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**UNITED NATIONS ECONOMIC COMMISSION  
FOR EUROPE**

Informal Inter-Agency Regional Consultations  
On the Measurement of Employment and of Poverty  
In Countries in Transition  
In Central and Eastern Europe and the CIS,  
(Geneva, 13-15 May 2002)

**Final Report**

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## Report on the Consultation on Employment, 13 May 2002

### INTRODUCTORY STATEMENTS

1 The informal consultation on the measurement of employment was organised by the Statistical Division of UNECE with representatives attending from ILO, Eurostat, the UNDP Regional Bureau for Europe and the CIS, UNESCAP, and a senior independent expert (the list of participants is in Annex C). Opening the meeting, UNECE Statistical Division staff reminded participants that this was the first of two informal consultations organised by UNECE. It would deal with employment statistics, the second consultation, beginning the following day, with the measurement of poverty. The consultations would help to strengthen co-ordination among agencies in respect of the measurement of employment and poverty, two major aspects of human development. It was hoped that as a result of the present consultation the organisations concerned would agree on the best way to measure employment, underemployment, and unemployment as well as poverty in countries in transition, within the framework of internationally agreed ILO standards and practices of the European Union. The recommendations would be in the first place for central and eastern Europe and the CIS (hereafter called the 'region'), but they might have implications also for regions elsewhere.

2 UNECE Statistical Division would circulate the outcome of the consultations for comments by national statisticians as well as analysts preparing national Human Development Reports in the countries of the region. Sub-regional meetings with national statisticians and analysts were envisaged for later this year.

3 A background paper had been prepared and circulated to participants before the meeting. It was explained that the consultation was in response to difficulties experienced by analysts of trends in economic and social conditions in the region. New conditions during transition (reduced productivity, unpaid leave, reduced security of tenure, etc.) required new ways of measuring employment and underemployment. ILO, Eurostat and other agencies were well aware of the problem, and work had recently begun to improve both concepts and data supply.

4 While there were many uses for labour market statistics the perspective in the background paper was the contribution of employment to human welfare and the statistics required to measure this.

5 It was suggested that the meeting might care to discuss the problems under five headings:

- How to make employment data more meaningful
- How to combine individual and household data
- How to estimate employment in the shadow economy
- The need for disaggregation
- Implications of the above for data requirements.

6 In their introductory statements, participants agreed that a problem existed. Statistical concepts for developed countries were not always suitable for developing countries or those in transition. A dichotomy of employment/unemployment failed in many cases to do justice to the complexities of the labour market.

7 Work on new concepts was underway. ILO had recently begun a project on 'decent work' the concepts of which were in line with the concerns of this meeting. The following six topics would be covered: Opportunity for work, freedom of choice of employment,

productivity of work, equity in work, work and job security, dignity of employment. They hoped to have appropriate indicators by the end of 2002 for 50 to 60 countries.

8 The European Union's 'Laeken' indicators (see Annex E) and other work at Eurostat, similarly, suggested a new approach to employment measurement in the EU. Account would be taken, for example, of involuntary part-time and other short-time work and such features as unpaid leave. The quality of employment would be considered along lines similarly to those of ILO. Account would be taken also of a 'labour reserve', that is persons not in the labour force, but who want to work - i.e. would be looking for a job or be available to work if the right job came along.

9 The European Union's 'Laeken' indicators (see Annex E) and other work at Eurostat, similarly, suggested a new approach to employment measurement in the EU. Account would be taken, for example, of involuntary part-time and other short-time work and such features as unpaid leave. The quality of employment would be considered along lines similarly to those of ILO. Account would be taken also of a 'labour reserve', that is persons not in the labour force, but who would be available if the right job came along.

10 In the Asia and Pacific region, it was said, unemployment in the western meaning did not exist because workers losing their urban employment simply returned to their agricultural work. But employment then became a very different kind of activity, a fact that the employment data should reflect.

11 Speakers stressed the heterogeneous nature of the region. Recommendations should reflect the different conditions in sub-regions (such as central, eastern and south-eastern Europe, the South Caucasus, Central Asia).

12 At the request of participants, the background paper, slightly modified to include updated references to agency documentation, is appended as Annex A.

## **CONCLUSIONS**

The following conclusions were reached after discussion:

### **Measuring various forms of employment**

12 The International Labour Office adopted at the 16<sup>th</sup> International Conference of Labour Statisticians (1998) a resolution on the 'measurement of underemployment and inadequate employment situations' (see Annex F). The Resolution included recommendations in respect of (i) time-related aspects of underemployment (persons working less than a national norm, wishing to work additional hours, and available to this end); (ii) inadequate employment situations. The criterion of inadequacy proposed in the Resolution is 'all those in employment who during the reference period wanted to change their current work situation for specific reasons linked to the underutilisation of the productive capacity of the employed population, chosen according to national circumstances'. It is further proposed in the Resolution that countries may wish to consider three sub-types of inadequacy, namely skill-related inadequacy, income-related inadequacy, and inadequate employment related to excessive hours. Some data have so far been collected under this Resolution (see ILO, *Key Indicators of the Labour Market*).

13 Other forms of underemployment were discussed. The Group considered that because of the inadequate quality of data on earnings it would be difficult to define underemployment in these terms. The Group however welcomed suggestions along the lines of Tables 5, 6 and 7 of the background paper. Employment data there had been sub-

divided by economic sector and distinguishing various forms of private and public employment. As average wages vary significantly among these sectors, this would be an indirect (and partial) way of relating earnings to employment. Attention was drawn to the phenomenon, common in the region, of wages paid well in arrears. This should be taken into account when estimating sectoral earnings.

### **Combining individual and household data**

14 The justification for linking employment data to households is that welfare (including poverty) is normally measured in terms of households: while an individual wage might be sufficient to maintain the individual who earned it, it could be inadequate for a family. From a welfare perspective, therefore, it was desirable to link data on employment and earnings to household needs.

15 An ILO Resolution at the Thirteenth Conference of Labour Statisticians in 1982 (Paras. 23ff, 31.) specifically refers to the need for household-related employment data.

16 Attention was drawn also to the EU's 'Laeken' list of indicators of social inclusion (Annex E). The list includes an indicator (Indicator 7) of the number of persons living in jobless households (households with eligible adults of whom none is in employment). The list is notable for the fact that its contents are mandatory for EU Member States, and will become so in countries joining the EU in the future. Candidate States in central Europe and those queuing up to become candidates have every incentive, therefore, to accept the indicators in the list and otherwise conform to the EU's recommendations (Eight of the countries in transition in Central and Eastern Europe are 'first wave' candidates, expected to join in 2004, another two are 'second wave' candidates, expected to join later).

17 There was agreement that from a technical perspective individual and household data can be combined provided both are collected in the same household survey and appropriate questions asked. The problem is less a technical one (assuming that surveys are regularly conducted), but rather one of data organisation in processing and incentive. There was need to publicise and explain the need for linked data.

### **Employment in the shadow economy**

18 The question here is whether total employment is underestimated (and trends in employment falsified) because of employment in the shadow (here defined as unrecorded) economy. A participant from ILO explained that considerable progress had been made in measuring employment in the 'informal' sector, which largely overlaps the shadow economy. Modules had been developed for inclusion in labour force surveys and successfully tested in several countries in transition.

19 The Group thought that on condition that employment was measured through labour force surveys, and with the use of proper modules, the risk of underestimation was small. Because of black or other illicit labour the *volume* of work might be understated, but not the number of those in employment.

### **Disaggregation**

20 The Group strongly recommended that, as far as feasible, labour market statistics be broken down to reflect the conditions of possibly disadvantaged groups: by sex, age, ethnicity, refugee status, geographic areas and the like.

21 The above mentioned 1998 ILO Resolution on underemployment refers (Annex F, para.14b) to the desirability of classifying the data by sex, specified age groups and level of education, branch of economic activity, occupational group, institutional sector, status in employment categories. Information on the presence in the household of young children and disabled was also considered to be 'useful'.

