemployment and Underemployment	STAT/SEUS/4
Comparative Evaluation of the Concepts and Measures of Unemployment and Underemployment Used in Countries of the Asian Region	STAT/SEUS/5
Data Collection with Hand-held Computers: Contributions to Questionnaire Design	STAT/SEUS/CRP.1

Country papers

1. Australia	13. Malaysia
2. <del>Bhutan</del> Bangladesh X	14. Nepal
3. Brunei	15. Papua New Guinea
4. Burma	16. <del>Philippines</del> Pakistan X
5. China	17. Republic of Korea
6. Fiji	18. Samoa
7. France	19. Singapore
8. Hong Kong	20. Sri Lanka
9. India	21. Thailand
10. Indonesia	22. Tonga
11. Iran	23. Viet Nam
12. Japan	

FOR PARTICIPANTS ONLY

20 January 1989

ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

ESCAP/ILO Seminar on Employment and Unemployment Statistics  
16-20 January 1989  
Bangkok

LIST OF PARTICIPANTS

AUSTRALIA

Mr. Frank Parsons, Assistant Statistician, Population Census and Surveys Branch, Australian Bureau of Statistics, Canberra

BANGLADESH

Mr. MD. Zobdul Hoque, Deputy Director, Bangladesh Bureau of Statistics (BBS), Ministry of Finance and Planning, Dhaka

BHUTAN

Mr. Bir Bahadur Sundas, Social Statistician, Central Statistical Office, Planning Commission, Thimpu

BRUNEI DARUSSALAM

Mrs. Dayang Marilyn Linggi Teo Lai, Acting Statistician, Economic Planning Unit, Ministry of Finance, Bandar Seri Begawan

Mr. Awang Haji Puteh bin Jukin, Acting Assistant Statistician, Labour Department, Ministry of Home Affairs, Bandar Seri Begawan

/...

**BURMA**

Mr. U Aung Myint, Second Secretary, Embassy of the Union of Burma, Bangkok

Mr. U Thit Lwin, Third Secretary, Embassy of the Union of Burma, Bangkok

**CHINA**

Mr. Wang Ya-ping, Statistician, Social Statistics Department, State Statistical Bureau, Beijing

**FIJI**

Mr. Raj Rattan Subrail, Principal Statistician, Bureau of Statistics, Suva

**FRANCE**

Mr. Olivier Marchand, Chef de la Division Emploi, Institut national de la statistique et des etudes economiques (INSEE), Paris

**HONG KONG**

Mr. Chan Wing Cheung, Senior Statistician, Census and Statistics Department, Hong Kong

**INDIA**

Mr. Paul Jacob, Joint Director, National Sample Survey Organisation, Calcutta

**INDONESIA**

Mr. Saudin H. Sitorus, Chief, Labor Force Statistics Division, Central Bureau of Statistics, Jakarta

#### ISLAMIC REPUBLIC OF IRAN

Hojatol-Eslam Seyed Fakhrudeen Hashemi, Member of Parliament of the Islamic Republic of Iran and Member of the Labour and Social Affairs Commission, Tehran

Mr. Mohammad Hossein Nejatian, Director, Department of Social and Population Statistics, Statistical Centre of Iran, Tehran

Mr. Mir Hossein Ghazai, Expert on Subject Statistics, Ministry of Labour and Social Affairs, Tehran

Mr. Ali Asghar Karimi Tahery, Expert on Market Inspection, Ministry of Labour and Social Affairs, Tehran

#### JAPAN

Mr. Kaname Yui, Chief, Examination and Publication Unit, Labour Force Statistics Division, Statistics Bureau, Tokyo

Mr. Akira Takami, Chief, Research and Analysis Unit, Population Census Division, Statistics Bureau, Management and Coordination Agency, Tokyo

#### MALAYSIA

Mrs. Normah Mohd Aris, Statistician, Department of Statistics, Wisma Statistik, Kuala Lumpur

#### NETHERLANDS

Mr. Ronald Gerard Strikker, First Secretary (Development) and Assistant Permanent Representative of the Netherlands to ESCAP, Bangkok

#### NEPAL

Mr. Krishna Prasad Koirala, Chief, Labour Management Office, Ministry of Labour and Social Welfare, Kathmandu

Mr. Bishnu Dass Dangol, Assistant Director, Central Bureau of Statistics, Kathmandu

/...



**PAKISTAN**

Mr. Muhammad Younas, Director, Federal Bureau of Statistics, Islamabad

**PAPUA NEW GUINEA**

Mr. Arthur Jorari, Statistician, National Statistical Office, Waigani,

**PHILIPPINES**

Mrs. Sonia H. Castro, Director, Bureau of Labor and Employment Statistics, Department of Labor and Employment ~~Statistics~~, Bureau of Labor and Employment ~~Statistics~~, Manila

Mr. Clifford A. Paragua, Director, Bureau of Local Employment, Manila

**REPUBLIC OF KOREA**

Mr. Kim Sang Sik, Deputy Director, Social Statistics Division, National Bureau of Statistics, Economic Planning Board, Seoul

**SAMOA**

Mr. Tate Simi, Commissioner of Labour, Labour Department, Apia

Mr. Patolo Tafuli, Deputy Government Statistician, Department of Statistics, Apia

**SINGAPORE**

Miss Lim Cheng Choo, Statistical Officer, Labour Force Survey Unit, c/o Research and Statistics Department, Ministry of Labour, Singapore

**SRI LANKA**

Mrs. D.B.P.S. Vidyaratne, Assistant Director, Department of Census and Statistics, Colombo

...

#### THAILAND

Miss Tasaneeya Tharamatach, Chief, Manpower Assessment Section, Human Resources Planning Development, Office of the National Economic and Social Development Board, Bangkok

Miss Yaovasri Likanasudh, Chief, Labour Force and Education Statistics Branch, National Statistical Office, Bangkok

Mr. Jiratorn Poonyarith, Chief, Labour Statistics Section, Department of Labour, Ministry of Interior, Bangkok

Mrs. Jirawan Boonperm, Statistician, Labour Force Statistics Section, Population Survey Division, Bangkok

Miss Saipin Sirihong, Senior Labour Officer, Department of Labour, Bangkok

#### TONGA

Miss Scini Mafi Tonga, Acting Assistant Government Statistician, Statistics Department, Nuku'Alofa

#### VIET NAM

Mr. Nguyen Le Minh, Official Expert, Ministry of Labor War Invalids and Social Welfare, Hanoi

Mrs. To Thi Oanh, Officer, Statistics Department on Labour and Population, General Statistics Office, Hanoi

/...

**UNITED NATIONS SECRETARIAT**

**United Nations Statistical Office  
(UNSO)**

**Mr. M.V.S. Rao, Technical  
Adviser, National Household  
Survey Capability Programme  
(NHSCP), United Nations  
Statistical Office, *New York*  
New York**

**SPECIALIZED AGENCY**

**International Labour Organisation  
(ILO)**

**Mr. Farhad Mehran, Chief,  
Bureau of Statistics,  
ILO, Geneva**

**Mr. Ralf Hussmanns,  
Statistician, Statistics  
of Employment and  
Unemployment, ILO  
Bureau of Statistics,  
Geneva**

**Mr. A.V. Jose, Senior Development  
Economist,  
ILO Asian Regional Team  
for Employment Promotion (ARTEP),  
New Delhi,  
India**

**Mr. Pravin Visaria,  
Consultant, ILO Asian  
Regional Team for  
Employment Promotion  
(ARTEP), The Gujarat  
Institute of Area  
Planning, Gota Ahmedabad  
dist., India**

**Mr. A.M.A.H. Siddiqui,  
Director, ILO Asia and  
Pacific Centre for  
Labour Administration  
(ARPLA), Bangkok**

**Ms. Heidrun Kaiser,  
Consultant, ILO Asia  
and Pacific Centre  
for Labour Administration  
(ARPLA), Bangkok**

/...

SECRETARIAT

Mr. Koji Nakagawa	Deputy Executive Secretary and Officer-in-Charge of ESCAP
<hr/>	
Mr. M.A. Sahib	Chief, Statistics Division
Mr. Andrew J. Flatt	Chief, Statistics Development Section, Statistics Division
Mr. Bishnu Dev Pant	Chief, Statistical Information Services Section, Statistics Division
Mr. M.D. Romer	Senior Computerization Officer, Statistics Division
Miss Chatchavarin Thavipoke	Statistician, Statistical Information Services Section, Statistics Division
Mr. Loh Meng Kow	Statistician, Statistics Development Section, Statistics Division
Miss Francisca F. Martinez	Associate Statistician, Statistical Information Services Section, Statistics Division
Mrs. Parisudhi Kalampasut	Assistant Statistician, Statistics Development Section, Statistics Division
Mr. Laurence H. Lewis	Regional Adviser on Population Censuses and Surveys, Statistics Division
Mr. M. Nuri Ozsever	Regional Adviser on Data Preparation and Processing of Censuses and Surveys, Statistics Division

**Mr. Jagdish Kumar**

**Regional Adviser on National  
Accounts, Statistics Division**

**Mr. T. Miyake**

**Expert on Systems Analysis, Statistics  
Division**

**Mr. H.T. Laursen**

**Associate Expert on Microcomputer  
Application for Public  
Administration, Statistics Division**

**Mrs. Sirilux Bohren**

**Administrative Assistant, Statistics  
Division**

---

**Mr. F.G. Sabet**

**Officer-in-Charge, Programme Co-  
ordination and Monitoring Office**

---

**Mr. Fachri Mahmud**

**Chief, Technical Co-operation  
Division**

---

**Mr. Samuel C.H. Chao**

**Chief, Division of Administration**

**Mr. Hunter H.T. Chiang**

**Chief, Conference and General  
Services Section, Division of  
Administration**

---

**Mr. Khaled Khali**

**Chief, United Nations Information  
Service**

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### Ⅲ. 부 록

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**Fourteenth International Conference of Labour Statisticians**

Geneva, 28 October - 6 November 1987

## **Report of the Conference**

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TO:

Mr. Kim, Sang Sik

With the compliments of

F. Mehran,  
Bureau of Statistics.

Geneva, 1 February 1989  
International Labour Office Geneva

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## INTRODUCTION

### Convocation and agenda

1. At its 231st Session (Geneva, November 1985), the Governing Body of the International Labour Office authorised the Office to convene the Fourteenth International Conference of Labour Statisticians to meet in Geneva from 28 October to 6 November 1987. The main objectives of this Conference were to revise existing or adopt new international standards in certain areas of labour statistics. It would also provide an opportunity to obtain professional views and guidance from national labour statisticians on the ILO's statistical activities. The following items were placed on the agenda:

- I. General Report.
- II. Consumer price indices.
- III. Industrial disputes: Statistics of strikes.
- IV. Revision of the International Standard Classification of Occupations.

### Preliminary work

2. Reports dealing with each of the items on the agenda were prepared by the Office for submission to the Conference.

3. The General Report, Report I, included an overview of the current and planned work of the Bureau of Statistics. It referred to the new Labour Statistics Convention (No. 160) and Recommendation (No. 170). An account was given of the Bureau's publications and computing activities, as well as topics for future activities. The remainder of the report dealt with the Bureau's conceptual and methodological work in three areas: employment in the informal sector, statistics of absence from work, and employment promotion schemes. A number of points were for discussion only, and the views of the Conference were sought concerning future work in these fields.

4. When focusing on statistics of employment in the informal sector, the report also considered certain principles which might help lead to the development of international standards on statistics of the informal sector. It included a brief review of the informal sector, the concept of employment in the informal sector and the economic unit and examined other measurement issues.

5. In dealing with statistics of absence from work, a framework was proposed for the development of national statistics. The concept of absence from work was discussed, and was related to the definitions of hours of work and paid employment from existing ILO recommendations. Measurement problems, analytical measures and classifications were reviewed.

6. The implications of employment promotion schemes for the measurement of employment and unemployment were the subject of the final section of the General Report. The main groups of measures (job-training schemes, community work, wage and other subsidies, arrangement of working hours, assistance to unemployed persons setting up enterprises, and early retirement), were described briefly, as was the classification, in national statistics, of the beneficiaries of these schemes. In addition, the impact of these schemes on international definitions of employment and unemployment was discussed.

7. Report II dealt with consumer price indices. The need to update the existing international recommendations concerning statistics of consumer price indices had been evident for some time. Guidance was required for the treatment of a number of issues, including owner-occupied housing, consumer credit, seasonal items and insurance. Guidance was also needed on techniques such as combining price quotations, and on the classification of consumer expenditure for the purpose of constructing internationally comparable sub-indices. Report II indicated the main points requiring consideration. The advantages and disadvantages of the various alternatives were discussed, but without recommending guide-lines. The report, however, presented a draft resolution to replace the resolutions of 1947 and 1962 (adopted by the Sixth and Tenth ICLS, respectively). The new resolution would help statisticians to advise their governments by providing a concise and authoritative statement of what experience and analysis have shown to be good practice.

8. The existing international guide-lines on statistics of strikes dated back to 1926, when the subject was examined by the Third ICLS. A resolution was adopted defining industrial disputes and laying down detailed principles for their classification. However, while there had been continuing interest in assessing the importance and characteristics of strikes, it had become increasingly difficult to analyse and interpret the data compiled. The basic problem had been the lack of comparability in the statistics at both the national and international levels, due to the many differences in the definitions used. Also, the organisations responsible for their collation and publication often had no control over the quality of data reported. For these reasons, the subject was placed on the agenda of the Fourteenth ICLS. Report III was prepared by the Office on the basis of individual studies and national practices. It dealt with the objectives and uses of statistics of strikes and examined terminology, measures of strike activity, classifications, methods of reporting and indicators of strike activity. In conclusion, a draft resolution on statistics of strikes was proposed for consideration by the Conference to replace the 1926 resolution on industrial disputes. These new guide-lines were aimed at helping both producers and users of strike statistics.

9. Five International Conferences of Labour Statisticians had examined the question of an International Standard Classification of Occupations (ISCO). The Ninth ICLS endorsed the major, minor and unit groups of the first ISCO, which the ILO published in 1958, including descriptions of the occupation categories within each unit group (ISCO-58). At the same time it had recognised that ISCO-58 would need revision after a certain time. The Eleventh ICLS (1966) considered and adopted a revised list of major, minor and unit groups, and a revised edition of ISCO (ISCO-68) was published with an expanded number of occupational descriptions.

10. Over the 20 or so years since the last revision, there had been no regular ILO programme for monitoring developments in national occupational classifications, nor for updating ISCO-68. The Thirteenth ICLS (1982) had approved the recommendations of a special working group set up to consider the revision of ISCO that "an international classification system should be developed which, while providing for the inclusion of a wide variety of factors, would only attempt to specify the occupational detail at a level appropriate for making international comparisons. But that, in addition, guide-lines should be prepared for the development of the more detailed elements of national classifications so that, as far as possible, such classifications would be convertible to the agreed international framework." Following several meetings of expert groups and many consultations with national statisticians, the Office prepared Report IV for consideration by the Conference. It comprised two parts: the first presented the revised structure of ISCO in a draft resolution; the second contained draft descriptions of all

groups in the revised structure, as well as detailed references to the relevant groups in ISCO-68. Part I also presented the background to the revision of ISCO. It reviewed user requirements for occupational classifications in general and for ISCO in particular, presented the principles and classification criteria underlying the proposals, described how some specific issues were treated, and presented proposals on how to link national classifications to the revised ISCO and the procedures to be applied when using ISCO in statistical surveys and censuses at the national level. Finally, it described work in progress and future work envisaged in connection with ISCO. Five conference room documents presented supplementary background information.

#### Organisation of the Conference

11. The Conference opened on 28 October 1987 in the Governing Body Room of the International Labour Office in Geneva.

12. It was attended by delegates from 71 countries, by Employers' and Workers' representatives nominated by the Governing Body of the International Labour Office and by representatives of the United Nations, the World Health Organisation, the Economic Commission for Africa, the Economic Commission for Europe, the Economic and Social Commission for Western Asia, the Organisation for Economic Co-operation and Development, the Statistical Office of the European Communities, the United Nations Research Institute for Social Development, the Arab Labour Organisation, the International Monetary Fund, the International Research and Training Institute for the Advancement of Women, the World Confederation of Labour, the International Organisation of Employers, the World Federation of Trade Unions and the International Confederation of Free Trade Unions.

13. The Conference elected Mr. Y. MIURA (Japan) as Chairman of the Conference, Ms. R. GROSSKOFF (Uruguay) as Vice-Chairman, and Mr. N.H.W. DAVIS (United Kingdom) as Rapporteur. Mr. I. CASTLES (Australia) was elected as Chairman of the Committee on Consumer Price Indices.

14. Mr. R. TURVEY, Chief Statistician of the International Labour Office and Secretary-General of the Conference, welcomed the delegates on behalf of the Director-General. He drew attention to the aim of the Conference to adopt new resolutions in three areas of labour statistics - the International Standard Classification of Occupations, consumer price indices and statistics of strikes. The meeting's views were also being sought with regard to four other topics. Once the resolutions adopted by the Conference had been approved by the Governing Body, a new edition of the International Recommendations on Labour Statistics would be published. Over the following two years manuals would be produced on consumer price indices, occupational classifications and household surveys for statistics of the economically active population, employment, unemployment and underemployment. These manuals would provide guidance on the practical application of the resolutions, and would also deal with more detailed technical issues. He announced that a demonstration would be given by the Office of its recently developed on-line computer system for users of its labour statistics data base (LABORSTA) Mr. Turvey then introduced the officials of the ILO who would assist the Conference.