### **Implications of the above for data requirement**

22 Labour force surveys are the principal source of data. Such surveys have been conducted for a recent period in 22 out of the 27 countries in transition in the region. They are mandatory for EU Member States and will be so for countries newly admitted to the EU.

23 Labour force surveys can be quite simple, cheap, and frequent and can have a large sample. Or they can be more complex, in which case they lose some of their other qualities. A balance should be struck between simplicity and content.

24 The Group discussed whether earnings from employment could be obtained from labour force surveys. Alternatively, whether they could be collected in household income surveys and then linked to labour force surveys through the use of common modules. The Group concluded that there was at present no fully valid method of collecting earnings from employment, especially from own account and other agricultural employment.

25 As noted above, linking individual employment to household data requires no special survey, only standard information on household size and composition in labour force surveys.

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## Report on the Consultation on Poverty, 14-15 May 2002

### INTRODUCTORY STATEMENTS

1 The informal consultation on the measurement of poverty was organised by the Statistical Division of UNECE with representatives attending from the ILO, Eurostat, the World Bank, the UNDP Regional Bureau for Europe and the CIS, UNESCAP, and a senior independent expert, back-to-back with the consultation on the measurement of employment (the list of participants is in Annex C). Representatives of the Statistical Division of UNECE reminded participants that the main aim of the consultation was to strengthen the statistical basis in central and Eastern Europe and the CIS (henceforth referred to as the 'region') and to fill data gaps in areas known to be deficient. Thus, a consultation had taken place the previous day on employment statistics. The present meeting would attempt to make recommendations to improve the measurement of poverty.

2 The problem in employment had been to identify partly new concepts and methods to describe the specific forms of employment and underemployment that had arisen in transition. The difficulty in respect of poverty was rather to achieve greater consistency among agencies and national statistical offices in the use of familiar concept and methods. The hoped for outcome of the consultation would be agreement on one or two "best concepts and methods" in the measurement of poverty in the transition economies.

3 The Statistical Division of UNECE intends to circulate the conclusions of the consultations for comments to national statisticians as well as to national analysts involved in the preparation of national Human Development Reports in the countries of the region. Although the recommendations would apply specifically to central and Eastern Europe and the CIS they would probably have implications also for other regions.

4 As explained in the background paper circulated to participants before the meeting the consultation was in response to a problem experienced by national Human Development Report analysts. These and others attempting to report on social trends in countries in transition were finding it difficult to obtain unambiguous data on the extent of poverty in their countries, and on how poverty was changing over time. International agencies and national statistical offices used a large variety of inconsistent concepts, methods and techniques to a degree that it could be concluded at first view in any one country that poverty was widespread, that on the contrary it was moderate, that it was increasing or declining. Potential users were understandably bewildered. The meeting had been arranged in order to bring some rationality into this process, to reach a measure of agreement on best practices, and eventually convey the results to national statistical offices and others working on poverty projects in the region.

5 In their introductory statements, participants expressed their interest in the meeting. There was agreement that greater consistency of poverty estimates was desirable, and that it could be achieved through better co-ordination among agencies.

6 The representative of Eurostat explained that it was difficult for the 15 member states of the EU not to accept recommendations of the secretariat once these had been ratified by the Council of the European Union – even if this fell short of a specific legal act<sup>1</sup>, and that member states are legally obliged to respect any such legal acts<sup>2</sup>. This did not so far

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<sup>1</sup> For example, the 'indicators' documents adopted at the December 2001 European Council held in Laeken (Belgium).

<sup>2</sup> A relevant legal act is currently at an advanced stage of preparation (the 'EU-Statistics on Income and Living Conditions' framework regulation and associated implementation regulations)

apply to transition economies, but once the candidate countries among them became members they too would be legally bound to accept the rules. In anticipation of their eventual membership many of the transition countries were likely to follow the recommendations well before actual membership (as noted in paragraph 16 in the report of the employment consultation eight of the 27 countries in transition in the region are 'first wave' candidates, two 'second wave'). In turn, their practice would influence other states that hoped to join the Union at some date in the future. In this sense, recommendations of the European Commission have a different significance than those of other agencies.

7 The Group requested that the background paper, which explains many of the current measurement problems, be attached to the report on the meeting for easier understanding of the conclusions. The paper should be modified to reflect relevant EU documentation (such as the list of 'Laeken' indicators on social inclusion) and relevant documents of other agencies. The background paper, so modified, is attached as Annex B.

## CONCLUSIONS

The following conclusions were reached after discussion:

### Basic concepts

8 The Group agreed that it was essential to define the purpose(s) of any measurement since the choice of method would depend on the purpose. A few examples were given. The purpose might be to identify the poorest in any one country (who need not be poor in absolute terms) requiring relative poverty lines, alternatively to identify the destitute or poor in absolute terms, requiring an absolute concept. Again, the purpose might be cross-national comparison, with evident implications for choice of method, which, in turn, might not be the most appropriate method for comparison over time within the same country.<sup>3</sup>

9 Poverty describes a situation of a lack of means, and is recognised as a multi-dimensional phenomenon (the poor in income terms may also be under-educated, lacking health, socially excluded, etc.). Nonetheless, for purposes of measurement, the different dimensions should be kept apart. Poverty should be measured in the first place in terms of income, or proxies of income, such as consumption expenditure. (In the 1990s the EU deliberately switched from expenditure-based measures to ones based on income.) Household possessions, although sometimes used as proxy for income in measuring poverty, have a different significance. They may have been acquired in the past and may not relate to current income, for example. Household possessions may be of interest in their own right, but are not recommended as a proxy of income.

10 To facilitate evaluation of the resulting figures the poverty line(s) should always be shown against the background of the full distribution of household income (or consumption expenditure). (See Section 6.2 of the background paper)

11 Indicators of perceived poverty (subjective indicators) may be of interest in their own right, for example to gauge the political situation. They are not recommended as a proxy for income.

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<sup>3</sup> Eventual statistics should permit spatial, temporal and/or sectoral comparisons. This diversity is recognised in an EU context through a proposed 'hierarchy' of indicators – upper levels of which give priority to comparability between countries at higher degrees of aggregation, lower levels of which emphasise representativity of individual national circumstances and more detailed explanatory analysis.

12 The relationship of income-related poverty to other factors of welfare, such as social inclusion/exclusion, education or health should be carefully studied (as in Table 10 of the background paper, for example), i.a. as a basis of planning, implementing and monitoring poverty alleviation policies. To make such analysis possible, the different factors should be kept apart. For this reason the Group agreed that multi-dimensional, composite indices or similar devices combining income with non-income factors (whatever their significance in advocacy) have very limited value as measures of poverty because i.a. of the difficulties of disentangling the various factors in analysis.

### **Choice of monetary poverty lines**

13 Income-related poverty lines may be absolute or relative. Which are used depends on the purpose of the measurement, as explained in paragraph 8 above. The purpose should be clearly stated and the choice made accordingly. In general, where the extent of absolute poverty is small, as in much of the area of the European Union, relative poverty may be more relevant as a concept. In many countries of Eastern Europe and the CIS, on the other hand, poverty is widespread, and it is desirable to measure its extent in absolute terms.

14 Whichever method is used it should be fully explained. Poverty as a relative concept gives very different results and has quite different implications for policy than poverty as an absolute concept.

15 The Group recommended that more than one income-related poverty line be identified to reflect different conditions of deprivation. It is common practice in the region to use two absolute lines of which one is based on food requirement (severe poverty), the other on food plus other necessities (poverty). A relative line should also be considered, for example that recommended by the European Commission at 60 per cent below national median income. Other lines for national use, or for research purposes, might be added. However, for clarity of presentation the number of lines should be kept to a minimum. Whatever lines are presented should be carefully explained and, as noted above, shown in the context of a distribution of household income.

16 The group discussed the problem of regional (sub-national) poverty lines to reflect differential income and cost of living patterns in regions (cf. Section 4.3 of the background paper). It referred to the complexities of such calculations and concluded that separate regional poverty estimates should be made only if living conditions are sufficiently heterogeneous to justify this and if the required data are readily available.

### **Calculation of absolute poverty lines**

17 In view of the short time available this topic was not fully discussed. The Group recommended that if the basket of essentials is based on a ratio of non-food to food expenditure (required in the calculation of the absolute poverty line – see Section 4.1.1 of the background paper) the actual expenditure pattern in each country be used to calculate the ratio rather than a standard ratio derived from elsewhere. Alternatively, the non-food component might be based on the actual expenditure in the country on selected non-food items (rather than applying a ratio). Whichever method is used, the calculation should be based on the consumption pattern not of the poor, but of those just above the poverty line. As this involves circularity (until the poverty line is in place, we do not know who is just above it) a process of iterative approximation is required.

## **Definitions of income as basis of poverty estimates**

18 The Group agreed that household income distributions are the standard conceptual base of poverty measurement. However, whether income or consumption expenditure is used should depend on the quality of the respective national data sets and sources. There may be practical difficulties in accurately measuring the multiple sources of household income in several countries in the region, where income data may tend to be more defective than in countries where wages are the principal source. In consequence, consumption expenditure data might be used as a proxy where valid income data are unavailable.

19 Where income data are used they should be based on international standards, such as those recommended by the UN Canberra Group (for example, as extended by the European Union in its definition for implementation) or the International Labour Office (see the references in the background paper). In principle, total net disposable household income should be used (including for purposes of poverty measurement income in kind as well as cash and, where possible, imputed rent in owner-occupied housing). This should be converted to income per adult equivalent using the OECD modified scale (see Section 4.1.1 of the background paper) or modified in some other way if this is required in national conditions.

20 If the purpose of poverty measurement is to ascertain the extent of poverty that would prevail in the absence of government transfers (to study the condition of specific, disadvantaged groups in the context of poverty alleviation policies, for example) an alternative, secondary concept of income might be used: namely disposable income net of government transfers (or net of certain types of government transfers).

21 If consumption expenditure data are used as a proxy of income, they should be defined in such a way as to give the closest possible approximation to income. The calculation of the data should again follow international recommendations (cf. references in the bibliography in Annex D).

22 The Group briefly discussed unremunerated domestic services (the unremunerated work done by household members in their own homes, such as cooking, cleaning etc.) as a source of income. It concluded that, however valuable their contribution to the local economy, the value of such services should not be included in income because of the practical difficulties of obtaining accurate information, including accurate valuations – whereas the inclusion of self-produced goods posed more tractable problems.

23 The group briefly discussed the problem of within-year adjustment of income or expenditure values for (hyper-) inflation, which is a feature in certain of the countries in the region. It was noted that the related capital-maintenance problem is not really addressed in the Canberra Manual or the EU extended version for implementation, and that some conceptual development work is required to propose a suitable solution.

## **Data sources**

24 Household sample surveys<sup>4</sup> are the sole practical means in the majority of countries in the region of collecting the required income or consumption expenditure data with the required breakdowns (although other sources might be used to check and supplement the

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<sup>4</sup> For example, an annual, cross-sectional, integrated income and expenditure survey covering a comprehensive and representative sample of households. Note: longitudinal 'panel' surveys of the type currently conducted in the EU member states are unlikely to be possible in most of the countries in the region, at least in the short term.

data). Care should be taken not to omit from a survey any significant population group (such as the homeless, institutionalised persons, members of ethnic minorities, refugee groups or the super-rich). Because samples are normally selected from lists of addresses, special measures should be taken to ensure inclusion of the homeless.

25 In this connection, it was recommended that in countries that have not had a recent census enumeration, a population census be carried out as soon as circumstances permit. This is in line with the UN recommendation to carry out a census around the year 2000<sup>5</sup>. The census would provide a valuable sampling frame. It could also be used to verify that no major group is omitted.

26 The Group noted the practice, described in Section 4.1.3 of the background paper, of combining household survey and census (mainly housing) data to calculate poverty in small areas.

27 There is a clear need for further investment in statistical capacity building in many of the countries in the region so as to improve the relevant data sources.

### **Disaggregation**

28 Poverty alleviation policies are normally directed at identifiable socio-economic and demographic categories rather than individuals (poverty profiles). For this and related purposes the poor should be identified in terms of demographic characteristics (sex, age, etc.), disadvantaged groups (ethnic minorities, refugees, etc.), principal geographic regions and other characteristics significant in a country context (see Table 11 of the background paper; also the Laeken indicators in Annex E).

29 It was noted that regional breakdowns of poverty estimates were desirable, but unlikely to be possible in the near future for many of the countries in the region<sup>6</sup> (see also paragraph 16 concerning regional poverty lines).

### **Presentation of the data**

30 The statistics (income distribution, poverty lines, estimates of poverty, poverty profiles, etc.) should be made publicly available, with appropriate explanations. As noted above, the method of calculation (whether relative or absolute, for example) should be clearly stated.

31 The poverty estimates, although initially calculated in terms of households, may be presented in terms of individuals or households. Of the two, the Group recommended individuals as the unit of presentation.

### **Frequency of estimates**

32 The Group agreed that, if feasible, poverty estimates should be made annually. However, given the high cost of data collection, a two to three years interval might be more realistic in some countries, if possible with some sort of 'topping-up' in the interim. A five-yearly interval was considered too long for countries in transition such as those in the region.

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<sup>5</sup> See UN.ECE/Eurostat guidelines.

<sup>6</sup> For example, they are not currently calculated for the existing EU member states.

## **Other**

33 The Group concluded that the interchange of ideas, as attempted at this meeting, was helpful in reducing inconsistency in the measurement of poverty. Continued consultation in some form, through a website for example, would be beneficial.

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Annex A

Revised  
21 May 2002

United Nations Economic Commission for Europe (UNECE), Statistical Division

**Informal regional consultation on the measurement of employment in countries in transition in Europe and the CIS, Geneva 13 May 2002**

**Background paper by Wolf Scott, ECE Consultant<sup>7</sup>**

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<sup>7</sup> The views expressed are the Consultant's and not necessarily those of ECE.

## 1. Introduction

This project has arisen from attempts in the national human development reports (NHDRs) in Eastern Europe and the CIS to monitor living conditions, of which productive employment is an essential part. Because of the complexities of the labour market during transition such attempts have in some cases been less than successful. There is concern by national statistical offices as well as international agencies to provide a more realistic picture of the labour market than is commonly available, bearing in mind the particular conditions of countries in transition in Eastern Europe and the CIS.

The concern is not necessarily restricted to Eastern Europe. The International Labour Office has initiated a global project on 'decent work' to capture some of the more difficult aspects of employment, and similarly in connection with security of employment.<sup>8</sup> Although the interest in improved measurement by ILO is global rather than regional, lessons learned from the eastern European region might well be applied elsewhere. It may well prove, moreover, that a regional approach to measurement is the most profitable. A global methodology may in the end be no more than the highest common denominator of regional methods.

The problems encountered are in part connected with the broad concepts implied by 'decent' or 'productive' work. In part they relate to the inadequacies of the traditional approach in the conditions of Eastern Europe and the CIS. The complexities, some conceptual, others technical, include:

- Considerable movement into and out of the labour force as a result of widespread economic disruption during transition. This includes the concept of 'discouraged' workers who may or may not be counted as such in the statistics.
- What is called employment includes a considerable amount of *underemployment* in the sense of nominal employment at no, or small, wages, unpaid administrative leave and the like. An aggregate figure of employment, combining those fully employed on adequate wages with the various forms of underemployment makes little sense in these conditions.

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<sup>8</sup> The International Labour Office has launched a major enquiry into employment security, distinguishing seven categories:

- Labour market security (adequate employment opportunities)
- Employment security (protection against arbitrary dismissal, regulations of hiring and firing, imposition of costs on employers, etc.)
- Job security ('a niche designated as an occupation or "career", plus tolerance of demarcation practices', etc.)
- Skill reproduction security (opportunities to gain and retain skills through apprenticeships, employment training, etc.)
- Work security (protection against accidents and illness at work through safety and health regulations, limits on working time, unsociable hours, night work for women, etc.)
- Representation security (protection of a collective voice in the labour market through independent trade unions, etc.)
- Income security (protection of income through wage machinery, wage indexation, social security, etc.)