15. The Standing Orders were those for International Conferences of Labour Statisticians adopted by the Governing Body on 19 November 1981 at its 218th Session. The reports presented at the Conference were made available in English, French and Spanish. Interpretation was given in those languages and, in addition, in Arabic, Chinese, German and Russian.

16. The Conference was informed that Mr. Chiluba of Zambia, one of the Workers' representatives nominated by the Governing Body, had been prevented from attending by the Government of his country. The Conference noted this with regret and agreed that its concern should be drawn to the attention of the Director-General and through him to the President of Zambia.

17. The Conference was informed of the statistical controversies which had arisen in France concerning the appropriate classification of participants in certain employment promotion schemes in statistics of employment and unemployment. As a result, the Government of France had, in 1985 and 1987, solicited the advice of the ILO in the light of the international definitions of employment and unemployment adopted by the Thirteenth International Conference of Labour Statisticians in 1982. Since such statistical difficulties were occurring in a number of countries, and since discrepancies in the way the participants were classified could make international comparisons invalid, the matter had been placed on the agenda of the Conference. In view of the highly specialised nature of the subject, the Conference decided to set up a working group to exchange views on the implications of employment promotion schemes for the measurement of employment and unemployment.

18. On its final day, Mr. F. BLANCHARD, Director-General of the International Labour Office, addressed the Conference. He expressed his own personal interest, and that of the Governing Body, in the work of the Conference. The ILO and member States were all trying to improve the quality and availability of labour statistics. He stressed their importance for understanding the impact of economic and technical changes on the world of work.

19. The Director-General welcomed the decisions made by the Conference and also its discussions on new important topics such as the informal sector on which future international recommendations might be needed. He would support the views expressed by the Conference on the need for further work by the ILO in a number of fields when its report was presented to the Governing Body.

20. In conclusion, the Director-General expressed his appreciation of all the work done by the Conference and its success in reaching a number of important conclusions.

21. Following the adoption of the report, the Secretary-General joined the Conference in thanking the Chairman, Vice-Chairman and Rapporteur for their contribution to the success of the Conference. He also noted with appreciation the work of the Chairmen and Rapporteurs of the Committee and Working Group.

22. In closing the Conference, the Chairman drew attention to the progress it had made, which would provide useful standards for the years to come. There had been a lively exchange of experiences and views on the different topics, and the achievements of the Conference reflected its spirit of active and constructive participation. He concluded by thanking all concerned, both those providing services and those participating.

#### Decisions of the Conference

23. The Conference adopted eight resolutions, which are presented in Appendix I. The first three concerned technical recommendations. These were:

Resolution I: Resolution concerning consumer price indices.

Resolution II: Interim resolution concerning statistics of strikes and lock-outs.

Resolution III: Resolution concerning the revision of the International Standard Classification of Occupations.

The following five resolutions concerned recommendations on the future work of the Office in the field of labour statistics:

Resolution IV: Resolution concerning the provision of technical advice and the exchange of experience on consumer price indices.

Resolution V: Resolution concerning further ILO statistical work on industrial disputes.

Resolution VI: Resolution concerning the terminology and coding system for ISCO-88.

Resolution VII: Resolution concerning the application of ISCO-88.

Resolution VIII: Resolution concerning the informal sector.

#### Other business

24. The Conference decided that the Spanish term "estadísticos" should be used as the equivalent of the English "statisticians" instead of "estadígrafos". Thus, the Spanish title of the Conference would become "Conferencia internacional de Estadísticos del Trabajo".



## CONFERENCE PROCEEDINGS

### I. General Report

#### Chapter 1: The work of the Bureau of Statistics

25. The Conference considered this topic on the basis of the first chapter of Report I. In his introduction, the Secretary-General stated that the main objective of this chapter was both to inform the Conference and to seek its views and advice on the current and future programmes of work for the Bureau. He also noted the importance of keeping the ILO informed of all aspects of developments in labour statistics. The national statisticians were invited to send to the Office any documents concerning new developments in their labour statistics. Furthermore, statisticians visiting Geneva would be very welcome in the ILO.

26. The importance of the new Labour Statistics Convention, 1985 (No. 160), particularly as an aid to labour statisticians in their respective countries, was raised. The Conference agreed that member countries should be encouraged to ratify this new Convention, particularly since it replaced the now obsolete Convention (No. 63) on statistics of wages and hours of work.

27. Many participants voiced their appreciation of the work of the Bureau of Statistics in the field of labour statistics, as did representatives of international organisations, who also assured the Bureau of their desire for continued co-operation.

28. In the discussion of the Office's publications, support was expressed for the proposed restructuring of the Year Book of Labour Statistics, which should facilitate comparisons between countries. It was suggested that Volume III of Statistical Sources and Methods should also be updated to include an annex giving an inventory of labour force surveys not covered in the present edition. The Office agreed that such a list in an annex could provide useful information but that it would be appropriate to limit it to large-scale regular surveys.

29. Following a comment that, often, ILO statistical publications were not received by the national statisticians, the Secretary-General explained that these publications were sent to all member countries. They were addressed to the official contacts, usually the Ministry of Foreign Affairs or the Ministry of Labour. The statisticians should therefore take up this matter with the appropriate ministries.

30. The modernisation of the Office's computerised data bases and the improvements made in the dissemination of data were welcomed by the Conference. In this connection it was noted that the ultimate aim would be to establish a single data base, incorporating the data bases of the United Nations and all the specialised agencies.

31. In the discussion of the section on regional advisers and country missions, the Secretary-General and the observers from several international organisations explained the arrangements for co-ordinating technical co-operation in the different countries.

32. The Conference agreed that all the topics mentioned in the last section of the chapter (i.e. productivity, household income and expenditure, non-standard forms of employment and unemployment flows and durations) were relevant for the future work of the Bureau. However, the Office noted that,

with respect to certain topics, it might be some time before developmental work on international standards could be completed. In the meantime, it would, as far as possible, consult national experts and issue interim reports.

33. The Secretary-General informed the meeting that, although the Office intended to pursue its work on labour productivity, it would be inappropriate for it to develop international recommendations on this topic, since the output information required for its measurement went beyond the ILO's field of competence. The immediate objective was to produce an article on the methods used by different countries, for publication in the Bulletin of Labour Statistics. Several alternatives for subsequent work were possible.

34. The need to revise the international classification of status in employment was also mentioned. This topic was the subject of a working document distributed at the Conference. The issues involved came up in the discussions on a number of the Conference agenda items.

35. In connection with the programme of estimates and projections, the view was expressed that estimates of total hours of work could also be usefully included. The Secretary-General recognised the utility of such data, particularly in conjunction with statistics of hours not worked.

#### Chapter 2: Employment in the informal sector

36. The Conference considered this topic on the basis of Chapter 2 of Report I, General Report: "Employment in the informal sector". In the history of the International Conference of Labour Statisticians, this was the first time that the subject had been placed on the agenda.

37. The Vice-Chairman of the Conference chaired the session. In her introductory remarks, she explained that the objective was to discuss the subject in broad terms rather than to come up with international standards on statistics of employment in the informal sector.

38. The Assistant Secretary-General presented a summary of the chapter, referring to the background of the study, the relevance of the concept of the informal sector in both developing and industrialised countries, the relationships of the concept of the informal sector with those of the traditional sector, concealed activities and non-market production. He concluded by highlighting the main issues concerning the concept and definition of the informal sector, its scope, the choice of measurement unit and variables, and the difficulties involved in data collection.

39. In its discussions, the Conference recognised that informal sector statistics were needed, in particular, to formulate employment and income-generation policies, to promote self-employment activities, to improve national accounts, and to enrich labour statistics and other related statistics. It also recognised that statistics on employment in the informal sector constitute only part of the entire range of informal sector statistics. Mention was made of the need to co-ordinate such statistics with the United Nations System of National Accounts (SNA), the International Standard Classification of Occupations (ISCO), the International Standard Industrial Classification of All Economic Activities (ISIC), the International Classification of Status in Employment, and for the development of statistics on the contribution of women and of national household survey programmes.

40. Many delegates welcomed the ILO initiative in bringing this topic to the Conference for its consideration. The comments made on the main issues identified are summarised below.

41. Terminology. While the term "informal sector" was widely accepted and used in the course of the discussion, other terms, such as "small-scale enterprises", "marginal sector", "unstructured sector" (secteur non-structuré in French), "individual economic activities", and "business under the open sun", were suggested as alternatives which might better reflect the nature of the underlying phenomena in certain countries.

42. Concept and definition. It was recognised that collecting statistics on the informal sector was a complex task and the formulation of a universal definition of the informal sector was difficult. The notion itself varied among countries according to the prevailing employment structure and, in a certain sense, depended on the source of data collection.

43. While it was acknowledged that there was some overlap between the concepts of "informal sector" and "concealed activities", there was general agreement that the two concepts were not identical and therefore should be considered separately. Each of these concepts reflected a different socio-economic concern with its own measurement objective.

44. A substantial part of the discussion on definitions centred on the formulation of the concept of informal sector, given in paragraph 10 of the chapter under consideration. Concern was expressed about the second part of this formulation where reference was made to activities that "are carried out without formal approval from the authorities".

45. It was suggested that "provision of cheap goods and services" should be included as one of the primary objectives in the formulation along with "employment and income generation".

46. There was also discussion as to which criteria should be chosen for characterising the informal sector. While many delegates expressed their agreement with the three criteria given in paragraph 10 (scale, organisation and technology), particularly with respect to the criterion of scale of operation as measured in terms of number of workers, others suggested a number of alternative or additional criteria, including location, amount of capital, access to financial resources and qualification of workers engaged. Others expressed reservations about the appropriateness of the criterion of level of technology, since it was mentioned that informal sector activities were sometimes carried out with modern machinery. There was, however, a warning about the practical difficulties that definitions based on multiple criteria might entail.

47. Mixed reactions were expressed regarding the use of registration as a criterion for defining the informal sector. It was mentioned that if used alone, it might raise difficulties with respect to international comparability. Registration was governed by legal provisions which varied from one country to another.

48. Scope and coverage. There was a divergence of views regarding the need to include non-market production within the scope of informal sector activities. The argument forwarded for its inclusion was that the scope of informal sector activities should be consistent with the production boundary of the United Nations System of National Accounts, the more so because non-market production did involve employment and contributed to income. In this connection, certain suggestions were made that the scope could even be extended to cover unpaid domestic activities so as to reflect better the contribution of women to social and economic development.

49. It was mentioned that in certain countries many children below the minimum age set for measuring the economically active population were engaged

in informal sector activities. The question was raised as to whether such working children should be included among the employed population in the informal sector.

50. Measurement unit. There was virtual unanimity that the "economic unit" was the most appropriate measurement unit for defining the informal sector. It was mentioned that for this purpose the concept of economic unit should be defined in accordance with the most recent revision of ISIC. It was, however, stressed that tabulations should also be made for individuals and occupations in the informal sector.

51. Employed population in the informal sector. It was recognised that the definition of the employed population in the informal sector given in paragraph 22 of the chapter was meant to identify all persons engaged in an economic activity in the informal sector but not to classify the economically active population into the informal and formal sectors, as this would involve a double-count of persons who were engaged in both sectors during the reference period.

52. Sub-classifications. It was recognised that the informal sector was very heterogeneous with respect to types of activities in any given country. Therefore, the need for further sub-classification by various characteristics was stressed. Certain examples were given, including sub-classification by location of the economic unit to distinguish between the localised and the non-localised part of the informal sector and to identify outworkers, household enterprises, ambulant activities, street outlets, etc.

53. It was also stressed that it was important to sub-classify the employed population in the informal sector by socio-demographic characteristics, for both sexes.

54. Data collection. Various sources for collecting data on employment in the informal sector were mentioned, including household and establishment surveys, population and establishment censuses, and administrative records. Different views were expressed on the particular advantages and disadvantages of each source.

55. At the end of the discussion, the delegate of Mexico moved an oral resolution on "the need to measure employment outside the formal sector". At the request of the Conference, a written text was subsequently submitted for consideration. Following an amendment to clarify the role of the ILO in future statistical work concerning the informal sector, the Conference adopted the resolution, which is presented as Resolution VIII in Appendix I of this report.

### Chapter 3: Statistics of absence from work

56. The Conference discussed Chapter 3 of the General Report (Report I) concerning statistics of absence from work. The topic was introduced by the representative of the Secretary-General, who pointed out that not all absences from work were undesirable or avoidable. Moreover, absences which were undesirable might be difficult to distinguish from other absences such as legally permitted sick leave. Consequently, it was felt that the topic "absence from work" should relate to all absences rather than a sub-set of these.

57. Chapter 3 contained the outline of a possible framework for all absences from work and considered various reasons for these absences. It also

suggested guide-lines in respect of the reference period to be used, units of measurement, possible classifications and sources of data.

58. In the discussion, delegates agreed that statistics on absence from work were important in considering labour productivity and other matters, and therefore welcomed the work done by the Office.

59. At the same time, many felt that it was very difficult to collect reliable data on the extent of and reasons for absence from work. Some of the problems mentioned included inadequate information held by, or available to employers, problems of recall in household surveys, and inaccurate reporting generally.

60. Many delegates considered that the chapter concentrated too much on the use of establishment surveys as a means of collecting data on this topic. The delegates of some of the more developed countries stated that, in their experience, household surveys provided a wider range of useful information, particularly on the reasons for absence from work. Information from establishment surveys was likely to be more variable and would depend to a large extent on the quality of the records held as well as on the extent to which absenteeism was thought to be a problem in the establishment. In addition, some delegates thought that time-use surveys should also be considered as potentially valuable sources of information on the topic.

61. In general, it was felt that all data sources (including administrative records where these were available) should be used in studying absence from work. No one source was likely to yield all the information required. Thus, information on the effect of absence from work on costs might be best obtained from employers, while the personal characteristics of absentees could more easily be obtained from household surveys.

62. The Conference also discussed the various types of absences mentioned in the chapter. It was felt that the detail to be used in classifying absence by reason would have to depend on the data source used and the type of detail available. Where household surveys could be used, experience had shown that it was preferable to ask for as much detail as possible and for the results to be aggregated only when analysing the data.

63. Some delegates expressed an interest in measuring absences from work covering all workers, including the self-employed and those in the informal sector. The consensus was, however, that the measurement of absence from work should relate only to regular paid employees. In addition, there was some discussion on whether, in a survey of establishments, it would be possible to collect the required information from those employing only a small number of workers.

64. In respect of the reference period, delegates felt that this also depended on the data source. For example, experience in some countries had shown that a one-week reference period was best for household surveys, but that perhaps a one-month reference period might be suitable for establishment surveys.

65. Most delegates considered that the time unit of analysis should be "hours paid for but not worked" rather than "working days", which had been recommended in the chapter.

66. Finally, it was recommended that the work undertaken so far by the ILO on this topic should continue, with particular attention being given to sources of data and methods of collection that might be used by countries when considering how to collect statistics on absence from work.

Chapter 4: Implications of employment promotion schemes  
on the measurement of employment and unemployment

67. On behalf of Mr. HERBERGER (Federal Republic of German), Chairman of the Working Group on the "Implications of Employment Promotion Schemes on the Measurement of Employment and Unemployment", Mr. MAYER (Federal Republic of Germany) reported on the work of the Working Group (see Annex) and summarised the main issues agreed upon concerning the international definitions of employment and unemployment adopted by the Thirteenth International Conference of Labour Statisticians in 1982, and in particular the:

- "one hour of work" and the "seeking work" criteria;
- rules for the statistical treatment of participants in job-training schemes;
- elaboration of the concept of "visible underemployment";
- practice of establishing annually an employment training balance sheet of participants in employment promotion schemes;
- recommendation that future studies be conducted by the ILO.

68. The Conference noted the report of the Working Group. A view was expressed that the issues dealt with by the Working Group related primarily to industrialised countries and that other issues of interest to developing countries had not been sufficiently developed. It also noted, however, the Working Group's recommendation that the ILO should extend its studies on employment promotion schemes in order to cover other countries in the world.

ANNEX

Report of the Working Group on  
Implications of Employment Promotion Schemes  
on the Measurement of Employment and Unemployment

1. The following 34 countries were represented on the Working Group: Angola, Austria, Belgium, Bulgaria, Côte d'Ivoire, Cyprus, Denmark, Finland, France, Federal Republic of Germany, Ghana, Greece, Honduras, Ireland, Israel, Japan, Kenya, Libyan Arab Jamahiriya, Luxembourg, Mexico, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Tunisia, Uganda, United Kingdom, United Republic of Tanzania, United States of America, Union of Soviet Socialist Republics, Venezuela and Zimbabwe.

2. Representatives of the Employers' group nominated by the ILO Governing Body, the Statistical Office of the European Communities (EUROSTAT), the Organisation for Economic Co-operation and Development (OECD) and the United Nations Research Institute for Social Development (UNRISD) also attended.

3. The Working Group elected Mr. Lothar Herberger (Federal Republic of Germany) as Chairman.

4. The discussion of the Conference was based on Chapter 4 of Report I - General Report: "Implications of Employment Promotion Schemes on the Measurement of Employment and Unemployment". In introducing the topic, the Assistant Secretary-General briefly described the background of the study and the content of Chapter 4, noting that it built on studies carried out by EUROSTAT for its 12 member countries and by the ILO for four additional countries (Australia, Finland, Sweden and the United States). The Working Group noted that Chapter 4 of the General Report provided an excellent basis for the discussion of the Group.