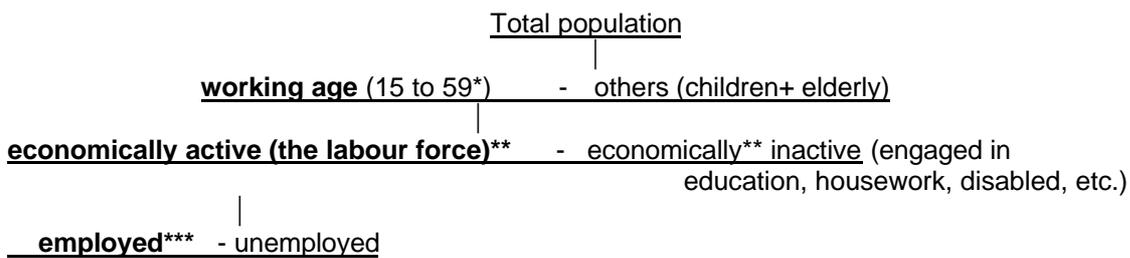
The Decent Work programme entails a six-fold categorisation, namely: opportunity for work, freedom of choice of employment, productivity of work, equity in work, work and job security, dignity of employment.

- There is usually a missing link between statistics on individual employment and earnings, on the one hand, and household incomes and needs, on the other hand. The concept of welfare is normally applied to households, including both earners and dependants. Data on employment and earnings make little sense as a measure of welfare unless related to household size and structure.
- Conceptual difficulties apart, many of the labour market statistics are technically deficient. This is in part the result of continued use of establishment data (registration of the unemployed as a basis of unemployment statistics, for example), of the considerable shadow economy much of which is not captured in official data, the much greater complexity of employment as such (second and third jobs), confusion over what the general population regards as employment, as distinct from the official definition, and so on.
- A lack of disaggregation of the data makes it difficult to identify problems of disadvantaged groups.

## 2. Traditional labour market statistics

The traditional pattern of employment can be described as in Figure 1.

**Figure 1**



\*Or whatever age is appropriate in a country; it usually differs between women and men.

\*\*The term 'economically' is here used in terms of *gainful* activity, for remuneration, however small, in cash and kind, and including unpaid family labour. The term 'labour force' is sometimes used in the place of economically active.

\*\*\* The term here includes remunerated self-employment as well as wage-employment

A typical country table would be as below (Table 1):

Table 1  
**A traditional labour market profile,  
 Georgia, 2000**

- per cent -	
16 and over and below retirement*	100
of which:	
Economically inactive	16
<b>Economically active (labour force)</b>	<b>84</b>
<b>Of the economically active:</b>	
Employed:	
Wage employment	27
Self-employment	44
unpaid family work	14
Total employed	85
Unemployed	15
<b>Total economically active</b>	<b>100</b>

\*Men 16-64, women 16-59

Source: IFRC 2000

E1/1

16 per cent of the population of working age is inactive in this example, 84 per cent active. Of the economically active 85 per cent are employed, 15 per cent unemployed. The employed are further distinguished by whether they work for wages, are self-employed or unpaid family labour.

### **3. Problems in CITs with this traditional concept**

This approach is not fully realistic in many of the countries in transition. There are five major problems.

➤ *Discouraged workers.*

In the early years of transition, as establishments closed down or reduced their production, many persons left the labour force in the sense that although they would have accepted reasonably paid work had it been offered, none was available for most of them. Gradually they stopped looking and in this sense left the labour force. In recent ILO usage, they fall into the category of 'discouraged' workers and as such may be included in the labour force as unemployed.<sup>9</sup> One practical problem with labour force statistics in the CITs, however, is that it is rarely clear whether or not the discouraged workers are fully included or not. Their availability depends on the kind of work which they consider might be offered, and some of them might be inclined to vote themselves out of the labour force even if they might return if the offer were reasonable.

Whether or not discouraged workers are included depends also on the source of the data. They might be identified and counted as such in labour force surveys, but since they do not register as unemployed they will not be included in data that have registration as their source.

<sup>9</sup> On a stricter definition, the unemployed are those without work, available, and actively looking for, work.

➤ *The heterogeneous nature of employment.*

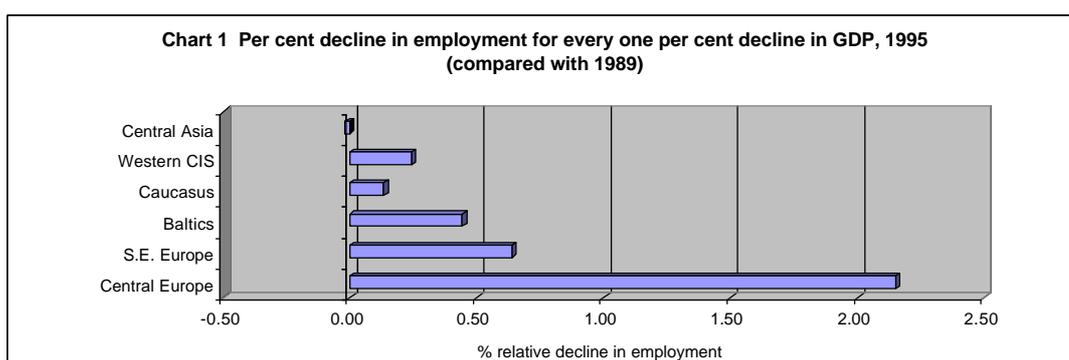
The term 'productive' employment has been introduced to emphasise the fact that in conditions of transition much of the employment (including self-employment) is relatively unproductive and thus remunerated at rates that fail to provide an adequate income. Much of the prevailing poverty in CITs is the result not so much of unemployment, old age or numerous children, but of low remuneration.

As noted, many people left the labour force early in transition. Others continued in employment but with greatly reduced wages, in purely nominal employment or quasi-permanent unpaid leave. This is a condition of underemployment, but rarely identified as such in the official statistics, which distinguish only between outright unemployment and employment, irrespective of the conditions of work and how much is earned.

Employment levels in this sense depend in part on government policy (insofar as governments still control the labour market). In Yugoslavia and some countries of central Asia, for example, it has been policy to 'hoard' workers in employment, but at very low wages or without wages. This might be in the hope of better times, so that workers might be re-employed when conditions permit. Alternatively, retaining them on a nominal basis might be a social gesture. Even if unpaid, workers can thus maintain some kind of social contact with their fellows.

The term 'waiting workers' is used for this and similar conditions in Bosnia and Herzegovina where an estimated (*National Human Development Report 1998*) 115,000 workers (11 per cent of the labour force) fall into this category. They receive no wage but some form of compensation the amount of which depends on the employer's financial situation. It has rarely exceeded the equivalent of 100 DM per month.

Some of the countries, especially Azerbaijan and the Central Asian countries (except Kazakstan) showed almost no decline in employment in the worst years of transition when GDP fell strongly (63 per cent in Azerbaijan, 33 per cent on an average in central Asia, see Chart 1).<sup>10</sup> It would have been impossible to maintain virtually full employment without a sharp fall in productivity that might express itself through changes in the conditions of employment and levels of remuneration. Current employment data in these countries do not show these changes.



E1/7

The Croatian NHDR for 1998 attempted a more realistic definition of employment and unemployment including, as well as those who no longer seek work (although willing to accept work if offered), workers in the shadow economy and two categories of

<sup>10</sup> The decline in employment was slightly greater when account is taken of the growth in the population of working age.

underemployed: respectively those working in jobs for which they were not trained (usually unskilled, occasional or part-time work) and those with wages below 1000 kuna a month.