5. It was recognised that, in general, employment promotion schemes influenced the statistics of employment and unemployment. As the schemes differed widely from country to country, their influence should be analysed in order to improve international comparability. In countries where it was deemed necessary, such analyses would enable the calculation of different employment and unemployment figures, depending on the alternative classifications of persons in the various employment promotion schemes.

6. The main discussion of the Working Group focused on the statistical issues arising out of the development of employment promotion schemes in relation to the application of the international standards laid down in Resolution I adopted by the Thirteenth International Conference of Labour Statisticians in 1982. It was noted that some of the schemes generated particular forms of employment and intermediate situations that were on the borderlines of employment, unemployment and economic inactivity. It was recognised that many of the statistical issues involved were relevant, not only to registered unemployment statistics derived from administrative sources, but also to employment and unemployment statistics obtained from household surveys or establishment surveys.

7. There was general agreement that the definitions of employment and unemployment adopted by the Thirteenth International Conference of Labour Statisticians (1982) did not at present require revision for the purpose of classifying the participants in the employment promotion schemes described in Chapter IV into the major categories: employed, unemployed, not in the labour

force. It was, however, felt that the application of those standards in particular circumstances could usefully be elaborated.

8. In this context it was stressed that according to the international definition of employment, being "at work" meant having contributed to the production of goods and services as defined by national accounting, in exchange for a wage or salary, in cash or in kind, for at least one hour during the reference period (one week or one day).

9. The "one hour of work" criterion of the international definition of employment was carefully examined and there was unanimous agreement that this criterion should not be changed, as it would destroy the basic structure of the labour force framework embedded in the international standards on statistics of employment and unemployment and it would lead to inconsistencies with the United Nations System of National Accounts and standards concerning other related bodies of statistics. It was emphasised however that the employment data should be classified by hours of work and that countries should make further use of the concept of visible underemployment as already recommended by the international standards.

10. With respect to the statistical treatment of participants in job-training schemes, it was generally agreed that:

- (a) when training took place within the context of the enterprise, it could be assumed that participants, like apprentices, were associated with the production of goods and services of the enterprise, at least for an hour during the reference period (one week or one day), and in that case the participants should be considered as "at work" and classified as employed, whether the employer or another entity paid the wage or salary;
- (b) when training did not take place within the context of the enterprise (e.g., training took place outside the enterprise, or inside the enterprise but without association with the production activity of the enterprise), the statistical treatment would depend on whether or not the participant was employed by the enterprise before the training period (including cases classified as employed under (a) above):
  - (i) if employed by the enterprise before the training period, the participant should continue to be considered as employed while on training if he or she maintained a "formal job attachment", as set forth in the international definition of employment in paragraph 9(1)(a2) of Resolution I of the Thirteenth International Conference of Labour Statisticians.

In this context, to establish whether or not "formal job attachment" exists, the criterion of "assurance of return to work" should be considered to be the essential one. "Assurance of return to work" should be interpreted as assurance to return to work with the same employer.

In situations where such assurance to return to work did not exist, "formal job attachment" should be assessed on the basis of the criterion of "continued receipt of wage or salary". That criterion should be considered as satisfied if the employer paid directly all or a significant part of the wage or salary.

The third criterion, "elapsed duration of absence", might also be used in particular situations, e.g., in connection with long-term training schemes;



(ii) if the participant was not employed by the enterprise before the training period, the participant could not be considered as "with a job but not at work" and the notion of "formal job attachment" would not apply. Consequently, if the scheme provided a definite commitment to employment at the end of training, the statistical treatment might follow that of persons who had made arrangements to take up employment at a date subsequent to the reference period (see paragraph 10(4) of Resolution I of the Thirteenth International Conference of Labour Statisticians).

11. Regarding the "seeking work" criterion of the international definition of unemployment, it was agreed that the example of "registration at a public or private employment exchange" need not be reformulated but should, in general, be interpreted as follows: registration should be considered as an active step to seek work only when it was for the purpose of obtaining a job offer from the employment exchange. This precision was particularly important where participation in an employment promotion scheme was linked to registration. Consequently, where registration was simply an administrative requirement for benefiting from the provision of a scheme and not for the purpose of obtaining a job offer, the act of registration should not be considered as an active step to seek work in the sense of the international definition of unemployment.

12. The issue concerning the distinction between seeking self-employment and the self-employment activity itself was examined in the light of the schemes providing assistance to unemployed persons wishing to set up an enterprise. It was suggested that this distinction be based on the point when the enterprise started to exist, e.g., when the enterprise was registered. In situations and in countries where enterprises were not necessarily required formally to register in order to operate, it was suggested that the dividing line might be at the point when the first order was received or when the financial resources became available or when the necessary infrastructure was in place. While noting these suggestions, the Working Group decided that the present formulation of the "seeking work" criterion of the international standards did not require further specification in this respect.

13. The relevance of the concept of "visible underemployment" of the international standards was examined in relation to the employment situation of participants in certain categories of employment promotion schemes. There was agreement that the concept might indeed be useful in this context, but that it needed to be further elaborated, possibly as part of the work of a future International Conference of Labour Statisticians. Some concerns were, however, expressed as to the practical difficulties of joint measurement of visible underemployment and participation in employment promotion schemes. Visible underemployment was only measurable through household surveys. Enumeration of participants in employment promotion schemes was often best made using administrative sources.

14. The French practice of establishing annually an employment-training balance sheet of young persons (see table 4.2 of Chapter 4 of the General Report) was considered to be a useful approach for supplementing labour force statistics with data on participation in employment promotion schemes derived from administrative sources. It was recognised that the drawing up of such balance sheets was not without practical difficulties. Notwithstanding these difficulties, it was suggested that the ILO might wish to recommend to countries concerned the drawing up of such balance sheets on a regular basis for young persons as well as for other age groups, so as to cover the whole working-age population, whenever possible.

15. It was noted that such balance sheets might in fact have wider applications and might be useful to countries in all parts of the world as a means of combining labour force statistics at the aggregate level with related statistics from different sources. Several examples were given concerning volunteer workers, unpaid apprentices, agriculture and construction workers in government-sponsored employment schemes.

16. The Working Group also considered it desirable for the ILO to extend the study on employment promotion schemes to cover countries in other parts of the world, provided the necessary resources were available.

## II. Consumer price indices

69. The Conference had before it for discussion Report II: Consumer Price Indices, prepared by the Office. The report focused on a number of topics which were expected to require detailed consideration by the Conference. These were: owner-occupied housing, consumer credit, combining price quotations (substitutions and quality changes), seasonal items, insurance and classification of goods and services. The draft of a new resolution on consumer price indices for consideration by the Conference was presented in Chapter 8 of the report. It also included as annexes the Resolution concerning cost-of-living statistics adopted by the Sixth International Conference of Labour Statisticians (August 1947) and the Resolution concerning special problems in the computation of consumer price index numbers adopted by the Tenth International Conference of Labour Statisticians (October 1962). In addition, three charts were provided to clarify alternative treatments concerning owner-occupied dwellings, substitution and seasonal items.

70. In order to ensure full and careful consideration of the proposed draft resolution on this topic, the Conference agreed to refer it to a committee under the chairmanship of Mr. Ian Castles (Australia). The draft resolution, as modified by the Committee, would then be brought back to the plenary session for final examination and adoption.

71. The report of the Committee on Consumer Price Indices (see Annex) and the new draft of the resolution, as amended by the Committee, were submitted for consideration by the Conference.

72. The Chairman of the Committee presented the report. He pointed out that consumer price indices were used for a wide variety of purposes and emphasised that objectives and uses differed among countries. Therefore, a single standard could not be applied universally.

73. He also stated that in calculating a consumer price index, the owner-occupied housing component was one of the most complex issues and that different methods yielded different results. In this connection, it was stressed that there was a need to define clearly the conceptual framework of the index and to make choices, taking into account the main purposes which the index was to serve.

74. In relation to sampling for price collection, the Rapporteur of the Committee, informed the Conference that there was general agreement that probability-sampling techniques, although difficult to apply in the selection of items and outlets, should result in a more accurate index and enable sampling errors to be calculated. Attention was drawn to paragraph 8, subparagraph 2, of the 1962 resolution which stated:

Efforts should be made to ensure that samples of cities, or areas, of dwelling units, sales outlets and of items priced are as representative as possible of the universes they represent. Probability sampling, although involving difficult practical problems, will normally enhance the accuracy of the price index and, moreover, will make possible an estimate of the sampling error.

75. However, it was pointed out that probability sampling could not be adopted in many countries, due to lack of resources and other difficulties. Thus, purposive sampling, using the best judgement of the statistician and the available information would be more appropriate for such situations.

76. After reviewing the amended draft resolution on consumer price indices, the Conference adopted it, subject to minor drafting changes to be made by the Office. The text is given in Resolution I in Appendix I of this report.

77. A separate resolution on the provision of technical advice and exchange of experience was also adopted. The text of this resolution is presented as Resolution IV in Appendix I of this report.

78. The report of the Committee, containing the detailed discussions, is given in the Annex. The list of the participants of the Committee is presented in Appendix II.

ANNEX

Report of the Committee on Consumer Price Indices

1. The Committee first met at the morning session on Wednesday, 28 October 1987 and held eight sessions. Representatives of the following countries participated: Angola, Argentina, Australia, Austria, Brazil, Botswana, Bulgaria, Burundi, Canada, China, Côte d'Ivoire, Cyprus, Egypt, Finland, France, German Democratic Republic, Federal Republic of Germany, Ghana, Greece, Guinea Bissau, Ireland, Israel, Italy, Jamaica, Japan, Kenya, Libya, Luxembourg, Mauritius, New Zealand, Netherlands, Portugal, Spain, Sweden, Switzerland, Tanzania, Thailand, Tunisia, Turkey, Uganda, United Kingdom, United States, USSR, Uruguay, Venezuela, and Zimbabwe.

2. Employers' and Workers' representatives nominated by the ILO Governing Body also participated, as did representatives of the following international organisations: Economic Commission for Europe, Statistical Office of the European Communities and the Organisation for Economic Co-operation and Development.

3. Mr. Ian Castles, Australian Statistician, Australian Bureau of Statistics, was elected Chairman, having been proposed by Ireland and seconded by the United States.

4. Ms. Barbara Slater, Director, Prices Division, Statistics Canada, was proposed by the United Kingdom, seconded by New Zealand, and elected Rapporteur.

5. Delegates presented general comments on Report II prepared by the International Labour Office (ILO) as a basis for discussion and noted areas which they felt required emphasis in the work of the Committee. A wide range of points were raised, with any issues which were omitted in the ILO report being noted for discussion by the Committee and possible inclusion in the draft resolution.

6. The sequence for discussion proposed in the report was accepted by the delegates, with omitted points to be listed by the Rapporteur for discussion under item 15.

7. It was decided to form an expert group to deal with issues of terminology subsequent to the Committee's agreement on the substance of the draft resolution. This group would be chaired by Mr. Picard (France) and would include Ms. Slater (Canada) and Ms. Sanjurjo (Argentina).

8. In discussing the draft resolution, a number of points about which there were substantive debates were raised. These are noted in this report (following the order of the draft resolution as outlined in Report II. Other amendments proposed about which there was less debate have been incorporated in the redrafted resolution which is appended to this report as Annex 1.

9. It was agreed to add a reference in the Preamble concerning the encouragement of good statistical practices as a goal of the resolution. It was noted that because the particular objectives and uses of a consumer price index vary among countries no single standard could be universally applied, but that the choices made should be from among those which are generally regarded as being sound.

10. In discussing the Terminology section, there was some discontent expressed with the use of the term "minimal sets" as the way to denote the lowest level to which fixed expenditure weights were applied. However, it was agreed to leave this matter to the terminology expert group, which decided on "elementary aggregates" as the more suitable term. This was incorporated in the draft resolution.

11. In discussing the section on the Nature of a consumer price index, it was decided that there was a need to separate the concept of what a consumer price index was trying to measure from the form in which it is implemented in practice.

12. In discussing the section on Scope, there was some debate about the meaning of this term but the consensus was that it should describe both the population, regions, items and outlets to which one wished the consumer price index to refer and the practical result once sampling possibilities and data availability had been considered.

13. The inclusion of taxes in a consumer price index was raised with the following points being noted:

- (a) income taxes would be a more commonly understood term than direct taxes;
- (b) conceptually, the inclusion of indirect (e.g. sales or value-added) taxes in the prices used in calculating a consumer price index raised the question of a possible need to evaluate what precise bundle of goods and services the consumer received in exchange for paying such taxes:
  - however, the indirect taxes could be associated directly with the good or service which was purchased and was taxed and the price inclusive of such taxes was the out-of-pocket cost for the good or service faced by the consumer;
  - income taxes could neither be associated with a particular bundle of government-provided goods and services nor with a final price of goods or services bought in the market-place;
- (c) indices which either encompassed income taxes or removed indirect taxes might be calculated, given certain assumptions, but should be clearly distinguished from consumer price indices;
- (d) given that the resolution dealt with consumer price indices, it was agreed to note that income taxes should not be included and to accept that prices faced by the consumer would include indirect taxes for which no evaluation of the utility of any associated government-provided goods and services had been made.

14. The need and relevance of including second-hand goods (e.g. used cars and consumer durables, and existing houses) was debated, but it was concluded that there was considerable variation in circumstances across countries. Thus, the draft resolution could only deal with the treatment of weights for second-hand goods if they were to be represented in a particular country's consumer price index.

15. It was agreed that the treatment of owner-occupied housing was one of the most complex issues in calculating a consumer price index. There was a need to have a clear conceptual framework and to make choices (consistent with that framework, with the uses to which the index was mainly to be put and with general public acceptance of the methodology) with respect to focusing on goods and services which were either used, acquired or paid for during the

reference period. It was also noted that the definition of consumption, as opposed to investment or saving, was critical to the formulation of an approach to owner-occupied housing.

16. In discussing the section on Weighting, it was noted that a number of methods might be employed to combine data which were collected over the reference period (usually a whole year) and that it was particularly important to be careful to deal appropriately with such matters during periods of high inflation or very different relative inflation among the goods and services priced.

17. It was also noted, with respect to weighting, that while it may be desirable to try to select a "normal" period as the reference period, in many countries the expenditure surveys were planned some time in advance and could not be rescheduled at the last moment, or were established to occur at fixed intervals. Thus, it was equally important to note the need to adjust for temporary abnormalities as it was to advise that a normal period be selected, if possible.

18. Finally, with respect to weighting, it was noted that there were many sources of weighting information whose relative importance may vary from country to country depending on the particular market circumstances, the framework within which the consumer price index was placed, and data availability. Thus, the resolution was revised to provide a broader description of possible recommended approaches.

19. In considering the section on Sampling for price collection, it was the view of most delegates that increased emphasis on probability sampling, at least as a goal, should be included in the resolution. However, some delegates pointed out that lack of suitable data and/or resources could prohibit much use of such techniques, and that purposive or judgemental sampling was likely to remain the best approach in those circumstances.

20. It was noted that, while probability sampling could provide measures of and could assist in reducing variance, it did not address non-sampling errors. It was also noted that the efficiency of probability sampling might be reduced with small samples which might be employed in smaller countries.

21. Finally, with respect to sampling, delegates agreed that additional section(s) needed to be added to deal with the time dimension in sampling of prices.

22. In examining the section on the Price data, there was considerable discussion concerning the problems of substituting for goods and services which had disappeared from an outlet or from the market altogether, and for outlets which must be replaced either because they had disappeared or had become less representative. The following key points were raised:

- (a) All relevant characteristics should be described in the specifications and any additional information used by the price collector to select the particular item to be priced should be recorded. This would help both in pricing the same item in successive periods and, when this was not possible, in finding the most suitable substitute.
- (b) In adjusting the price index to take account of necessary substitutions, it was suggested that the key criterion that should be used was the "market valuation" of the difference between the original item or outlet and its substitute. Some delegates noted that practices of discounting to clear old models or stock could mean that the prices observed in the marketplace for the original item were not a good representation of its

true value. Other delegates noted that "market valuation" referred to the concept of consumer utility and that many different techniques and data sources might need to be used to estimate this concept.

- (c) Developing countries, in particular, urged that the proposed ILO manual on consumer price indices should discuss in some detail the various techniques that might be used to adjust the price index when substitutions had to be made.

23. In considering the section on the Use of average prices, some delegates noted that while there was considerable public interest in average price data and in comparisons among regions of their countries and/or internationally, it was perhaps risky to place too much confidence in averages derived from data which were initially collected in order to measure changes in prices over time. Additional or separate data collection might be necessary to support an average prices programme. Other delegates indicated that they were able to use at least some of the prices they collected for their temporal index to calculate and publish average prices.

24. In discussing the section on Publication, it was noted that a more general term would be "Dissemination" in that many different media were used to release data publicly.

25. Concern was expressed about a requirement to publish nationally all-items indices excluding certain items such as housing or medical care, but there was general agreement that such indices could be calculated and published internationally if they were useful for international comparisons or other purposes.

26. There was considerable debate about the question of whether release of the data in advance of its public availability should be mentioned at all. It was noted that this could be a dangerous practice, open to political manipulation. However, it was also noted that it was common practice in a number of countries to give limited advance release to key government personnel such as the President or Minister of Finance.