Table 2  
**Croatia: Alternative measures of  
 unemployment and underemployment, 1996**

	'000	per cent
Labour force	1711	100.0
of which:		
<b>In 'normal' employment</b>	1194	53.7
<b>Unemployed</b>		
Registered unemployed	267	15.6
Other unemployed (following the basic ILO definition*)	170	9.9
Discouraged workers	45	2.6
Other hidden unemployed	61	3.6
<b>Total unemployed</b>	543	31.7
<b>Underemployed</b>		
Involuntary types of work	89	5.2
Receiving less than 1000 kuna a month	161	9.4
<b>Total underemployed</b>	250	14.6

\*Not employed at any time in previous eight days,  
 willing to work and actively seeking work.

E1/3

Given the present levels of employment, low levels of earnings are probably the crucial element in employment. As noted, the bulk of the poor in the CIS are not the fully unemployed, pensioners or disabled, but those with insufficient wages to maintain their households. A second or third earner would be required in a household to make ends meet, but there is not sufficient work to provide such employment. Many of the households in Central Asia are agricultural, with all or most family members working on their farms or in agricultural co-operatives. But even their combined earnings are often insufficient. In all the five republics with available data the prevalence of poverty is greater in rural than urban areas.

The International Labour Office adopted at the 16<sup>th</sup> International Conference of Labour Statisticians (1998) a resolution on the 'measurement of underemployment and inadequate employment situations'. The Resolution included recommendations in relation to statistics of (i) time-related aspects of underemployment (persons working less than a national norm, wishing to work and available for additional hours; (ii) inadequate employment situations. The criterion of inadequacy proposed in the Resolution is 'all those in employment who during the reference period wanted to change their current work situation'. It is further proposed in the Resolution that countries may wish to consider three sub-types of inadequacy, namely skill-related inadequacy, income-related inadequacy, and inadequate employment related to excessive hours.

Studies to test the feasibility of these proposals are underway at ILO.

- *The missing link between individual employment/earnings and household incomes and needs.*

The household (or family) is the ultimate unit in the analysis of social conditions. People earn and spend, but they normally do so in the context of the household. A job and a wage must support dependants, and households are affluent or poor depending on this relationship. However, in none of the CITs are data available on employment and earnings linked to households.

- *Technical deficiencies in data*

Even with improvements in concepts, many of the statistics would be deficient for technical reasons. Establishment data, the principal source of labour force statistics before transition, clearly do less than justice to conditions in which increasingly people are no longer linked to establishments. While household surveys are increasingly used as source, some of the shortcomings remain. As an example, unemployment data are still commonly derived from registration, even in countries in which only a minority of the unemployed register, as in the central Asian republics.

Table 3  
Alternative unemployment rates in central Asian countries

	Registered unemployed (% of econ. Active)				Alternative estimates %, year, source of data
	end year (%)			change (%)	
	1997	1998	1999	1999 over 1998	
Kazakstan	3.9	3.7	3.9	0.2	13.7 %, 1998, ILO YB 2001
Kyrgyzstan	3.1	3.1	3.0	-0.1	8%, 2000, UNICEF AR
Tajikistan	2.8	2.9	3.1	0.2	13-30%, 1998, NHDR 1999
Turkmenistan	...	...	...	...	15%, 1998, CCA 2000
Uzbekistan	0.3	0.4	0.5	0.1	10%, 1995, NHDR 1999

Source of registration data: UNECE, *Economic Survey of Europe*, 2000/1

E1/8

Official figures of registered unemployment in Central Asia show no more than 3 to 4 per cent in Kazakstan and Kyrgyzstan, below one per cent in Tajikistan and Uzbekistan and virtually none in Turkmenistan (Table 3). The total number of unemployed in all these countries is probably much greater. The labour force survey in Kazakstan in 1998 found another 10 per cent in addition to the 3.7 per cent registered cases. In Uzbekistan, a survey in 1995 showed 9.5 per cent unemployment, almost twenty times the registered figure at the time. Moreover, "Hidden unemployment, in which workers are formally attached to a job, but not paid their wages or not in time, is said to reach nearly 25% (in Uzbekistan)." (NHDR 1999, p.22)<sup>11</sup>

As the authors of the Uzbek NHDR comment:

An accurate understanding of the Uzbekistan labour market requires registered, hidden and open unemployment to be taken into consideration. ... Official unemployment statistics addressing only registered unemployment are problematic. ... The magnitude of the problem is significantly understated. (NHDR 1999, p.22)

Data collected through registration are generally unreliable since in the CIS they omit the many persons who do not register (a majority of the unemployed), while in central and some parts of south-east Europe - since persons tend to linger on the registers through which they obtain certain benefits even if they find jobs - unemployment is

<sup>11</sup> It is not clear whether it is 25% of the total economically active or of the employed.

likely to be overstated.<sup>12</sup> Similarly, the discouraged unemployed are omitted from the figures if registration is the unique source.

The shadow economy (by definition the unrecorded economy) is another, possibly major, source of error. Estimates of the share of GDP that lies in the (unrecorded) shadow economy vary from 25 to 50 per cent or more in countries in transition. Not much is known about the magnitude of shadow employment, but it too is likely to be high. Thus in Bulgaria:

A study conducted by the Institute for Market Economics in 1996 reveals that almost one third of the active labour force in the country is employed through the black ... or shadow ... employment. Every tenth legally employed person receives from the employer additional remuneration that both sides conceal. Over 23% of the employees interviewed were engaged in additional economic activity ... The survey reveals an extremely large portion of hidden employment amongst the self-employed. (NHDR, 1998, p.47)

There are other technical deficiencies. Thus, although workers may be entitled to remuneration, some wages in many of the CITs are paid well in arrears to an extent that in practice there is a real loss, sufficient to make the difference between full employment (in terms of adequate compensation) and underemployment.

In theory, labour force surveys (LFS) give very much better figures than those obtained from other sources (the census included) and could account also for the shadow economy. Practice depends on the quality of each LFS, including the skills of those who conduct it.

➤ *Disaggregation to sub-national level*

Some categories of the population are less likely to find employment than others, for example ethnic or national minority groups, refugees or IDPs, whereas statistics rarely distinguish such groups. Romas are frequently mentioned in southeast Europe:

The new political and economic circumstances of the 1990s have been accompanied by the emergence of high rates of Roma/Gypsy unemployment. ... (They) not only have difficulties finding work but are also more likely to be made redundant. They lack the marketable skills and business experience now required, their standard of education is low, and in most cases they have no professional skills or qualifications. (Werner Haug et. al., *The demographic characteristics of national minorities in certain European States*, Vols.1 and 2, *Population Studies* Nos. 30 and 31, Council of Europe, 2000)

The condition of women as regards employment is complex and the statistics deficient. It is thought that more women than men left the labour force (i.e., left or lost their jobs and no longer actively sought employment) early in transition. In the Croatian analysis it is suggested that more women than men subsequently returned to employment, but often to jobs (such as petty commerce) that failed to match their qualifications.

Although the need is generally acknowledged, systematic disaggregation, showing the employment conditions of disadvantaged groups, is rarely attempted in CITs, except marginally by gender.

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<sup>12</sup> Registered unemployment in Slovenia in 1997 was 14.8 per cent, LFS data 7.4 per cent. Corresponding figures in Romania in 1998 were 10.3 and 6.8 per cent.

#### 4. Possible solutions

The following is required if labour market data are to be improved in line with the problems listed in the previous section (considerably more if the requirements of the ILO's seven criteria of secure employment are to be met):

(a) a meaningful estimate of the labour force (i.a., to include discouraged workers)

Table 4 shows the basic figures, including the discouraged unemployed in both the total economically active and the unemployed.

Table 4  
The Labour force 1995 and 2000 - fictive data ('000)

	1995	2000
Total population	5 375	5 381
Population of working age*	3 371	3 387
Total economically active**	2 365	2 445
of which:		
Employed	1 933	2 033
Unemployed**	432	412
Economically active as per cent of working age population	70	72
Employed as per cent of working age population	57	60
Unemployed as per cent of economically active	18	17

\* Males 15-64, females 15-59

\*\* Including the discouraged unemployed.

E1/2

The data should be obtained from a source that gives a reasonable estimate of total unemployment, including discouraged workers.

#### (b) Kinds of employment

Two alternatives are available to distinguish the fully employed from the underemployed: (i) employment by category as in the Croatian table (Table 2 above). The usefulness of this depends on how each of the categories, for example 'normal' employment, is defined. Tables of this kind may be well suited to national requirements but, as each country or sub-region, may have different problems and therefore categories, comparability may be difficult to achieve. (ii) An alternative may consist of employment tabulated jointly with earnings. An example is available from Georgia (Table 5) where in this case wage earners are divided by type of institutional function (government vs. private).<sup>13</sup>

<sup>13</sup> A separate table is available for the self-employed.

Table 5  
**Georgia: Number of wage earners and average wages, by private/public, 2001**

	Female	Male	Total	Av. wage lari/month	Women's as % of men's wages
	- No. in thousands -				
Public sector, among them:					
State-owned enterprise	60	81	140	96	49
Other state budget organization	182	133	315	60	59
Non-state sector, among them:					
Non-state enterprise (without foreign capital participation)	82	125	207	113	64
Foreign organization or joint venture	5	7	12	368	192
Other	7	13	20	110	48
<b>Total</b>	<b>336</b>	<b>359</b>	<b>694</b>	<b>90</b>	<b>74</b>

Source: Georgia, SDS

E1/4

Wages in this example are lowest in 'other state budget organisations' with altogether 315,000 earners, including such lowly paid sectors as education and health as well as general government administration, with an average wage of 60 lari (\$30) per month. The foreign and joint-stock companies are best off, with 368 lari per month on an average, but this is a small sector with only 12,000 employees.

Table 6  
**Georgia: Number of wage earners and average wages, by economic sector, 2001**

	Female	Male	Total	Av. wage lari/month	Women's as % of men's wages
	- No. in thousands -				
Agriculture, forestry, fishing	4	13	17	84	59
Manufacturing and mining	25	60	85	105	50
Utilities	6	24	29	114	131
Trade and repair of household appliances	28	30	58	92	56
Transportation and Communications	19	48	67	131	51
State Government, defense	35	76	110	80	73
Education	112	33	145	60	66
Healthcare	57	14	71	55	63
Culture, sport, recreation, other services	20	20	40	78	63
Other fields	27	24	51	239	194
<b>Total</b>	<b>335</b>	<b>359</b>	<b>694</b>	<b>90</b>	<b>74</b>

Source: Georgia SDS

E1/4

Alternatively, the table might be divided according to economic activity as in Table 6. Education, healthcare, culture etc. as well as agriculture are the lowest paid sectors.

In this sense, the table provides a rough estimate of where wages are especially low, as a basis of subsequent monitoring. For example, as shown in Table 7, average wages at current prices in education rose from 15 lari per month in 1996 to 60 in 2000 (a rise of 400 per cent over the period), and similarly in healthcare. As prices only rose about 50 per cent, there is a net gain in wages in these sectors, a gain that in the case of education exceeded that of average wages.

Table 7  
**Georgia: Relative rise in wages in the lowest paid sectors (current prices)**

	1996	1997	1998	1999	2000	Rise 2000/1996
Education	15	24	32	46	60	4 times
Health care	23	27	42	44	55	2.4 times
All sectors (average)	35	50	63	79	90	2.6 times

Source: SDS, Georgia  
E1/4

The table might be improved if a distribution of earnings (instead of averages) were available as in the fictive example (Table 8) below:

Table 8  
**Wages according to whether they are below or above a critical limit (fictive data)**

	Total employment	Employees with wages below 100 lari/month	Employees with wages 100 lari or more
Public sector, among them:			
State-owned enterprise	140	100	40
Other state budget organization	315	281	34
Non-state sector, among them:			
Non-state enterprise (without foreign capital participation)	207	126	81
Foreign organization or joint venture	12	2	10
Other	20	12	89
<b>Total</b>	<b>694</b>	<b>521</b>	<b>254</b>

E1/4

Assuming that the minimum subsistence wage for an adult worker with no dependants were 100 lari (approximately the Georgian Government's estimate), 521,000 workers would be paid below this minimum, about two thirds of the total.

(c) Linking individual to household data

The ultimate test of adequate living conditions is not the individual's needs, but those of the household, which he or she supports. Household needs depend on household size and structure (age and sex of household members) on the one hand, and incomes from all sources, on the other hand. Minimum needs are normally calculated in terms of an absolute poverty line. This is then set against total household income from all sources to see whether or not the household is poor as so defined. A simplified procedure is proposed here, namely to give two estimates:

- (i) of the number of earners from work in a household, and
- (ii) the amount from earnings per person (or per adult equivalent) in the household.

Such figures do not necessarily measure the adequacy of such earnings in any particular case, since it ignores other sources of income, but it goes some way towards explaining changes in living conditions for the country as a whole and its sub-categories.

The number of earners in households (fictive data) is shown in Table 9:

Table 9  
**Households according to the number  
of earners, 1995 and 2000**  
**(fictive data)**

	1995	2000
	- per cent -	
0	28	23
1	61	57
2	10	17
3+	1	3
Total	100	100
Av. Earners	0.84	1.00

E1/5

The figures include all those in the labour force, irrespective of whether they are employed or not, kinds of employment and whether they have earnings. Thus unpaid family members are counted as earners.

In this fictive example, the number of earners has increased over the five-year period. The question remains whether the absence of an earner in approximately one quarter of households is explained by old age. A more sophisticated version of Table 9 might be as follows:

Table 10  
**Households with at least one member  
of working age, according to the number  
of earners, 1995 and 2000**  
**(fictive data)**

	1995	2000
	- per cent -	
0	8	5
1	76	73
2	14	19
3+	2	3
Total	100	100
Av. Earners	1.10	1.20

E1/5

As the majority of households with no earners in Table 9 consisted of the elderly, most of the households without an earner have vanished in this example (Table 10). By 2000 only five per cent of households with at least one adult of working age remained with no earner, a decline of three per cent. In this sense, conditions have improved, but wages may have gone the other way. Whether this is so, or not, is shown in the fictive example in Table 11, where indeed average household earnings are shown to have risen over the five years from 228 to 241 units, the largest gain being recorded in the lowest group of earners.

Table 11  
**Households by per capita earned income**  
(fictive data)

Per capita earned income (units/month)	1995	2000
	No. of households ('000)	
-49	55	32
50-99	112	91
100-199	156	164
200-299	187	210
300-399	142	153
400 plus	70	72
Total	722	722
Average earnings	228	241

E1/6

It might be noted that the European Commission is heading towards changes in labour market statistics as part of a scheme by the Social Protection Committee to redefine social objectives, set targets and list indicators to assess progress. Recent work towards this end, described in a paper by Atkinson, Cantillon and Nolan (2001),<sup>14</sup> includes indicators of individual employment and unemployment, linking these to households. The following recommendations in the paper relate to employment:

**Recommendation 19:** the overall unemployment rate and the long-term unemployment rate, measured on an ILO basis, should be Level 1 indicators.<sup>15</sup>

**Recommendation 20:** there should be Level 2 indicators for the proportion of discouraged workers and the proportion non-employed, expressed as a percentage of the total population aged 18-59 (or 16-64) excluding those aged 18 (or 16)-24 in full-time education (defined as those that are both in education and inactive).

**Recommendation 21:** there should be a Level 1 indicator of the proportion of people living in jobless households, as defined in Section 6.2, complemented by a Level 2 indicator of the proportion of people living in jobless households with current income below 60% of the median.

**Recommendation 22:** there should be Level 2 indicators of (a) the proportion of the employed aged 18-59(16-64) who are living in households with current incomes below 60% of the median (*Working poor*), and (b) the proportion of the employed aged 18-59(16-64) who are low paid in that their hourly earnings are less than two-thirds of the median hourly earnings of all full-time workers aged 18-59(16-64) (both male and female).