27. Since laws concerning data disclosure varied considerably among countries, there was a lively debate concerning what should and could be kept confidential. Some delegates, notably from developing countries, stressed the need in the resolution to recommend explicitly that certain information be treated confidentially so that statisticians could resist political pressure to reveal the detailed price/outlet data. Others noted that while this might be desirable, increasing pressure in their countries for open access to government information was also a factor that had to be considered. In the end, a balance between these two needs was struck in drafting the resolution.

28. The Committee discussed the need for better mechanisms to facilitate the exchange of experience among government statisticians and the provision to statistical offices of technical advice about the compilation of consumer price indices. The Committee accepted the view expressed in Report II that any resolution on this subject should be kept separate from the main resolution, which was designed to remind statisticians and to inform governments about good statistical practice. Accordingly, the Committee recommends to the Conference the adoption of the draft resolution appended as Annex 2.



### III. Industrial disputes: Statistics of strikes

79. The Conference considered the item on the agenda on the basis of Report III, Industrial disputes: Statistics of strikes, prepared by the Office. The report contained brief opening chapters on objectives and uses of statistics of strikes, and on terminology. It then considered in more detail issues concerned with measures of strike activity (Chapter IV), some specific problems of statistics of strikes (Chapter V) and data classifications (Chapter VI). Chapters VII and VIII related to methods of reporting and indicators of strike activity. The draft resolution before the Conference was contained in Annex II of Report III.

80. The representative of the Secretary-General introduced the subject. He suggested that the Conference might begin with a general discussion which would help identify the major issues and points involved. Statistics of strikes were unlike statistics on other topics because the statistician usually had little control over them since they were often obtained from administrative records. One of the important issues before the Conference concerned the terminology to be used. Although the term "strike" had been used throughout the report and was widely used and understood, delegates were invited to consider whether it was the most appropriate term to use. Other important questions concerned the definition of strikes and their classification by type.

81. Finally, mention was made of the coverage of the information to be obtained. Report III had focused on the minimum set of information needed; it was evident that national and international requirements would probably extend beyond this.

82. The Chairman then invited the Conference to discuss general issues before proceeding to a detailed examination of the resolution section by section.

83. In the general discussion many delegates prefaced their remarks by stressing the importance of the topic and thanked the ILO for bringing issues involved to the attention of the Conference and for the preparatory work it had done. Comments from delegates generally focused on three broad but closely related issues: the scope and coverage of the topic under consideration, the reasons for collecting the statistics (including the objectives to be met by the resolution), and measurement issues.

84. On the scope and coverage of the topic, nearly all delegates felt that lock-outs by employers should be considered along with strikes, as had been recognised in the draft resolution. Strikes were only one manifestation of industrial disputes. Moreover, some delegates felt there were stoppages of work which were not caused by industrial disputes and that these ought also to be included. Work stoppages which were politically motivated were an example of this kind.

85. Some delegates supported broadening the scope and coverage of the topic to include all industrial disputes, and mentioned examples of action which might be taken by workers in support of their grievance which fell short of the complete withdrawal of their labour. These included a work "slow-down" or a refusal by workers to carry out a particular aspect of their job, which might be damaging to the interests of their employer. It was also thought that, over time, action of this kind might grow. In such circumstances, the incidence of strikes might not be an accurate indicator of the degree of industrial unrest within a country, which was thought by many to be one of the

principal reasons for collecting the statistics. This was in fact the case for those countries in which strikes were rare or illegal.

86. Other delegates, while recognising the strength of the arguments put forward by those who wished to broaden the scope of the topic, were concerned about the practicability of doing so. The reporting arrangements in many countries did not extend to the wider issues that had been addressed and delegates from those countries saw little prospect of them being able to do so. Regardless of the merits of the cases put forward, therefore, some delegates thought the resolution, as it applied to action by workers, should be confined to strikes, that is, action which involved lost production time.

87. On the question of whether politically motivated strikes should be covered, views were expressed both in favour and against. Those in favour stressed the economic impact of such strikes and their similarity in this respect to other strikes. Those against argued that the statistics would no longer be an indicator of industrial unrest which they saw as the primary purpose of the statistics. Moreover, such statistics could not be collected in a number of countries.

88. While there appeared to be broad agreement with the Office proposal that the resolution should embrace both strikes and lock-outs, a number of delegates felt that this should be limited to lock-outs at the place of work where workers and management were in dispute. This limitation, which many felt should also apply to strikes, would be necessary because it was impossible to discover all the consequences of industrial action in one business on the activities of others. For example, a stoppage of work due to an industrial dispute in one business might result in fewer orders being placed with, and hence lost production time in, another business.

89. Many of the issues concerning the scope and coverage of the statistics mentioned above were raised in the context of the purpose for which the statistics should be collected. The views expressed reflected the importance attached to the industrial relations, economic or social consequences of the industrial action taken. Generally, the wider the context in which the statistics would be viewed, the broader the scope and coverage of the statistics would have to be.

90. The discussion on this issue led a delegate to question whether Report III dealt sufficiently with the conceptual or theoretical framework within which the statistical evidence to be collected would fit. He felt that, without such a framework, there was no foundation on which to build an acceptable resolution. Moreover, it was desirable that the statistical guide-lines remain relevant for a reasonable period.

91. A number of delegates stated that one of the major considerations should be the availability of uniform up-to-date data for the purpose of making international comparisons and, in support of this, guidance on good practices in the collection of the data. Both these requirements necessitated a limitation of proposals to those which were reasonably attainable among a large number of countries.

92. In this context many delegates were concerned that statistics should only be sought on what could be reasonably measured. The cost implications should also be taken into account. There was general agreement that the number of workers involved was an important statistic that should be collected. However, there was considerable discussion on whether working time lost through strikes or lock-outs should be measured in terms of hours or days, and if and how the duration of a strike or lock-out should be measured. On the first issue, delegates generally agreed that either working hours or

working days lost would be acceptable since a broad measure of comparability could be obtained by converting one to the other.

93. On the question of the duration of a strike or lock-out, the point was made by a number of delegates that strikes in respect of one dispute were often planned so as to spread their impact over a reasonably long period of time through short but frequent work stoppages. The question raised was whether these should constitute one strike or a series of separate strikes. The Conference expressed support for both views.

94. Many delegates returned to the theme that measurement problems would often be the deciding factor with regard to what it would be possible to collect, and that the primary requirements were measures of the total number of workers involved and the total working time lost.

95. Finally, in the general discussion, a number of suggestions were made about the availability of practical guidance for the collection of national statistics on strikes and lock-outs. It was suggested that this might be included in the future work programme of the ILO.

96. The Conference then considered in detail the draft resolution submitted by the Office (Report III, Annex II). The first issue raised was the title itself and whether the statistics should relate to strikes, strikes and lock-outs or, more neutrally, either industrial disputes or work stoppages. The majority of delegates preferred "statistics of strikes and lock-outs" and the title of the resolution was amended accordingly. At this stage in the discussion it was further agreed that all subsequent references to "strikes" be changed to read "strikes and lock-outs".

97. Paragraphs 1.0 and 2.0 of the draft resolution were accepted without amendment, other than for the addition of the words "and lock-outs" after the word "strikes" in paragraph 2.0, as previously agreed.

98. In view of the differing opinions expressed during the general discussion, and in order to organise the work of the Conference on the subject, the Chairman asked for amendments to the remaining paragraphs to be made in writing.

99. Following the submission of 50 amendments, the Conference resumed its consideration of the draft resolution beginning at paragraph 3.0 under the heading "Terminology". This paragraph sought to define "strikes" for the purpose of the resolution. Two amendments had been submitted. One was aimed at inserting "one or more workers' organisations or" before "groups of workers", while both proposed more detailed changes to the definition and/or the coverage of strikes. A number of delegates also felt that it was not possible to define the period of time which should elapse between strikes before they should be counted as separate strikes. Others thought that it could be defined and should be specified in the resolution. A lengthy discussion ensued during which further suggestions were made by delegates. Following a show of hands, it was decided that the original draft should be retained, unamended.

100. The Conference then considered paragraph 4.0 which defined "lock-outs" for the purpose of the resolution. One amendment had been submitted but this was rejected by the Conference. The original wording proposed by the Office was therefore accepted.

101. At this stage a number of delegates wished to consider again whether the Conference's earlier decision to add "and lock-outs" to the word "strikes" throughout the remainder of the resolution was a sensible one. The

principal reason put forward for reopening the issue was that it might not always be appropriate to amend the resolution in this way and examples were given. Moreover, five amendments had been submitted in respect of paragraph 16.0 which, in the draft resolution, read "Lock-outs should be treated in the same way as strikes, but it is desirable, when possible, to make a distinction between strikes and lock-outs". Many delegates felt that paragraph 16.0 might no longer be needed.

102. After further discussion it was agreed that paragraph 16.0 should be deleted and a new paragraph 4.1 inserted after 4.0 to the effect that the remainder of the resolution should also apply, where relevant, to lock-outs.

103. The Conference then considered the title to the next section in the draft resolution which read "measurement of strike activity". Delegates felt that the word "activity" was inappropriate and that, because of the new paragraph 4.1, the heading could simply read to "measurement". This was approved by the Conference.

104. Two amendments to paragraph 5.0 had been submitted. The main concern of the Conference had been with the expression "representative of the country as a whole" which needed clarification. A revised draft was agreed.

105. On paragraph 6.0, two amendments had been submitted. The draft proposed would present problems for some countries in obtaining the required statistical indicators. However, neither of the two amendments were found acceptable, and the original proposed paragraph 6.0 was adopted.

106. The representative of the Secretary-General then proposed a correction to paragraph 7.0 which would then read "Statistics of strikes should be compiled for a reference period of not more than one year". This was accepted.

107. Two amendments to paragraph 8.0 were proposed. Both sought to ensure that aggregate statistics on strikes should be measured in either hours or days and one sought to change the term "days lost" to "days not worked". After some discussion the Conference agreed on a combined amendment to change the words "work-days lost" to "work-days or work-hours not worked".

108. On paragraph 9.0, the Conference asked that the source of the UN Definition of an establishment should be clarified. This would be done by the Secretariat, and the wording of the paragraph was corrected to include the appropriate reference.

109. Paragraphs 10.0 to 15.0 in the draft resolution provided guidance for measuring the number of workers involved, duration of strikes and amount of work-time lost. Twenty amendments had been put forward regarding these paragraphs. With the aim of helping the Conference make faster progress, given the limited time available for considering the topic, it was proposed that these paragraphs should be removed from the resolution and that they should form the basis of a future ILO document or manual dealing with the methodology for the collection of the statistics. The intention was that this document or manual could take into account the concerns expressed by delegates in their proposed amendments and in the earlier general discussion on these issues. This would be consistent with the practice adopted in other ILO resolutions, which set out agreed principles, while guidance on the technical application of those principles were contained in a supporting manual. The proposal was seconded.

110. In the following discussion, a number of delegates thought that the proposal to remove paragraphs 10.0 to 15.0 would weaken the force of the

resolution and that it would not then be a sufficient advance on the resolution adopted in 1926. On the other hand, other delegates supported the proposal, for the same reasons given by the proposer. Many delegates asked that the development of guide-lines in the preparation of statistics on strikes and lock-outs should be included in the work programme of the ILO and that the subject should be on the agenda of the next International Conference of Labour Statisticians.

111. After further discussion, the Conference accepted, by a narrow majority, the proposal to remove paragraphs 10.0 to 15.0 from the draft resolution. At the same time, it recommended that the ILO should prepare a document on the methodology of statistics on strikes and lock-outs.

112. The Conference then moved on to discuss paragraph 17.0 under the heading "Data Classification". Seven amendments had been proposed. In general, these sought to reduce the amount and type of detail for the classification of data on strikes and lock-outs. There was general support for this principle and after much discussion a composite amendment was approved.

113. On paragraph 18.0, under the heading "Comparative Measures", a further seven amendments had been proposed. Two of these related to the heading itself and it was agreed that this should be changed to "Indicators". The other five either sought changes to the list of suggested indicators or to the wording. Much of the discussion concerned the merits of absolute or relative indicators, the appropriateness of certain variables for these purposes and the relevance of certain ratios.

114. Six indicators were agreed on for inclusion in the new resolution.

115. In presenting the amended draft resolution to the Conference, the Secretary-General noted that the Office proposals had been considerably reduced. From the comments made by a number of delegates, it was evident that the Conference was not entirely satisfied with the amended text. Unfortunately, the resources available for the Office's preparatory work had been limited and, furthermore, it appeared that the Conference had underestimated the complexities of the subject.

116. The Conference considered that the Office should therefore continue its work on the topic, and return to the next International Conference of Labour Statisticians with proposals which would extend and improve on those contained in the amended draft resolution. With this in view, it adopted the resolution concerning further ILO statistical work on industrial disputes, which is presented as Resolution V in Appendix I of this report. The Conference decided to reflect the provisional nature of the recommendations in the resolution by introducing an appropriate phrase in the preamble, and by inserting "Interim" in its title. A minor clarification was introduced in paragraph 1.0. Although it was generally accepted that further work would be done on paragraph 18.0, one indicator, "Number of establishments", was nevertheless added.

117. The amended interim resolution concerning statistics of strikes and lock-outs was adopted by the Conference. The text is presented as Resolution II in Appendix I to this report.

#### IV. Revision of the International Standard Classification of Occupations (ISCO)

118. This item was considered by the Conference on the basis of Report IV: "Revision of the International Standard Classification of Occupations". Part I of the report covered the background to the proposed revision of ISCO, the principles adopted and the draft resolution. Part II contained draft descriptions of all the groups in the revised structure, as well as detailed references to the relevant groups in ISCO-68.

119. The subject was introduced by the representative of the Secretary-General, who gave a brief description of the background to the proposed revision and its relationship to ISCO-58 and ISCO-68. The proposals drew on the experience of users and designers of national classifications. In addition, working groups and expert meetings had been convened by the ILO in 1985 and 1986 to assist the Office in its work. The representative of the Secretary-General thanked all those who had participated.

120. He described the principles adopted in drawing up the revised ISCO. It would continue to be a classification of jobs based on similarity of work performed. In contrast to ISCO-68, however, the "similarity" criterion proposed at the major group level would be based generally on the level of skill required to perform the job. Below the major group level the similarity criterion was that of skill specialisation. The proposed revision retained minor and unit groups but a new sub-major grouping had been introduced between the major and minor groups.

121. Attention was drawn to specific issues encountered in drawing up the revised classification (see Report IV, Part I). In particular, it was stressed that every effort had been made to avoid the use of groups defined as "not elsewhere classified", which was a major shortcoming of ISCO-68.

122. Despite the rapid growth in the number of national occupational classifications, ISCO would continue to retain its dual role: as a basis for making international comparisons and as a model to assist those countries still developing national classifications of occupations.

123. In inviting discussion of Report IV, the Chairman suggested that the Conference might first address the general principles before proceeding to a discussion of the details of the classification. This was agreed.

124. On the general principles adopted for the revised classification of occupations, the Conference was unanimous in its support for a classification mainly based on skill level and skill specialisation. Several delegates referred to the increasing use of occupational classifications in applications requiring a skill dimension; for example, policy decisions relating to links between education and training, and the tasks to be performed in the economy. Some concern was expressed about the way the principles had been applied in the case of specific occupations, which would be looked at later, but it did not detract from the overall support for the Office proposals.

125. The relationship between the revised ISCO and other classifications was also discussed. In particular, the failure of the proposals to accommodate "economic status" within a classification of jobs was thought by one delegate to be a limitation but it was accepted that that important dimension would have to be catered for by cross-classifying ISCO with other classifications such as the international classification of Status in Employment.

126. Delegates attached considerable importance to the need to keep the classification up to date and for detailed descriptions to be available of the occupations falling within the unit groups. On the former, the ILO was prepared to maintain a continuing programme of work on occupational classification, including assistance to member countries.

127. The detailed discussion of the proposed major group \*1 (legislators, administrators and managers) centred on the concerns of delegates as to how to apply the distinction made between sub-major groups \*1.2 (company directors and managers) and \*1.3 (small business managers).<sup>1</sup>

128. Many delegates felt that the concept of a small business and the way it would be measured could not be applied universally across all industrial sectors and in countries at different stages of economic development. The view emerged that a sub-major group was needed comprising the lowest level of business managers who might be called "managing supervisors".

129. A number of delegates considered that the term "company directors" in sub-major group \*1.2 would allow many to be included in the group who were not directors of large organisations with other managers reporting to them. A better description supported by fuller details in a user manual was needed.

130. The Conference debated major groups \*2 and \*3 simultaneously, as it was recognised that there were some difficulties in defining which occupations should be classified most appropriately in one or other of the groups, as a result of differences in national circumstances. Major group \*2 (professionals) was designed to embrace those occupations requiring the highest-level skills, above those required for occupations in major group \*3 (technicians and associate professionals). One example was that of "primary school teacher", which was included in the proposed major group \*3, whereas in many countries a university degree or equivalent would be required for entry. Similarly, for a "nurse", some countries required a university degree or equivalent qualification for entry, while in many others the requirements for entry were lower.

131. For nurses, it was agreed that a separate unit group should be created in major group \*2 for nurses requiring the highest-level skills. Other qualified nurses would be included in major group \*3. The representative of the World Health Organisation announced that he would provide the Office with written modifications to the definitions of certain medical personnel.

132. The view on teachers, which emerged from the Conference, was that it should be possible for primary school teachers to be accommodated in both major groups \*2 and \*3 according to the level of skill required. Where totals of primary school teachers were required, these could be obtained from aggregates across the two groups.

133. A number of delegates felt that the classification would be improved by creating more unit groups in order to recognise real existing distinctions; for example, between computer programmers and systems analysts and between statisticians and mathematicians. Others were concerned that the boundary drawn between writers, artists and related professionals (major group \*2) and entertainment and sports associate professionals (major group \*3) did not always reflect the skill requirements of occupations in the two groups.

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<sup>1</sup> An asterisk preceding the number of an occupational group signifies reference to the group as proposed in Report IV.

134. The proposed major groups \*4 and \*5 were discussed in relation to the introduction of the skill criterion and the avoidance of the industry categorisation of the 1968 revision. In major group \*4 (clerks) the meeting felt that the distinction between office and client orientation of occupations might require further clarification. It could also be difficult to distinguish between occupations with very similar tasks and duties but for which different skill levels were required. The need for improved terminology and more accurate descriptions was noted.

135. Many representatives questioned the absence in major group \*4 of the occupational title "secretary" which is widely used throughout the world. Its omission was seen as unacceptable from a number of standpoints. It was agreed to provide for this group by renaming minor group \*4.1.1 and creating a special unit group. Jobs related to those in this category but requiring higher-level skills were recognised by the Conference as being accounted for in major group \*3 (unit group \*3.3.3.1, administrative and related assistants).

136. In the proposed major group \*5, the distinction between skill specialisations to delineate conceptual differences between the occupations was found acceptable. To avoid possible confusion due to the presence of similarly oriented occupations in different parts of the classification, greater care was required in the drafting of the descriptions. The need was stressed for further clarification of the grouping of occupations based on the required skill levels. In this respect the Conference returned to the question of nurses and medical personnel and agreed that the necessary technical issues should be dealt with in the manual.

137. Concern was voiced that the revised classification should be able to deal with occupations such as market intermediaries or "middle-men". These occupations were considered of particular relevance in the developing countries. An informal working party met to advise the Conference on the treatment and location of market intermediaries within the classification.

138. Major group 6 (farm, fishery and related workers) represented a vast number of persons in the world labour force. As presented by the Office, the basic distinction made at sub-major group levels between market-oriented and subsistence farming, elicited much debate by the Conference. The issue of specialised farming relating to the type of crop produced was seen as confusing by a number of delegates. There seemed to be a need for more unit groups to allow workers specialising in different crops and different types of animal husbandry to be identified.

139. A number of delegates who supported the separate distinction of subsistence farming nevertheless drew attention to the difficulty associated with defining it. Their concerns related to the volume of production or the destination of its consumption, and to the differences in definition between subsistence farmers and subsistence farm labourers (in major group \*9).

140. Similar issues were raised on the identification of skill levels required by occupations in this major group. Many delegates felt that in their national contexts the majority of farmers would be located in major group \*9 (labourers), where little differentiation between specialisations had been proposed. A suggestion was made to group all subsistence farming occupations into one major group, but this was seen as weakening the skill level and skill specialisation criteria adopted in the revised proposal.

141. Another issue raised in discussion concerned the difficulty in distinguishing between people managing their farms and therefore similar to small business managers (in major group \*1) and the farming occupations



contained in major group \*6. Some delegates thought that a new criterion such as size or status in employment might be helpful.

142. The feeling of the Conference seemed to be that the proposals for major group \*6, although correct in their approach, needed greater clarification. An informal working party was asked to look at both terminological and substantive issues. The Conference thus accepted that improved titles and definitions to delineate the occupations in the three major groups (\*1, \*6, \*9) were required. The important distinction between market-oriented and subsistence farming needed further clarification, and references to specialisations within sub-major group \*6.1 would be included. Explicit reference to animal husbandry would also be made in both sub-major groups.

143. The Conference discussed major groups \*7 and \*8 together. In the proposed revised classification, these two groups were designed to reflect distinctions between jobs where the skills required are associated with the types of materials used or the operational methods used. This approach was consistent with the overall principles adopted for the revised classification.

144. In the discussion, particular concern was expressed by a number of delegates over the treatment of handicraft workers. Given the wide variety of materials used by these workers, their proposed location in sub-major group \*7.2 (metal and machinery trades workers) seemed incorrect. It was suggested that a special sub-major group for these workers would be more appropriate. This would have the advantage of allowing more minor and unit groups to be included and so cater on the one hand for the wider range of materials used by handicraft workers than those specified in the Office's proposals and, on the other, for improved identification of traditionally female occupations.

145. The impact of automation on the tasks performed in a number of jobs covered by these two major groups was also mentioned by various delegates. Thus, it was thought that a number of jobs in minor group \*8.1.7 (automated assembly-line operators) might be more appropriately placed in major group \*9; while others, dealing with the control of robots, could require skills comparable to those found in major group \*3. It was important for these distinctions to be made clear in the detailed descriptions and supporting manual. Furthermore, the suitability of the classification for accommodating new specialisations needed careful consideration.

146. A specific proposal was that a separate unit group might be created for jobs associated with cleaning buildings, using various methods. The proposed minor group \*7.1.2 (building trades workers) accommodated those occupations which were concerned primarily with the construction of buildings but failed to recognise the growing importance of jobs associated with the preservation and appearance of buildings.

147. Concern was expressed that certain other occupations, such as those associated with printing trades, did not fit well within the larger aggregates. It was accepted, however, that a balance had to be struck between the desire for greater disaggregation and the wish to avoid creating numerically small sub-major and minor groups. The point was also made that the classification would have to be capable of accommodating jobs in the informal sector, particularly for food-processing occupations.

148. Another point raised in discussion related to groups of workers whose level of skill might appear to be fall between major groups \*7 and \*8 and major group \*9. This was another example requiring more detailed descriptions. Also, the terminology used in some instances was not always

appropriate in different languages and in countries at different stages of economic development. This would have to be made clearer.

149. In introducing the discussion on major group \*9 (labourers), the representative of the Secretary-General noted that a number of related points had come up in the discussion on other major groups, principally the possible inclusion in these groups of certain activities not requiring higher-level skills, for example, window cleaners, labourers in the fishing industry and those collecting money from coin-operated machines.

150. Much of the discussion on major group \*9 concerned the proposed inclusion of prostitutes. Some delegates felt that, if prostitutes were to be included in the classification, they should be included somewhere in major group \*5 as personal service workers. Many delegates felt very strongly, however, that prostitutes should not be included at all in the classification since prostitution was an illegal activity in their countries. The inclusion of prostitutes would be inconsistent, since other illegal activities, such as dealing in drugs, had not been included. After considerable discussion it became clear that the majority of delegates took the view that prostitutes should not be separately identified in the classification.

151. Some delegates thought that market vendors might appropriately be included in major group \*9. These workers were particularly important in certain countries.

152. The final proposal, major group \*0 (military operations personnel) provoked much discussion. The main issue emerging related to whether the treatment of members of the armed forces should, whenever possible, follow the general classification criteria based on tasks and duties performed. In this approach, members of the armed forces such as doctors and cooks would be located in their appropriate place in other major groups, with only those engaged in purely military activities being included in major group \*0. The alternative view put to the Conference was that all members of the armed forces should be included in a single major group without further subdivision. The Conference was not able to reach a consensus in this regard and therefore agreed to retain the ISCO-68 position, with the clear understanding that civilian employees working alongside members of the armed forces should not be included in major group \*0.

153. Throughout the detailed discussion on the major groups, some general observations were made on a number of occasions. In connection with the structure of the classification, a number of delegates felt that the inclusion of unit groups for workers "not elsewhere classified" might not be unavoidable, although this had been suggested by the representative of the Secretary-General in his introduction. For example, it might not be possible to ensure that all jobs currently in existence could be classified within the proposed unit groups, no matter how well designed. Moreover, the classification would have to be able, over its lifetime, to accommodate jobs which did not at present exist and which might not fit naturally into the proposed classification.

154. Considerable importance was attached to ensuring that the classification properly reflected the role and work of women. A significant use would be to monitor the growing importance and range of jobs carried out by women.

155. The Conference welcomed the continuing work to be carried out by the Office in preparing a manual on the use of the revised classification and in support of the activities of member States in developing their own classifications of occupations.

156. Finally, throughout the discussion, many delegates had prefaced their comments with an appreciation of the work done by the Office in preparing the documents for the Conference. All were aware of the difficult task the Office had faced in drawing up a revised ISCO, and they recognised the quality of the achievement in balancing the many and often competing priorities.

157. The Office was asked to incorporate the views expressed by the Conference into a revised proposal for its approval at a later session. It was left to the Office to accommodate the proposals, taking into account the structure and nomenclature of the Classification as a whole.

158. The Conference resumed its discussion of this topic by considering a Resolution submitted by the delegate of Australia. The purpose was to instruct the Bureau of Statistics, after appropriate consultations, to ensure that the terminology used in ISCO was accurate and to adopt a suitable coding system before ISCO was submitted to the ILO Governing Body for approval and subsequent promulgation. The resolution was adopted by the Conference and is presented as Resolution VI in Appendix I of this report.

159. The representative of the Secretary-General presented document D.8 entitled "Revision of the International Standard Classification of Occupations" (Revised Annex to draft Resolution). This revised version had been prepared on the basis of the discussion in earlier plenary sessions, summarised above. Another document D.8 Suppl. contained explanatory notes outlining the structural changes that had been made and various comments which had been received subsequently. The Conference then examined the proposed changes within each major group.

160. The Conference approved revised major groups \*1, \*4, \*6, \*8 and \*0, having noted that its proposals had been correctly reflected. Major groups \*2, \*3, \*5, \*7 and \*9 were approved subject to certain amendments.

161. At its next session, the representative of the Secretary-General presented revised proposals for the classification of teachers, nurses and social workers, which reflected the views expressed in earlier discussions. These were approved by the Conference. A further proposal to split minor group \*9.3.2 (Manufacturing and transport labourers) into two minor groups was also approved.

162. The Conference next addressed itself to the text of the draft Resolution concerning Revision of the International Standard Classification of Occupations. Three amendments were submitted aimed at: (i) emphasising the fact that ISCO classified previous and prospective jobs as well as present jobs; (ii) specifying some of the uses of a classification of occupations; and (iii) providing further clarification on the process by which the relationship between ISCO and national classifications might be established. Subject to these amendments, the draft resolution was approved. It is presented as Resolution III in Appendix I of this report.

163. The Conference also considered and adopted a resolution submitted by the delegates of France and Argentina, which described the type of activities the ILO Bureau of Statistics should undertake in order to ensure the successful application of the revised ISCO, particularly for the purpose of international comparisons. It also made a plea for the necessary financial support to be provided in order that these activities might be carried out. The text is given in Resolution VII in Appendix I of this report.

APPENDIX I

RESOLUTION I

Resolution concerning consumer price indices

Preamble

The Fourteenth International Conference of Labour Statisticians,

Having been convened at Geneva by the Governing Body of the ILO and having met from 28 October to 6 November 1987,

Recalling the existing international standards concerning cost-of-living index numbers contained in the resolutions adopted by the Second and Sixth Conferences in 1925 and 1947 respectively, and those concerning special problems in the computation of consumer price index numbers contained in the resolution adopted by the Tenth International Conference of Labour Statisticians in 1962;

Recognising the need to revise and broaden the existing standards in order to enhance their usefulness in the provision of technical guidelines to all countries and particularly those with less developed statistics;

Recognising the usefulness of such standards in enhancing the international comparability of the statistics;

Recognising that consumer price indices are essential to assessments of social conditions and of economic performance and potential; and

Recognising, therefore, that such indices need to be credible to observers and users, both national and international,

Agrees that the principles and methods used in constructing a consumer price index should be selected, with consideration of the chosen objectives, from among the guidelines and standards which are generally accepted as constituting good statistical practice, and

Adopts, this fifth day of November 1987, the following resolution which replaces those adopted in 1925, 1947 and 1962.

Terminology

1. For the purposes of this resolution, the following terms are defined:
  - (a) "Outlet" indicates a shop, market, service establishment, or other place, where goods and/or services are sold or provided to consumers for non-business use.
  - (b) "Consumption" indicates all goods and services (or "items") that are acquired, used or paid for, but not for business purposes and not for the accumulation of wealth.

- (c) "Region" indicates any geographically defined area and/or type of area within a country.
- (d) "Scope of the index" indicates the population groups, regions, items and outlets for which the index is established.
- (e) "Reference population" indicates the population that falls within the scope of the index.
- (f) "Elementary aggregate" indicates the most detailed level for which expenditure or quantity weights are held constant for a certain period of time.
- (g) Consumption expenditure can be measured in terms of "Acquisition, "Use" or "Payment":
  - (i) "Acquisition" indicates that the total value of all goods and services delivered during a given period, irrespective of whether they were wholly paid for or not during the period, should be taken into account;
  - (ii) "Use" indicates that the total value of all goods and services actually consumed during a given period should be taken into account; and
  - (iii) "Payment" indicates that the total payments made for goods and services during a given period, without regard to whether they were delivered or not, should be taken into account.

#### The nature of a consumer price index

2. The purpose of a consumer price index is to measure changes over time in the general level of prices of goods and services that a reference population acquire, use or pay for for consumption. A consumer price index is estimated as a series of summary measures of the period-to-period proportional change in the prices of a fixed set of consumer goods and services of constant quantity and characteristics, acquired, used or paid for by the reference population. Each summary measure is constructed as a weighted average of a large number of elementary aggregate indices. Each of the elementary aggregate indices is estimated using a sample of prices for a defined set of goods and services obtained in, or by residents of, a specific region from a given set of outlets or other sources of consumption goods and services.

#### The uses of a consumer price index

3. The uses of a consumer price index and their relative importance vary from country to country. They include:

- (a) general economic and social analysis and policy determination;
- (b) negotiation or indexation, or both, by government (notably of taxes, social security benefits, civil service remuneration and pensions, licence fees, fines and public debt interest or principal) and in private

contracts (e.g. wages, salaries, insurance premia and service charges) and in judicial decisions (e.g. alimony payments);

- (c) establishing "real" changes, or the relationship between money and the goods or services for which it can be exchanged (e.g. for the deflation of current value aggregates in the national accounts and of retail sales); and
- (d) price movement comparisons done for business purposes, including inflation accounting.

Sub-indices rather than the all-items index may be suitable for some of the above uses.

#### Scope of the index

4. The reference population should normally be defined very widely, specifying those income groups and household or family types that are excluded.

5. The regional scope should normally be defined as widely as possible, noting any exclusions. It should also be specified whether any regional limitation or breakdown of consumption expenditure and of price collection relates to sales in a region, or to purchases by residents of a region.

6. Separate indices may be computed for different population groups or for different regions.

7. The extent to which expenditure abroad is included should be clearly indicated.

8. Ideally, the consumer price index should relate to all goods and services (including imports) acquired, used or paid for by the reference population for non-business purposes, without any omission of tobacco or other things which may be regarded as non-essential or undesirable. The range of goods and services included may, but need not, coincide with consumption expenditure as defined in a national accounts framework. Income taxes, savings, life insurance and pension fund contributions, and financial investments (as distinct from financial services) should not be included in the consumer price index.

9. If second-hand purchases are represented in the index, then the weights for second-hand goods should be calculated net of the corresponding sales including trade-ins.

10. In some cases, such as insurance, health care, second-hand goods, etc.; it may not be possible to use the same methodology as in the general index. Groups of goods or services which fall within the scope of the index but which cannot be dealt with according to the general methodology, either because this methodology cannot be applied correctly for these items or because the necessary information is insufficient or lacking, may be included in or excluded from the calculations:

- (a) in the case of their inclusion, special methods will need to be used;
- (b) in the case of their exclusion:

- the group may be explicitly represented by another group to which the weights of the excluded items are allocated;
- the group may be purely and simply excluded from the index (price collection and weights) which assumes that its price movement is represented by the movement of the overall index.

In all the above cases, users should be informed as to the method followed.

11. The goods and services or household expenditures should follow a classification which is dependent upon the objectives of the index, previous practices, the methods of data collection, as well as upon the nature and quality of data available for the computation of weights. Nevertheless, it is desirable that this classification permit aggregation according to the eight major groups of the United Nations System of National Accounts (SNA): "Food, beverages and tobacco", "Clothing and footwear", "Gross rent, fuel and power", "Furniture, furnishings, and household equipment and operation", "Medical care and health expenses", "Transport and communication", "Recreation, entertainment, education and cultural services" and "Miscellaneous goods and services". If need be, a ninth group might be created, covering items which are not included in the household final consumption expenditure of the SNA.

#### Acquisition, Use or Payment

12. Having decided the scope of the index in terms of the reference population and the goods and services to be included, it should be explicitly considered whether the objectives of the index are best satisfied by adopting the concepts of Acquisition, Use or Payment. These issues should be examined, taking into account the theoretical index concept, acceptability to users, availability of data, and resource requirements. These issues particularly arise in dealing with own-account consumption, owner-occupied housing, consumer credit, durable goods, remuneration in kind and goods and services which are provided without charge or are subsidised by government.

13. The concepts of Acquisition or Payment may be chosen if the index is defined in terms of money flows. Adherence to the conventions of national accounting may be desired if the deflation of consumer expenditure as defined in the national accounts is one of the major uses to which the index is put. When the design of the index is founded upon the consistent application of consumer demand theory, the concept of Use may be appropriate. This concept implies estimating the rental value of owner-occupied housing if the data permit such estimates to be made reliably. Alternatively, it would imply the explicit inclusion of all owner-occupied housing costs.