The Laeken Council of the European Commission approved a list of indicators of social inclusion (see Annex E) based on, but not identical with, the Atkinson proposals. Only a single indicator (Indicator 7) in the list links employment with household data as in the first half of Recommendation 21 above. This, together with the remaining 17 indicators in the list, is now mandatory for present Member States, and will be so for candidate countries as they become members.

<sup>14</sup> Presented at the Conference on Indicators of Social Inclusion: Making Common EU Objectives Work, Antwerp, September 2001

<sup>15</sup> Two levels of indicators are proposed for common use by Member States: leading indicators (Level 1) and complementary indicators (Level 2). A third level of indicators would cover specific national concerns.

## 5. Data needs

Data needs based on the previous section (but not the EU recommendations) are as follows:

For individuals:

- Employment status (economically active/inactive, employed/unemployed)
- If economically active, by usual economic sector, distinguishing employed, self-employed, unpaid family labour, and similar
- Wages/average earnings actually received

For households:

- Number of earners
- Aggregate household earnings from work
- Household size and, assuming adult equivalencies are used instead of per capita, household structure by gender and age
- Whether a household contains a person of normal working age

Data for both individuals and households would be broken down by principal socio-economic groups and geographic regions.

Adding the EU Laeken list of indicators would entail slightly more data on employment/unemployment, namely:

For individuals:

- Duration of unemployment
- If inactive, whether in full-time education

The principal source for data of this kind is the household survey. An alternative is a registration system of the Danish type where information on earnings is filed together with other details including household size and structure. None of the CITs have this amount of detail in their registers. Nor, given the large size of the shadow economies and informal sectors would registers be reliable. Only household surveys can give reasonably valid employment and wage data.

Specialised labour force sample surveys are normally the best solution. Alternatively, questions on economic activity might be added to other surveys, such as household budget surveys. If possible – and this is not certain - the required information might be included in a standard module that, with proper interviewer training, could be attached to any survey. An example is provided in Figure 2 below:

Figure 2  
Standard module on economic activity for inclusion in household surveys

	Household member								
	1	2	3	4	5	6	7	8	9
Sex									
Age									
Normal activity*									
<b>If econ. active</b>									
Employed at least one day in previous week or fully unemployed**									
<b>If working at least one day:</b>									
Principal occupation									
Employed/self-empl./family labour									
Economic sector									
Public/private sector									
Full-time/part-time									
Earnings last month									
Second occupation									
Employed/self-empl./family labour									
Economic sector									
Public/private sector									
Full-time/part-time									
Earnings last month									

\*Economically active or if inactive: below school age, in full-time education, domestic work, disabled, retired

\*\* Not working but available for work

Annex B

Revised  
21 May 2002

United Nations Economic Commission for Europe (UNECE), Statistical Division

**Informal regional consultation on the measurement of poverty in countries in transition in Europe and the CIS, Geneva 14-15 May 2002**

**Background paper by Wolf Scott, ECE Consultant<sup>16</sup>**

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<sup>16</sup> The views expressed are the Consultant's and not necessarily those of ECE.

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## Acronyms

CIS	Commonwealth of Independent States
CITs	Countries in transition
FAO	Food and Agriculture Organisation
GDP	Gross domestic product
ICRC	International Committee of the Red Cross
IDP	Internally displaced person
IFRC	International Federation of Red Cross and Red Crescent Societies
ILO	International Labour Office
IMF	International Monetary Fund
MoH	Ministry of Health
NGO	Non-governmental organisation
NHDR	National Human Development Report
PPP	Purchasing power parity
UNICEF	United Nations Children's Fund
UNDP	United Nations Development Programme
WHO	World Health Organisation

## 1. Introduction: Purpose of the consultation

Reducing poverty in Eastern Europe and the CIS, as elsewhere in the world, is a purpose of international agencies, including UNDP, the Economic Commission for Europe and others. As regards UNDP, poverty alleviation programmes have been inaugurated and poverty is monitored to gauge their impact. Changes are reported in national Human Development Reports.

Table 1  
**Estimated poverty in countries of the trans-Caucasus**

	% in poverty
<b>Armenia</b> (households)	
Absolute line based on needs, 1996	47
Absolute line based on bread consumption, 1998	35
Absolute line based on Paros administrative scheme, 1998	31
<b>Azerbaijan</b> (population)	
Absolute line based on needs, 1995	62
<b>Georgia</b> (households)	
Absolute line based on minimum subsistence (110 lari*), 1999	53
Relative line based on 60% of median nat. cons., 1999	23
Relative line based on 40% of median nat. cons., 1999	10
World Bank estimate (absolute**), 1997	11

\* Per adult equivalent

\*\* Based on a minimum of 52 lari per adult equivalent.

Source: Armenia: NHDRs, Poverty of Vulnerable Groups in Armenia; Azerbaijan: World Bank, Poverty in Azerbaijan; Georgia: SDS, Report on the household budget survey.  
PS1/4

That is the intention, at any rate. In practice, figures of the extent of poverty appear at best sporadically in some countries, not at all in others. As there is no accepted definition of poverty or agreed-upon methodology of measurement, estimates of poverty in any one country may vary widely, depending on the concept and method. Table 1, which summarises recent poverty estimates in the trans-Caucasus, illustrates the problem in Armenia and Georgia (Azerbaijan has the advantage of only a single estimate).

By varying the definition and method of measurement, poverty can be made to appear large or small, to rise or decline over time. Any given value is arbitrary at best, misleading at worst, the more so as reported figures are rarely accompanied by the explanations.

**A purpose of this consultation is to try and reach some agreement on definitions, concepts and methods and thus achieve consistency in estimates.** The point is made below that concepts should match the purpose. This might be to identify the poorest (irrespective of whether they are poor in an absolute sense), in which case a relative concept would be appropriate; or it might be to identify the absolutely destitute, in which an absolute concept would be preferred. Estimates of perceived poverty may serve still another purpose, and so on. **Given the variety of purpose, therefore, poverty measurement cannot be identical in each case, but consistency is required at the very least in relation to any stated purpose.**

Reaching agreement might be the easier in a regional (rather than a global) context. Poverty relates to cultural patterns. The agreed symptoms of poverty in one region might not be the same as in another region. Confining the problem initially to a group of reasonably homogeneous countries (in this case eastern Europe and the CIS) with a similar culture, results in some of the difficulties being removed. It is a first step in an iterative process that would be followed by similar approaches in other regions. Global consistency might be achieved by concentrating on the elements that the regions might have in common.

## 2. The meaning of poverty in the context

For about a hundred years, ever since Joseph Rowntree's first survey of York<sup>17</sup>, there was agreement on the meaning of poverty. Poverty was defined in terms of a shortage of means whereby to procure essentials in respect of a limited population (that of an English 19<sup>th</sup> century town). The needs were expressed in terms of money and compared with income in cash and kind (the 'means'). The monetary value was the equivalent in this sense of a wide range of goods and services required for an acceptable life. People were aware even in 1899 that 'money was not everything'. Money was a convenient shorthand way of summarising both needs and means.

Poverty expressed in this way was then related to health, education, social exclusion etc. as both cause and consequence. Disability and ill-health of the principal earner was said to account for a quarter of all poverty in York at the time, sociability in the sense of alcoholic excess for another slice. The essentially cyclical nature of these characteristics was recognised: ill-health or alcoholism might lead to poverty, poverty in turn to ill-health or drunkenness.

The idea that a lack of income has implications for other conditions - a lack of education, ill-health, social isolation or crime - is not new, therefore. What is new, and misleading in a semantic sense, is the notion that poverty IS all these things as well as a lack of money; that poverty IS a lack of education, poverty IS crime, poverty IS a lack of housing. Definitions vary. We have chosen here to be consistent with practical usage and associate *poverty* with (a lack of) income, distinguishing it from deprivation in the non-income aspects of human welfare. This in no way alters the fact that the poor in terms of income also have other problems (in health, housing etc.), but keeping them apart facilitates analysis.