#### Defining elementary aggregates

14. In defining elementary aggregates (in terms of kinds of goods or services, types of outlets and regions), the following principles should be observed:

- (a) related goods or services which are thought to display similar price movements should be grouped together in an elementary aggregate;

- (b) goods or services whose prices might reasonably be expected to move markedly differently should not be grouped together in the same elementary aggregate;
- (c) elementary aggregates should be distinguished whenever weights (including regional or outlet weights) are available or can be estimated;
- (d) such regional or outlet weights should be used in calculating the index even when separate regional or outlet-type sub-indices are not required;
- (e) elementary aggregates should be described so that any good or service can be unambiguously assigned to the appropriate elementary aggregate.

15. In the calculation of elementary aggregate indices, consideration should be given to the possible use of geometric means.

#### Weighting

16. Weights are the relative expenditure or consumption shares of the elementary aggregates estimated from available data.

17. In deriving the weights of the elementary aggregates, a household expenditure survey is usually the main source of data. As far as resources permit, such surveys should be representative of household size, income level, regional location, socio-economic group and any other factors which may have a bearing on household expenditure patterns. The period of the survey should be a normal one (or temporary abnormalities should be adjusted in determining the weighting pattern) and should preferably cover a whole year if seasonal variations in expenditure patterns are important. When inflation during the period has been rapid and/or has differed significantly between expenditure groups, either expenditure for the different sub-periods should be valued at the prices of a common time sub-period or the expenditure proportions of the different sub-periods should be averaged over the period, in the absence of any superior method.

18. Surveys of sales in retail outlets and household surveys on point-of-purchase can provide valuable information concerning the breakdown of consumption by outlet-type and by region. In the absence of such surveys, it is sometimes preferable for statisticians to use their personal knowledge of the markets and their nature rather than to apply equal weights to the different outlets or types of outlets and/or to different regions.

19. In countries which have reliable information concerning components of the household final consumption expenditure of the national accounts, such information can sometimes be used to derive an initial aggregate weighting pattern. In centrally planned economies in particular, retail sales data may be a major source of weights. More detailed data from household expenditure surveys can be used to break down the aggregates or to adjust the figures to relate more closely to the reference population.

20. In countries where data from household expenditure surveys are not available and where the data on the components of the household final consumption expenditure of the national accounts are inadequate, data from various surveys such as of production, export and import and retail trade, and from administrative sources may have to be used to obtain an estimated consumption pattern.



21. Before any of the survey results are used to provide weights for the index, it is necessary to examine them carefully, e.g. in the light of the sampling and non-sampling errors, in order to judge whether the survey has provided reliable and representative information. Adjustments should be made, if necessary, using other available statistics.

22. Analysis of the data to show the expenditure patterns for different regions and categories of the population is useful, both to assist in revealing those categories for which the computation of separate consumer price indices may be warranted and for establishing the elementary aggregates and their weights.

23. The weights should be examined periodically, and particularly if economic circumstances have changed significantly, to ascertain whether they still reflect current expenditure or consumption patterns. The weights should be revised or adjusted if the review shows that this is not the case. In any case, they should be revised at least once every ten years.

24. Whenever the composition and/or weighting pattern of the index is changed, the new index should be linked to the old index to provide a continuous series of index numbers.

#### Sampling for price collection

25. Sampling of goods and services and of outlets is necessary to decide what prices should be collected and where they should be collected for each elementary aggregate (except in cases of centrally determined and uniform prices). Sample selection methods and sizes should be adequate to provide the accuracy required for the objectives of the index.

26. Efforts should be made to ensure that samples of cities, urban areas or regions, of dwelling units, of sales outlets, and of items and varieties priced are as representative as possible. Probability sampling, although involving difficult practical problems, will normally enhance the accuracy of the index and, moreover, will make possible an estimate of the sampling error.

27. Probability sampling gives every price within the scope of the index an opportunity for selection. Each price need not have an equal probability of selection. Indeed, efficient designs use probabilities that are proportional to variables that affect the precision of the estimates.

28. Implementation of probability sampling may be a gradual process. Where one begins will vary depending on the nature of the economic structure and the availability of data. Probability sampling might begin with geographic areas, or with detailed items within larger groups, or with outlets. Each stage of probability sampling makes some contribution to the quality of the indices.

29. If sufficient information or resources do not exist for constructing a probability sample which will give a good measure of price change, then the statistician should apply the best judgement and available data to select a representative sample of geographical areas, outlets, items and varieties. If, for example, resources are inadequate to establish a representative sample for the country as a whole, it might be appropriate to decide, in principle and a priori (that is, outside any random sampling), that certain regions, towns or urban areas where the collection of prices is less expensive represent larger groups of regions, towns or urban areas.

30. The samples of outlets and of goods and services and the specifications used for pricing should be reviewed periodically, and they should be updated if this is necessary to maintain their representativeness.

31. Particular attention should be paid to the way in which pricing is distributed in time. Price observations of the same item at the same outlet should, especially in the case of wide price variations, be made at regular intervals of, for example, about one month or three months, depending upon the frequency of the index compilation. Account should be taken of the fact that, when the index collection period is organised on the basis of weeks, there may be time discrepancies since a month or quarter is not composed of an exact number of weeks.

32. In the case of perishable goods, attention should also be paid to the time of day which is selected for price collection.

33. Rents should be obtained from a specially designed survey relating to a sample of dwellings which is periodically updated to ensure continuing representativeness and, particularly, that newly constructed units are brought into the sample.

#### The price data

34. The quality of the price data is the crucial determinant of the reliability of the index. Hence, great care should be taken to ensure that the prices obtained are actual transaction prices and are collected systematically at regular intervals. Standard methods for collecting and processing price data should be developed. Where centrally regulated or centrally fixed prices are collected centrally, checks should be made to ascertain whether the goods and services in question are indeed sold and whether these prices are in fact observed. Where prices are not displayed, where quantity units are poorly defined or where actual purchase prices may deviate from list or fixed prices, check purchases by the price collectors are advisable and a budget should be provided for these purchases. Where prices are subject to significant fluctuations over the month or quarter, it is desirable to collect them more than once during the month or quarter.

35. Consistent procedures should be established for dealing with missing price observations whatever the cause, including: seasonally unavailable, unable to contact, non-response, rejected observation, temporarily out of stock. Price collectors should be well trained and well supervised, and should be provided with a good manual explaining all the procedures they have to follow. The price data sent in by the price collectors should be reviewed and edited for comparability, substitutions, unusual or simply large price changes and for price conversions of goods priced in multiple units or varying quantities, where the units or quantities do not form part of the specification. There should be procedures, such as repricing in the same outlets, for checking the reliability of the price data.

36. The specifications used for pricing, including the final selection of the particular variety and size by the price collector, where relevant, serve the purpose of securing comparability between successive periods and assisting selection and evaluation of substitutes. The specifications should be precise enough to identify all the characteristics that are necessary to ensure that identical goods and services are priced in successive periods in the same outlet. It should be noted that the relevant characteristics of the

goods or services should include, for example, terms of payment, conditions of delivery, guarantees and type of outlet.

37. Substitutions will be necessary when priced items disappear permanently from the outlet(s) in which they are priced. An item which is no longer available in sufficient quantities or under normal sale conditions may also be considered to be unavailable. Clear and precise rules should be developed for identifying the substitute item. Precise procedures should be laid down for price adjustment with respect to the difference in characteristics when substitutions are necessary. Responsibility for such evaluation should be clearly established. Evaluations of the difference in characteristics and decisions on how to use substitute prices in the index should, to the extent possible, be based on solid, empirical evidence of the market valuation of the difference in characteristics between the original and the substitute items. A number of techniques and data sources may be used to approximate this market valuation. In the absence of a satisfactory estimate of the specific adjustment for the difference in characteristics, a choice must be made between an assumption of no change and an assumption that the price difference is simply and wholly a reflection of the difference in characteristics. Under the former assumption, the price for the substitute should be compared directly with that of the item for which it is substituted; this assumption can be made only when the items are fairly similar. Where the whole price difference is taken as a reflection of the difference in characteristics, the index should be constructed by linking the series for the substitute to that of the item for which it is substituted.

38. Substitutions made because of a decline in representativeness or disappearance of an item from an outlet might possibly require that another outlet be chosen. This might also be necessary when an outlet disappears. In these cases, rules should be established to ensure that the price collector makes a correct choice with respect to a new outlet, and that the adjustments are made, if need be, to take account of the change in outlet or the change in the nature of the outlet. The rules should be consistent with the objectives of the index and with the way in which the price collection sample has been determined.

39. Substitutions will also be necessary if all items in an elementary aggregate disappear from most or all outlets. In such cases, if a substitute item representing the elementary aggregate cannot be found and appropriate adjustments for the difference in characteristics made, it may be necessary to redistribute the weight assigned to the elementary aggregate among other elementary aggregates within the next highest level of aggregation possible.

40. The prices to be collected are the regular actual transaction prices, including indirect taxes, paid by the reference population. Prices charged for stale, shop-soiled, damaged, or otherwise imperfect goods sold at clearance prices should be excluded unless they are a permanent and widespread feature of market conditions. However, sale prices, discounts, cut prices and special offers should be included when applicable to all customers and when the goods and services are offered in their normal availability.

41. Prices should be collected in all types of markets which are important. These may include open-markets and black-markets as well as state-controlled markets. Where more than one type of market is important, an appropriately weighted average should be used in the calculation of the index.

42. In periods of price control or rationing, where limited supplies are available at prices which are held low by subsidies to the sellers, by government procurement, by price control, etc., these prices as well as those charged on unrestricted markets should be collected. They should be combined

in a way which uses the best information available with respect to the actual prices paid and the relative importance of the different types of sales.

43. Countries may wish to calculate, from the data collected for their consumer price index, average prices for selected reasonably homogeneous goods or services. However, their dissemination should be accompanied by an indication of the limitations of these calculations. Countries may also wish to establish efforts to collect separate data to support average price calculations, given considerable user interest in these data.

#### Dissemination

44. A consumer price index should be computed and publicly released as quickly as possible according to the resources available and to the user needs, preferably at least once every three months. Rules relating to the release of the data should be established, publicly known and strictly observed.

45. In general, retrospective corrections (e.g. as a result of an error in the data or in calculation) of the publicly released indices should only be done when absolutely necessary because of the difficulties such corrections cause for indexed contracts or payments. Instead, necessary corrections might be made to the index for the subsequent period. An explanation should be provided in order to avoid misinterpretation of the short-term price movement.

46. Sub-indices should also be released, at least for such major expenditure groups as food, clothing and footwear, housing, etc. Sub-indices for different regions or socio-economic groups or for special analytical purposes (e.g. travellers' expenses, imported items) might be publicly released if they were judged to be useful and the cost warranted it. Average prices or price ranges for important and reasonably homogeneous items may be released.

47. The exclusion of shelter from the all-items index makes the rates of price change more comparable across countries, although it does not eliminate all the difficulties encountered when making such comparisons. Countries should, therefore, provide for dissemination at the international level of an index which excludes shelter, in addition to the all-items index.

48. In order to ensure public confidence in the index, a full description of the methodology and data sources should be published. The document(s) should include, among other things, details of the weights, objectives of the index, and a discussion of the precision of the index. However, the precise identities of the outlets and goods and services for which prices are obtained and any other details which, if disclosed, would adversely affect the representativeness of the index should, in general, not be revealed.

49. The agency responsible for the index should consult with representatives of users on major issues. One way of organising such consultation is through the establishment of advisory committee(s) on which users and outside experts might be represented.

## RESOLUTION II

### Interim resolution concerning statistics of strikes and lock-outs

#### Preamble

The Fourteenth International Conference of Labour Statisticians,

Having been convened by the Governing Body of the International Labour Office and having met in Geneva from 28 October to 6 November 1987,

Recalling the existing international standards contained in the Resolution concerning statistics of industrial disputes adopted by the Third International Conference of Labour Statisticians (October 1926),

Recalling the requirements of the Labour Statistics Convention, 1985 (No. 160) and the Labour Statistics Recommendation, 1985 (No.170),

Recognising the need to revise the existing standards on statistics of industrial disputes in order to provide guide-lines for the production of more comparable and better national and international statistics of strikes and lock-outs,

Intending to revert to this subject at the Fifteenth International Conference of Labour Statisticians,

Adopts, this fifth day of November 1987, the following interim resolution to replace the resolution adopted in this field by the Third International Conference of Labour Statisticians:

#### General

1. Each country should, where relevant, regularly collect, compile and publish statistics of strikes and lock-outs at least once a year.
2. Detailed descriptions of the sources, concepts, definitions, scope, coverage and methodology used in compiling statistics of strikes and lock-outs should be produced and published.

#### Terminology

3. For the purposes of this resolution, a strike is a temporary work stoppage wilfully effected by a group of workers with a view to enforcing or resisting a demand or expressing a grievance. Strikes occurring at different times and/or at different establishments but due to the same case of dispute are regarded as one strike, if they have not been interrupted for more than a defined period of time.

4. For the purposes of this resolution, a lock-out is a temporary work stoppage wilfully effected by one or more employers with a view to enforcing or resisting a demand or expressing a grievance. Lock-outs occurring at different times and/or different establishments but due to the same case of dispute are regarded as one lock-out, if they have not been interrupted for more than a defined period of time.

5. For the remainder of this resolution, the statistical measurement, classification and indicators concerning strikes should also apply, where relevant, to lock-outs.

#### Measurement

6. Statistics of strikes should be established in such a way as to cover the whole country and, if possible, all branches of economic activity.

7. Statistics of strikes should relate to strikes beginning in the period under review and also, but separately, to those continuing from the previous period. The total of these two groups represents the number of strikes in existence during the period under review.

8. Statistics of strikes should be compiled for a reference period of not more than one year.

9. The importance of a strike should be measured by ascertaining the number of workers involved, the duration of the strike and the aggregate work-days or work-hours not worked on account of the strike during the reference period. Where possible, the number of establishments involved should also be measured.

10. The number of establishments involved should be based on the definition of an establishment as given in the most recent version of the United Nations International Standard Industrial Classification of All Economic Activities (ISIC).

#### Classification

11. Data on strikes should be cross-classified according to the major branches of economic activity (as far as possible according to ISIC), the number of workers involved and the aggregate number of work-days or work-hours not worked. Statistics of strikes may also be classified according to cause, as follows:

- (a) Strikes resulting from a dispute between workers and employers relating to:
  - (i) problems in connection with wages, bonuses and compensation;
  - (ii) problems in connection with conditions of work (hours of work, work organisation, etc.);
  - (iii) employment problems (redundancies, closure, reclassification of staff, etc.);

- (iv) other problems;
- (b) Other strikes.

#### Indicators

12. The following indicators may be useful for analysing or comparing statistics of strikes:

- (a) number of strikes;
- (b) number of workers involved;
- (c) number of work-days or work-hours not worked;
- (d) number of establishments involved;
- (e) number of work-days or work-hours not worked per 100 workers in all sectors covered by the strike statistics;
- (f) number of work-days or work-hours not worked per 100 workers by sector;
- (g) number of workers involved per 100 workers in the establishments involved.

### RESOLUTION III

#### Resolution concerning the revision of the International Standard Classification of Occupations

The Fourteenth International Conference of Labour Statisticians,

Having been convened at Geneva by the Governing Body of the ILO and having met from 28 October to 6 November 1987;

Recalling the recommendation of the Eleventh International Conference of Labour Statisticians endorsing the revised International Standard Classification of Occupations, 1968 (ISCO-68); and

Recalling the recommendation of the Thirteenth International Conference of Labour Statisticians concerning the revision of ISCO-68;

Adopts, this sixth day of November 1987, the following Resolution, which replaces that adopted in 1966:

1. The occupational classification system of major, sub-major, minor and unit groups shown in the Annex to this Resolution is endorsed by the Conference and is designated the International Standard Classification of Occupations, 1988 (ISCO-88).

2. ISCO classifies jobs past, present or future. It classifies persons through their actual and potential relation with jobs. Jobs are classified with respect to the type of work performed or to be performed. The basic criteria used to define the system of major, sub-major, minor and unit groups are the "skill" level and "skill specialisation" required to carry out the tasks and duties of the occupations, with separate major groups for "Legislators, senior officials and managers" and for "Armed Forces".

3. In collecting and processing statistics classified by occupation (e.g. for use in fields such as labour market analysis; education planning; manpower planning; occupational health analysis; wages analysis, etc.), each country should ensure the possibility of conversion into the ISCO-88 system, to facilitate international use of occupational information.

4. Countries should make available to and discuss with the ILO information about how the groups, aggregates thereof or subdivisions thereof defined in the classification (or classifications) used for national purposes can best be related to the major, sub-major, minor and unit groups of ISCO-88.

5. The Conference notes that the Bureau of Statistics has provided:

- (a) draft definitions of the major, sub-major, minor and unit groups;
- (b) definitions and descriptions of certain occupational categories which are used in its October Inquiry.<sup>1</sup>

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<sup>1</sup> See ILO October Inquiry on occupational wages and hours of work and on retail food prices. Annex to Questionnaire on wages and hours of work. Descriptions of the occupations.



6. The Conference notes that the Bureau of Statistics will provide:

- (a) guide-lines on how to collect and process occupational information in statistical censuses and surveys, and in administrative records, to ensure high and uniform quality of occupational statistics;
  - (b) a Manual on how to develop and use national occupational classifications and dictionaries.
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MAJOR, SUB-MAJOR, MINOR AND UNIT GROUPS

MAJOR GROUP 1  
LEGISLATORS, SENIOR OFFICIALS AND MANAGERS

SUB-MAJOR GROUPS

- 11 Legislators and senior officials
- 12 Corporate managers<sup>1</sup>
- 13 General managers<sup>2</sup>

SUB-MAJOR AND MINOR GROUPS

- 11 Legislators and senior officials
  - 111 Legislators
  - 112 Senior government officials
  - 113 Traditional chiefs and heads of villages
  - 114 Senior officials of special-interest organisations
- 12 Corporate managers<sup>1</sup>
  - 121 Directors and chief executives
  - 122 Specialised managers
- 13 General managers<sup>2</sup>
  - 131 General managers

SUB-MAJOR, MINOR AND UNIT GROUPS

- 11 Legislators and senior officials
  - 111 Legislators
    - 1110 Legislators

- 112 Senior government officials
  - 1120 Senior government officials
- 113 Traditional chiefs and heads of villages
  - 1130 Traditional chiefs and heads of villages
- 114 Senior officials of special-interest organisations
  - 1141 Senior officials of political party organisations
  - 1142 Senior officials of employers', workers' and other economic-interest organisations
  - 1143 Senior officials of humanitarian and other special-interest organisations
- 12 Corporate managers
  - 121 Directors and chief executives
    - 1210 Directors and chief executives
  - 122 Specialised managers
    - 1221 Production and operations managers
    - 1222 Finance and administration managers
    - 1223 Personnel and industrial relations managers
    - 1224 Sales and marketing managers
    - 1225 Advertising and public relations managers
    - 1226 Supply and distribution managers
    - 1227 Computing services managers
    - 1228 Research and development managers
    - 1229 Other specialised managers
- 13 General managers<sup>2</sup>
  - 131 General managers
    - 1311 General managers in agriculture
    - 1312 General managers in manufacturing
    - 1313 General managers in construction
    - 1314 General managers in retail and wholesale trade
    - 1315 General managers of restaurants and hotels
    - 1316 General managers in transportation

- 1317 General managers of business services firms
- 1318 General managers in personal care, cleaning, repairs and related services
- 1319 Other general managers

Notes:

<sup>1</sup> This group is intended to include persons who - as directors, chief executives or specialised managers - manage enterprises requiring a total of three or more managers.

<sup>2</sup> This group is intended to include persons who manage enterprises on their own behalf, or on behalf of the proprietor, with the assistance of no more than one other manager and/or some non-managerial help.

MAJOR GROUP 2  
PROFESSIONALS

SUB-MAJOR GROUPS

- 21 Physical, mathematical and engineering science professionals
- 22 Life science and health professionals
- 23 Teaching professionals
- 24 Other professionals

SUB-MAJOR AND MINOR GROUPS

- 21 Physical, mathematical and engineering science professionals
  - 211 Physicists, chemists and related professionals
  - 212 Mathematicians, statisticians and related professionals
  - 213 Computing professionals
  - 214 Architects, engineers and related professionals
- 22 Life science and health professionals
  - 221 Life science professionals
  - 222 Health professionals (except nursing)
  - 223 Nursing and midwifery professionals
- 23 Teaching professionals
  - 231 College, university and higher education teaching professionals
  - 232 Secondary education teaching professionals
  - 233 Primary and pre-primary education teaching professionals
  - 234 Special education teaching professionals
  - 235 Other teaching professionals
- 24 Other professionals
  - 241 Business professionals
  - 242 Legal professionals

- 243 Archivists, librarians and related information professionals
- 244 Social and related science professionals
- 245 Writers and creative and performing artists
- 246 Religion professionals

SUB-MAJOR, MINOR AND UNIT GROUPS

- 21 Physical, mathematical and engineering science professionals
  - 211 Physicists, chemists and related professionals
    - 2111 Physicists and astronomers
    - 2112 Meteorologists
    - 2113 Chemists
    - 2114 Geologists and geophysicists
  - 212 Mathematicians, statisticians and related professionals
    - 2121 Mathematicians and related professionals
    - 2122 Statisticians
  - 213 Computing professionals
    - 2131 System designers and analysts
    - 2132 Computer programmers
    - 2139 Other computing professionals
  - 214 Architects, engineers and related professionals
    - 2141 Architects, town and traffic planners
    - 2142 Civil engineers
    - 2143 Electrical engineers
    - 2144 Electronic and telecommunications engineers
    - 2145 Mechanical engineers
    - 2146 Chemical engineers
    - 2147 Mining engineers, metallurgists and related professionals
    - 2148 Cartographers and surveyors
    - 2149 Other architects, engineers and related professionals

- 22 Life science and health professionals
  - 221 Life science professionals
    - 2211 Biologists, botanists, zoologists and related professionals
    - 2212 Bacteriologists, pharmacologists and related professionals
    - 2213 Agronomists and related professionals
  - 222 Health professionals (except nursing)
    - 2221 Medical doctors
    - 2222 Dentists
    - 2223 Veterinarians
    - 2224 Pharmacists
    - 2229 Other health professionals (except nursing)
  - 223 Nursing and midwifery professionals
    - 2230 Nursing and midwifery professionals
- 23 Teaching professionals
  - 231 College, university and higher education teaching professionals
    - 2310 College, university and higher education teaching professionals
  - 232 Secondary education teaching professionals
    - 2320 Secondary education teaching professionals
  - 233 Primary and pre-primary education teaching professionals
    - 2331 Primary education teaching professionals
    - 2332 Pre-primary education teaching professionals
  - 234 Special education teaching professionals
    - 2340 Special education teaching professionals
  - 235 Other teaching professionals
    - 2351 Education methods specialists
    - 2352 School inspectors
    - 2359 Other teaching professionals not elsewhere classified

- 24 Other professionals
  - 241 Business professionals
    - 2411 Accountants
    - 2412 Personnel and careers professionals
    - 2419 Other business professionals
  - 242 Legal professionals
    - 2421 Lawyers
    - 2422 Judges
    - 2429 Other legal professionals
  - 243 Archivists, librarians and related information professionals
    - 2431 Archivists and curators
    - 2432 Librarians and related information professionals
  - 244 Social and related science professionals
    - 2441 Economists
    - 2442 Sociologists, anthropologists and related professionals
    - 2443 Historians and political scientists
    - 2444 Philologists, translators and interpreters
    - 2445 Psychologists
    - 2446 Social work professionals
  - 245 Writers and creative and performing artists
    - 2451 Authors, journalists and other writers
    - 2452 Sculptors, painters and related artists
    - 2453 Composers, musicians and singers
    - 2454 Choreographers and dancers
    - 2455 Film, stage and related actors and directors
  - 246 Religion professionals
    - 2460 Religion professionals



MAJOR GROUP 3  
TECHNICIANS AND ASSOCIATE PROFESSIONALS

SUB-MAJOR GROUPS

- 31 Physical science and engineering associate professionals
- 32 Life science and health associate professionals
- 33 Teaching associate professionals
- 34 Other associate professionals

SUB-MAJOR AND MINOR GROUPS

- 31 Physical science and engineering associate professionals
  - 311 Physical science and engineering technicians
  - 312 Computer assistants and computer equipment controllers
  - 313 Optical and electronic equipment controllers
  - 314 Ship and aircraft controllers and technicians
  - 315 Building, safety, health and quality inspectors
- 32 Life science and health associate professionals
  - 321 Life sciences technicians and related workers
  - 322 Modern health associate professionals (except nursing)
  - 323 Nursing and midwifery associate professionals
  - 324 Traditional medicine practitioners and faith healers
- 33 Teaching associate professionals
  - 331 Primary education teaching associate professionals
  - 332 Pre-primary education teaching associate professionals
  - 333 Special education teaching associate professionals
  - 334 Other teaching associate professionals
- 34 Other associate professionals
  - 341 Finance and sales associate professionals

- 342 Business services agents and trade brokers
- 343 Administrative associate professionals
- 344 Government associate professionals
- 345 Social work associate professionals
- 346 Artistic, entertainment and sports associate professionals
- 347 Non-ordained religion associate professionals

SUB-MAJOR, MINOR AND UNIT GROUPS

- 31 Physical science and engineering associate professionals
  - 311 Physical science and engineering technicians
    - 3111 Chemical and physical science technicians
    - 3112 Civil engineering technicians
    - 3113 Electrical engineering technicians
    - 3114 Electronics and telecommunications engineering technicians
    - 3115 Mechanical engineering technicians
    - 3116 Chemical engineering technicians
    - 3117 Mining and metallurgical technicians
    - 3118 Technical draughters
    - 3119 Other physical science and engineering technicians
  - 312 Computer assistants and computer equipment controllers
    - 3121 Computer assistants
    - 3122 Computer equipment controllers
    - 3123 Industrial robot controllers
  - 313 Optical and electronic equipment controllers
    - 3131 Photographers and image and sound recording equipment controllers
    - 3132 Broadcasting and telecommunications equipment controllers
    - 3133 Medical equipment controllers
    - 3139 Other optical and electronic equipment controllers not elsewhere classified

- 314 Ship and aircraft controllers and technicians
  - 3141 Ships' engineers
  - 3142 Ships' deck officers and pilots
  - 3143 Aircraft pilots and related workers
  - 3144 Air traffic controllers
  - 3145 Air traffic safety technicians
- 315 Building, safety, health and quality inspectors
  - 3151 Building and fire inspectors
  - 3152 Safety, health and quality inspectors (vehicles, processes and products)
- 32 Life science and health associate professionals
  - 321 Life science technicians and related workers
    - 3211 Life science technicians
    - 3212 Agronomy and forestry technicians
    - 3213 Farming and forestry advisers
  - 322 Modern health associate professionals (except nursing)
    - 3221 Medical assistants
    - 3222 Sanitarians
    - 3223 Dieticians and nutritionists
    - 3224 Optometrists and opticians
    - 3225 Dental assistants
    - 3226 Physiotherapists and related workers
    - 3227 Veterinary assistants
    - 3228 Pharmaceutical assistants
    - 3229 Other modern health associate professionals (except nursing)
  - 323 Nursing and midwifery associate professionals
    - 3231 Nursing associate professionals
    - 3232 Midwifery associate professionals

- 324 Traditional medicine practitioners and faith healers
  - 3241 Traditional medicine practitioners
  - 3242 Faith healers
  
- 33 Teaching associate professionals
  - 331 Primary education teaching associate professionals
    - 3310 Primary education teaching associate professionals
  - 332 Pre-primary education teaching associate professionals
    - 3320 Pre-primary education teaching associate professionals
  - 333 Special education teaching associate professionals
    - 3330 Special education teaching associate professionals
  - 334 Other teaching associate professionals
    - 3340 Other teaching associate professionals
  
- 34 Other associate professionals
  - 341 Finance and sales associate professionals
    - 3411 Securities and finance dealers and brokers
    - 3412 Insurance representatives
    - 3413 Estate agents
    - 3414 Travel consultants and organisers
    - 3415 Technical and commercial sales representatives
    - 3416 Buyers
    - 3417 Appraisers and valuers
    - 3418 Auctioneers
    - 3419 Other finance and sales associate professionals
  - 342 Business services agents and trade brokers
    - 3421 Trade brokers
    - 3422 Clearing and forwarding agents
    - 3423 Labour contractors and employment agents
    - 3429 Other business services agents and trade brokers

- 343 Administrative associate professionals
  - 3431 Administrative and related associate professionals
  - 3432 Legal and related business associate professionals
  - 3433 Bookkeepers
  - 3434 Statistical and mathematical associate professionals
  - 3439 Other administrative associate professionals
- 344 Government associate professionals
  - 3441 Customs and border inspectors
  - 3442 Government tax and excise officials
  - 3443 Government welfare and pension officials
  - 3444 Government licensing officials
  - 3445 Commissioned police officers and detectives
  - 3449 Other government associate professionals
- 345 Social work associate professionals
  - 3450 Social work associate professionals
- 346 Artistic, entertainment and sports associate professionals
  - 3461 Decorators and commercial designers
  - 3462 Radio, television and other announcers
  - 3463 Street, nightclub and related musicians, singers and dancers
  - 3464 Clowns, magicians, acrobats and related workers
  - 3465 Athletes and related workers
- 347 Non-ordained religion associate professionals
  - 3470 Non-ordained religion associate professionals

MAJOR GROUP 4  
CLERKS

SUB-MAJOR GROUPS

- 41 Office clerks
- 42 Customer services clerks

SUB-MAJOR AND MINOR GROUPS

- 41 Office clerks
  - 411 Secretaries and keyboard operating clerks
  - 412 Numerical clerks
  - 413 Material recording and transport clerks
  - 414 Library, mail and related clerks
- 42 Customer services clerks
  - 421 Cashiers, tellers and related clerks
  - 422 Client information clerks

SUB-MAJOR, MINOR AND UNIT GROUPS

- 41 Office clerks
  - 411 Secretaries and keyboard operating clerks
    - 4111 Stenographers and typists
    - 4112 Word processing and related operators
    - 4113 Data entry operators
    - 4114 Calculating machine operators
    - 4115 Secretaries
  - 412 Numerical clerks
    - 4121 Accounting and bookkeeping clerks
    - 4122 Statistical and finance clerks

- 413 Material recording and transport clerks
  - 4131 Stock clerks
  - 4132 Production clerks
  - 4133 Transport clerks
- 414 Library, mail and related clerks
  - 4141 Library and filing clerks
  - 4142 Mail carriers and sorting clerks
  - 4143 Coding, proofreading and related clerks
  - 4144 Scribes
- 42 Customer services clerks
  - 421 Cashiers, tellers and related clerks
    - 4211 Cashiers and ticket issuers
    - 4212 Tellers and other counter clerks
    - 4213 Bet bookmakers and croupiers
    - 4214 Pawn-brokers and moneylenders
    - 4215 Bill, debt and related cash collectors
  - 422 Client information clerks
    - 4221 Travel agency clerks
    - 4222 Receptionists and information clerks
    - 4223 Telephone switchboard operators

MAJOR GROUP 5  
SERVICE WORKERS AND SHOP AND MARKET SALES WORKERS

SUB-MAJOR GROUPS

- 51 Personal and protective services workers
- 52 Salespersons, demonstrators and models

SUB-MAJOR AND MINOR GROUPS

- 51 Personal and protective services workers
  - 511 Travel attendants and guides
  - 512 Housekeeping and restaurant services workers
  - 513 Personal care workers
  - 514 Other personal services workers
  - 515 Astrologers, fortunetellers and related workers
  - 516 Protective services workers
- 52 Salespersons, demonstrators and models
  - 521 Shop salespersons and demonstrators
  - 522 Stall and market salespersons
  - 523 Fashion and other models

SUB-MAJOR, MINOR AND UNIT GROUPS

- 51 Personal and protective services workers
  - 511 Travel attendants and guides
    - 5111 Flight attendants and travel stewards
    - 5112 Transport conductors
    - 5113 Travel guides and ground hosts
  - 512 Housekeeping and restaurant services workers
    - 5121 House stewards and housekeepers
    - 5122 Cooks



- 5123 Waiters and bartenders
- 513 Personal care workers
  - 5131 Child-care workers
  - 5132 Institution-based personal care workers
  - 5133 Home-based personal care workers
  - 5139 Other personal care workers
- 514 Other personal services' workers
  - 5141 Hairdressers, barbers, beauticians and related workers
  - 5142 Companions and valets
  - 5143 Undertakers and embalmers
  - 5149 Other personal services' workers not elsewhere classified
- 515 Astrologers, fortune-tellers and related workers
  - 5151 Astrologers and related workers
  - 5152 Fortune-tellers, palmists and related workers
- 516 Protective services workers
  - 5161 Fire-fighters
  - 5162 Policemen/women
  - 5163 Prison guards
  - 5169 Protective services workers not elsewhere classified
- 52 Salespersons, demonstrators and models
  - 521 Shop salespersons and demonstrators
    - 5210 Shop salespersons and demonstrators
  - 522 Stall and market salespersons
    - 5220 Stall and market salespersons
  - 523 Fashion and other models
    - 5230 Fashion and other models

MAJOR GROUP 6  
SKILLED AGRICULTURAL AND FISHERY WORKERS

SUB-MAJOR GROUPS

- 61 Market-oriented skilled agricultural and fishery workers
- 62 Subsistence agricultural and fishery workers

SUB-MAJOR AND MINOR GROUPS

- 61 Market-oriented skilled agricultural and fishery workers
  - 611 Market gardeners and crop growers
  - 612 Market-oriented animal producers
  - 613 Market-oriented crop and animal producers
  - 614 Forestry and related workers
  - 615 Fishery workers, hunters and trappers
- 62 Subsistence agricultural and fishery workers
  - 621 Subsistence agricultural and fishery workers

SUB-MAJOR, MINOR AND UNIT GROUPS

- 61 Market-oriented skilled agricultural and fishery workers
  - 611 Market gardeners and crop growers
    - 6111 Field crop and vegetable growers
    - 6112 Tree and shrub crop growers
    - 6113 Gardeners, horticultural and nursery growers
    - 6114 Mixed crop growers
  - 612 Market-oriented animal producers
    - 6121 Dairy and livestock producers
    - 6122 Poultry producers
    - 6123 Apiarists and sericulturists
    - 6124 Mixed animal producers

- 613 Market-oriented crop and animal producers
  - 6130 Market-oriented crop and animal producers
- 614 Forestry and related workers
  - 6141 Forestry workers and loggers
  - 6142 Charcoal burners and related workers
- 615 Fishery workers, hunters and trappers
  - 6151 Aquatic life cultivation workers
  - 6152 Inland and coastal waters fishery workers
  - 6153 Deep-sea fishery workers
  - 6154 Hunters and trappers
- 62 Subsistence agricultural and fishery workers
  - 621 Subsistence agricultural and fishery workers
    - 6210 Subsistence agricultural and fishery workers

MAJOR GROUP 7  
CRAFT AND RELATED WORKERS

SUB-MAJOR GROUPS

- 71 Extraction and building trades workers
- 72 Metal and machinery trades workers
- 73 Precision, handicraft, printing and related trades workers
- 74 Other craft and related workers

SUB-MAJOR AND MINOR GROUPS

- 71 Extraction and building trades workers
  - 711 Miners and blasters, stone cutters and carvers
  - 712 Building frame and related trade workers
  - 713 Building finishers and related trades workers
  - 714 Painters, building structure cleaners and related workers
- 72 Metal and machinery trades workers
  - 721 Metal moulders, welders, sheet-metal workers, structural metal preparers, and related workers
  - 722 Blacksmiths, toolmakers and related workers
  - 723 Machinery mechanics and fitters
  - 724 Electrical and electronic instrument mechanics and fitters
- 73 Precision, handicraft, printing and related trades workers
  - 731 Precision workers in metal and related materials
  - 732 Potters, glass formers and related workers
  - 733 Handicraft workers in wood, textile, leather and related materials
  - 734 Printing and related trades workers
- 74 Other craft and related workers
  - 741 Food and related products processing trades workers
  - 742 Cabinet makers, wood treaters and related trades workers

- 743 Textile and garment trades workers
- 744 Pelt, leather and shoemaking trades workers

SUB-MAJOR, MINOR AND UNIT GROUPS

- 71 Extraction and building trades workers
  - 711 Miners and blasters, stone cutters and carvers
    - 7111 Miners and quarry workers
    - 7112 Shotfirers and blasters
    - 7113 Stone splitters, cutters and carvers
  - 712 Building frame and related trades workers
    - 7121 Builders, traditional materials
    - 7122 Bricklayers, stonemasons and tile setters
    - 7123 Concrete placers, concrete finishers and terrazzo workers
    - 7124 Carpenters and joiners
    - 7129 Other building frame and related trades workers
  - 713 Building finishers and related trades workers
    - 7131 Roofers
    - 7132 Plasterers
    - 7133 Insulators
    - 7134 Glaziers
    - 7135 Plumbers and pipe fitters
    - 7136 Building and related electricians
  - 714 Painters, building structure cleaners and related workers
    - 7141 Painters and paperhangers
    - 7142 Lacquerers and spray painters
    - 7143 Parquetry workers and floor layers
    - 7144 Building structure cleaners
- 72 Metal and machinery trades workers
  - 721 Metal moulders, welders, sheet-metal workers, structural metal preparers, and related workers

- 7211 Metal moulders and coremakers
- 7212 Welders and flame-cutters
- 7213 Sheet-metal workers
- 7214 Structural metal preparers and erectors
- 7215 Riggers and cable splicers
- 7216 Underwater workers
- 722 Blacksmiths, toolmakers and related workers
  - 7221 Blacksmiths, hammersmiths and forging-press workers
  - 7222 Toolmakers, metal pattern makers and metal markers
  - 7223 Machine-tool setter-operators
  - 7224 Metal grinders, polishers and tool sharpeners
- 723 Machinery mechanics and fitters
  - 7231 Motor vehicle mechanics and fitters
  - 7232 Aircraft engine mechanics and fitters
  - 7239 Other machinery mechanics and fitters
- 724 Electrical and electronic instrument mechanics and fitters
  - 7241 Electrical mechanics and fitters
  - 7242 Electronics fitters and servicers
  - 7243 Radio and television servicers
  - 7244 Telegraph and telephone installers
  - 7245 Electrical line installers, repairers and cable jointers
- 73 Precision, handicraft, printing and related workers
  - 731 Precision workers in metal and related materials
    - 7311 Precision instrument makers and repairers
    - 7312 Acoustical musical instrument makers and tuners
    - 7313 Jewellery and precious metal trades workers
  - 732 Potters, glass formers and related workers
    - 7321 Potters and related clay and abrasive formers
    - 7322 Glass formers, cutters, grinders and finishers
    - 7323 Glass engravers and etchers

- 7324 Glass and ceramics painters and decorators
- 733 Handicraft workers in wood, textile, leather and related materials
  - 7331 Handicraft workers in wood and related materials
  - 7332 Handicraft workers in textile, leather and related materials
- 734 Printing and related trades workers
  - 7341 Compositors and type setters
  - 7342 Stereotypers and electrotypers
  - 7343 Printing engravers and etchers
  - 7344 Bookbinders and related workers
  - 7345 Silk screen, block and textile printers
- 74 Other craft and related trades workers
  - 741 Food and related products processing trades workers
    - 7411 Meat and fish butchers and preparers
    - 7412 Bakers, pastrycooks and confectionery makers
    - 7413 Food and beverage tasters and graders
    - 7414 Tobacco preparers and tobacco products makers
  - 742 Cabinet makers, wood treaters and related trades workers
    - 7421 Wood treaters
    - 7422 Cabinet makers and related workers
    - 7423 Woodworking machine setter-operators
    - 7424 Basketry weavers, brush makers and related workers
  - 743 Textile and garment trades workers
    - 7431 Fibre preparers
    - 7432 Weavers, knitters and other hand textile products makers
    - 7433 Tailors, dressmakers and hatters
    - 7434 Fur tailors and related workers
    - 7435 Textile patternmakers and cutters
    - 7436 Sewers, embroiderers and related workers
    - 7437 Upholsterers and related workers

744 Pelt, leather and shoemaking trades workers  
7441 Pelt dressers, tanners and fellmongers  
7442 Shoemakers and related goods makers



MAJOR GROUP 8  
PLANT AND MACHINE OPERATORS AND ASSEMBLERS

SUB-MAJOR GROUPS

- 81 Industrial plant operators
- 82 Stationary machine operators and assemblers
- 83 Drivers and mobile machine operators

SUB-MAJOR AND MINOR GROUPS

- 81 Industrial plant operators
  - 811 Mining and mineral-processing plant operators
  - 812 Metal-processing plant operators
  - 813 Glass and ceramics kiln and related plant operators
  - 814 Wood-processing and papermaking plant operators
  - 815 Chemical processing plant operators
  - 816 Power-generating and related plant operators
  - 817 Automated assembly-line and industrial robot operators
- 82 Stationary machine operators and assemblers
  - 821 Metal and mineral products processing machine operators
  - 822 Chemical products machine operators
  - 823 Rubber and plastics products machine operators
  - 824 Wood products machine operators
  - 825 Printing, binding and paper products machine operators
  - 826 Textile products machine operators
  - 827 Food and related products processing machine operators
  - 828 Assemblers
  - 829 Other stationary machine operators and assemblers
- 83 Drivers and mobile machinery operators
  - 831 Railway engine drivers and related workers

- 832 Motor vehicle drivers
- 833 Agricultural, earthmoving, lifting and other mobile materials-handling equipment operators
- 834 Ships' deck crews and related workers

SUB-MAJOR, MINOR AND UNIT GROUPS

- 81 Industrial plant operators
  - 811 Mining and mineral-processing plant operators
    - 8111 Mining plant operators
    - 8112 Mineral ore and stone treating plant operators
    - 8113 Well drillers and borers and related workers
  - 812 Metal-processing plant operators
    - 8121 Ore smelting, metal converting and refining furnace operators
    - 8122 Metal melters, casters and rolling-mill operators
    - 8123 Metal heat-treating plant operators
    - 8124 Metal drawers and extruders
  - 813 Glass and ceramics kiln and related plant operators
    - 8131 Glass and ceramics kiln operators
    - 8132 Other glass and ceramics plant operators
  - 814 Wood-processing and papermaking plant operators
    - 8141 Sawmill, wood panel and related wood-processing plant operators
    - 8142 Paper pulp preparation plant operators
    - 8143 Papermaking plant operators
  - 815 Chemical processing plant operators
    - 8151 Crushing, grinding and mixing equipment operators
    - 8152 Cooking, roasting and related heat-treating plant operators
    - 8153 Filtering and separating equipment operators
    - 8154 Still and reactor operators
    - 8155 Petroleum-refining plant operators
    - 8159 Other chemical-processing plant operators

- 816 Power-generating and related plant operators
  - 8161 Power-generating plant operators
  - 8162 Steam turbine, boiler and engine operators
  - 8169 Other power-generating and related plant operators
- 817 Automated assembly-line and industrial robot operators
  - 8171 Automated assembly-line operators
  - 8172 Industrial robot operators
- 82 Stationary machine operators and assemblers
  - 821 Metal and mineral products processing machine operators
    - 8211 Machine-tool operators
    - 8212 Cement and other minerals processing machine operators
  - 822 Chemical products machine operators
    - 8221 Pharmaceutical and toiletry products machine operators
    - 8222 Ammunition and explosive products machine operators
    - 8223 Metal finishers, platers and coaters
    - 8224 Photographic products machine operators
    - 8229 Other chemical products machine operators
  - 823 Rubber and plastics products machine operators
    - 8231 Tyre making and vulcanising machine operators
    - 8239 Other rubber and plastics products machine operators
  - 824 Wood products machine operators
    - 8240 Wood products machine operators
  - 825 Printing, binding and paper products machine operators
    - 8251 Printing machine operators
    - 8252 Binding machine operators
    - 8253 Paper and paperboard products machine operators
  - 826 Textile products machine operators
    - 8261 Spinning and winding machine operators
    - 8262 Weaving and knitting machine operators
    - 8263 Sewing and embroidering machine operators

- 8264 Textile bleaching, dyeing and cleaning machine operators
- 8269 Other textile products machine operators
- 827 Food and related products processing machine operators
  - 8271 Meat and fish processing machine operators
  - 8272 Dairy products machine operators
  - 8273 Grain and spice milling machine operators
  - 8274 Baked goods producing and cereals processing machine operators
  - 8275 Fruit, vegetable and nut processing machine operators
  - 8276 Sugar processing and refining machine operators
  - 8277 Tea, coffee, cocoa and chocolate preparing and producing machine operators
  - 8278 Tobacco products processing machine operators
  - 8279 Brewers and wine and other beverage machine operators
- 828 Assemblers
  - 8281 Mechanical machinery assemblers
  - 8282 Electrical machinery assemblers
  - 8283 Electronic equipment assemblers
  - 8284 Metal, rubber and plastic products assemblers
  - 8285 Wood and related materials products assemblers
  - 8286 Paperboard, textile and related products assemblers
- 829 Other stationary machine operators and assemblers
  - 8290 Other stationary machine operators and assemblers
- 83 Drivers and mobile machinery operators
  - 831 Railway engine drivers and related workers
    - 8311 Railway engine drivers
    - 8312 Railway brakemen, signallers and shunters
  - 832 Motor vehicle drivers
    - 8321 Motorcycle drivers
    - 8322 Car, taxi and light van drivers
    - 8323 Bus and tram drivers

- 8324 Heavy truck drivers
- 833 Agricultural, earthmoving, lifting and other mobile materials-handling equipment operators
  - 8331 Motorised farm and forestry machinery operators
  - 8332 Earth-moving and related machinery operators
  - 8333 Crane, hoist and related materials-moving equipment operators
  - 8334 Lifting-truck operators
- 834 Ships' deck crews and related workers
  - 8340 Ships' deck crews and related workers

MAJOR GROUP 9  
ELEMENTARY OCCUPATIONS

SUB-MAJOR GROUPS

- 91 Sales and services elementary occupations
- 92 Agricultural, fishery and related labourers
- 93 Labourers in mining, construction, manufacturing and transport

SUB-MAJOR AND MINOR GROUPS

- 91 Sales and services elementary occupations
  - 911 Street vendors and related workers
  - 912 Shoe cleaning and other street services elementary occupations
  - 913 Domestic helpers and cleaners and related workers
  - 914 Building caretakers and window cleaners
  - 915 Messengers, watchers and security workers
  - 916 Garbage collectors and related labourers
- 92 Agricultural, fishery and related labourers
  - 921 Agricultural, fishery and related labourers
- 93 Labourers in mining, construction, manufacturing and transport
  - 931 Mining and construction labourers
  - 932 Manufacturing labourers
  - 933 Transport labourers

SUB-MAJOR, MINOR AND UNIT GROUPS

- 91 Sales and services elementary occupations
  - 911 Street vendors and related workers
    - 9111 Street food vendors
    - 9112 Street vendors, other products

- 9113 Door-to-door and telephone salespersons
- 912 Shoe cleaning and other street services elementary occupations
  - 9120 Shoe cleaning and other street services elementary occupations
- 913 Domestic helpers and cleaners and related workers
  - 9131 Domestic helpers and cleaners
  - 9132 Helpers and cleaners in offices and hotels and related workers
  - 9133 Hand launderers and pressers
- 914 Building caretakers and window cleaners
  - 9141 Building caretakers
  - 9142 Window cleaners
- 915 Messengers, watchers and security workers
  - 9151 Messengers, package and luggage porters and deliverers
  - 9152 Watchers and doorkeepers
  - 9153 Private security guards
  - 9154 Vending machine money collectors and meter readers
- 916 Garbage collectors and related labourers
  - 9161 Garbage collectors
  - 9162 Sweepers and related labourers
- 92 Agricultural, fishery and related labourers
  - 921 Agricultural, fishery and related labourers
    - 9211 Farmhands and labourers
    - 9212 Forestry labourers
    - 9213 Fishery, hunting and trapping labourers
- 93 Labourers in mining, construction, manufacturing and transport
  - 931 Mining and construction labourers
    - 9311 Mining and related labourers
    - 9312 Construction and maintenance labourers: roads, dams and similar constructions
    - 9313 Building construction labourers

- 932 Manufacturing labourers
  - 9321 Assembling labourers
  - 9322 Hand packers and other manufacturing labourers
- 933 Transport labourers
  - 9331 Freight handlers
  - 9332 Hand and pedal vehicle drivers
  - 9333 Drivers and operators of animal drawn vehicles and machinery



MAJOR GROUP O  
ARMED FORCES

SUB-MAJOR, MINOR AND UNIT GROUPS

01 Armed forces

011 Armed forces

0110 Armed forces

RESOLUTION IV

Resolution concerning the provision of technical  
advice and the exchange of experience on  
consumer price indices

The Fourteenth International Conference of Labour Statisticians, aware of the importance and difficulties of achieving a reliable and objective consumer price index, expresses the desire that, whether centrally or through regional advisers, the International Labour Office (ILO) should be better equipped to provide technical advice and to improve the exchange of experience among government statisticians of member countries.

RESOLUTION V

Resolution concerning further ILO statistical work  
on industrial disputes

The Conference recommends that the Bureau of Statistics should convene a series of technical meetings and/or establish a representative working group to assist it with further work on industrial disputes. Such meetings should pay particular attention to the relevance of existing statistical frameworks, to changes in practices in industrial disputes and to the feasibility of collecting appropriate comparative data in the face of differing circumstances.

RESOLUTION VI

Resolution concerning the terminology and  
coding system for ISCO-88

In view of the need to ensure that the terminology used in ISCO is accurate, that its coverage of occupations in all countries is complete and that the coding system adopted is suitable and practical, the Conference agrees that the Bureau of Statistics should be able to make the following changes to the Annex to the main resolution on ISCO before it is submitted to the Governing Body and published:

- (a) purely terminological changes to improve the appropriateness of titles in English, French and Spanish;
- (b) changes to the ordering of subgroups within groups, to improve the logic and presentation of the structure;
- (c) changes to the numerical coding conventions currently proposed;
- (d) changes to the provision of not-elsewhere-classified groups (n.e.c.) within the structure.

In respect of (c) and (d), the Conference recommends that the Bureau should adapt a number of standard conventions, e.g. regarding the codes reserved for n.e.c. groups.

The Bureau of Statistics should include a set of coding conventions to facilitate the coding of general occupations (jobs which have a lesser degree of specialisation than that implied by the present structure).

In the process the Bureau of Statistics should consult with appropriate national experts.

RESOLUTION VII

Resolution concerning the application of ISCO-88

The Conference considers it necessary to emphasise that the success of the application of the revised ISCO, in particular for the purposes of international comparisons, requires the continuance of efforts undertaken in this field by the Bureau of Statistics of the ILO. In particular, activities should focus on:

- (1) the provision of appropriate technical assistance to countries intending to draw up or revise their national classifications;
- (2) the provision of technical advice and the holding of consultations with countries wishing to harmonise their national classifications with the revised ISCO;
- (3) the establishment of more precise boundaries between the different basic groups, for example by listing the main borderline cases included or excluded.

To this end, the Conference draws attention to the need to provide an adequate budget to carry out these tasks over the coming years.

RESOLUTION VIII

Resolution concerning the informal sector

The discussions have underlined the need to measure employment outside the formal sector. This is a heterogeneous group which poses many measurement problems. It should be studied in depth in order to arrive at a definition which includes its component sub-categories. Therefore, the International Labour Office should continue to work on this subject and should include it on the agenda of the Fifteenth International Conference of Labour Statisticians.