As defined for the purposes of this paper, therefore, human welfare is a function of (i) income and/or the goods and services that can be obtained with income<sup>18</sup> (including income in both cash and kind), and (ii) benefits that in practice cannot readily be obtained with money or expressed in monetary terms (such as many forms of public service<sup>19</sup>, a state of health, educational achievement, freedom from oppression, of speech and movement, social exclusion/inclusion, etc.). Inversely, an insufficiency in human welfare is a function of (i) *a critical shortfall in income, here defined as poverty*,<sup>20</sup> and (ii) deficiencies in these other, non-income benefits. The relationship is shown graphically in Figure 1.

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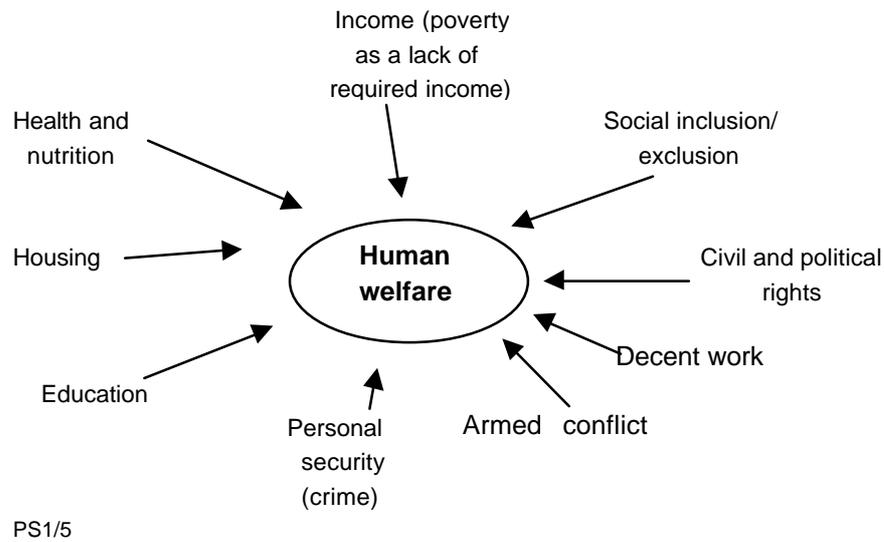
<sup>17</sup> Rowntree B.S., *Poverty: A Study of Town Life*, Macmillan, London, 1901.

<sup>18</sup> The distinction between income and the ability to purchase goods was important in Soviet times when incomes often outran the supply of goods and services.

<sup>19</sup> Leaving aside the question whether, as is sometimes claimed, public services, as in health and education, can be given a monetary value and counted as income.

<sup>20</sup> The Oxford dictionary defines poverty as a "want of means", Webster's as "the state of one who lacks a usual or socially acceptable amount of money or material possessions".

**Figure 1**



### **3. The specific features of poverty in Eastern Europe and the CIS**

The distinction between income-related poverty and other characteristics of human welfare is more complex than in other regions. Economic collapse caused a dramatic decline in national and individual incomes, without in the short run affecting to the same degree some other conditions, such as housing, health or education. As compared with most other countries, the CIS in particular have relatively favourable social conditions but very low incomes. This is apparent when the three constituent elements of the Human Development Index are compared with those in other countries. The five countries of Central Asia are taken as an example (the situation is similar elsewhere in the CIS).

Table 2  
**Central Asia: The human development index and its constituents, 1998**

	HDI	GDP index	Life expectancy index	Education index	Range of 3 indices
Kazakstan	0.754	0.63	0.72	0.92	<b>0.29</b>
Kyrgyzstan	0.706	0.52	0.72	0.88	<b>0.36</b>
Tajikistan	0.663	0.39	0.71	0.89	<b>0.50</b>
Turkmenista	0.704	0.54	0.68	0.89	<b>0.35</b>
Uzbekistan	0.686	0.50	0.71	0.84	<b>0.33</b>
<b>For comparison</b>					
Canada	0.935	0.91	0.90	0.99	<b>0.08</b>
Saudi Arabia	0.747	0.77	0.78	0.69	<b>0.09</b>
Turkey	0.732	0.69	0.74	0.76	<b>0.07</b>

\* I.e., GDP less the average of education and life expectancy

Source: UNDP, (Global) Human Development Report 2000

PS1/1

The GDP index value is considerably lower in the central Asian countries than either life expectancy or education (a combination of adult literacy and overall school and university enrolment), whereas in the three countries (Canada, Saudi Arabia and Turkey) selected for comparison and fairly typical of the non-transition countries, the index values of GDP, health and education are fairly similar (see the final column in Table 2).

Much depends however on how education and health are defined and measured. Adult literacy is little affected by short-term change. On the other hand, there has been a distinct decline in recent years at the pre-school and upper-secondary school levels and in the quality (as distinct from quantity) of education at all levels. In health, life expectancy has been less affected in the short run than certain forms of morbidity (diphtheria in the mid 1990s, tuberculosis, malaria in certain countries) or healthcare services as distinct from health status.

#### **4. Current methods of measuring poverty in Europe**

##### **4.1 Monetary and other approaches**

The common element in poverty measurement is in the definition of the criterion, a minimum 'line' below which people are identified as poor. The lines may be monetary (say \$3 per person/day) or material (households having or not having specified possessions or an income expressed in bread or similar). The lines might be absolute (\$3 per person/day) or relative (a specified distance below average national income, for example). Assessment might be objective (as in the above examples) or subjective (those *considering* themselves as 'unable to make ends meet' might be defined as poor). Poverty might also be defined in a more sophisticated fashion: in terms for example of a lack of opportunity to improve one's condition, as a result of ill-health or lack of education.

For any one concept, there might be a variety of methods. Thus, relative lines might be defined in terms of the lowest five per cent of the population in income or in expenditure; alternatively as those 50 (or some other number) per cent below the national mean or the national median income or expenditure.

Some of the basic criteria and methods in common use in Europe are outlined below.

#### 4.1.1 'Absolute' (or 'implied relative') monetary poverty lines

The most common practice in national statistical offices or appropriate ministries in the countries of the region is to relate poverty to minimum subsistence. In other words, a minimum is defined in absolute terms (so many calories, so much bread, so much money). An absolute minimum is normally defined in physiological terms (in relation to needs required to maintain health, for example), more recently in cultural as well as physiological terms. The European Council of Ministers in 1984 defined the poor as 'individuals or families whose resources are so small as to exclude them from the minimal acceptable way of life of the Member State in which they live.' Since the minimum so defined relates to national cultural patterns it may well vary among countries and in the same country over time.

In this sense, there is no such thing as an absolute 'absolute' line. Whether a person is poor depends in part on the condition of his or her mates and on prevailing cultural norms. The term 'implied relative', to distinguish it also from the 'explicit relative' concepts described in the following section, may be a more appropriate term. However, for convenience, the use of 'absolute', albeit in inverted commas, has been retained.

A common method of determining 'absolute' poverty lines is to base them on the physiological requirement for food, commonly 2,100 to 2,400 (or some other, similar figure) calories per capita per day for an active adult. The least cost of providing the calories, taking care to provide a reasonably mixed diet that contains other essential micronutrients, is next calculated.<sup>21</sup> This cost is next upgraded by adding an item for non-food needs.

The calculation of this item crucially affects the final result. When the minimum budget was first calculated in this way in the United States in the 1960s, food amounted on an average to one third of total average household consumption expenditure. Hence, the minimum cost of food was multiplied by three to reach the total minimum budget. There is nothing especially sacrosanct about the figure three. The actual ratio has greatly varied in practice when applied elsewhere. Ideally, the figure should express the relationship between food and non-food consumption expenditure for the group just above the poverty line, rather than on the consumption expenditure of the poor, since the purpose of the poverty line is to indicate the minimum required so as to avoid poverty. *Current practice in some countries to determine the ratio of non-food to food expenditure by reference only to consumption expenditure of the poor is methodologically wrong and results in unduly low poverty lines.* The poor cannot afford health care and hence spend very little money on such care. To use their expenditure pattern as standard entails circular reasoning.

An alternative, namely to estimate the cost of non-food items by first deciding what items are essential (e.g., clothing, fuel, medicines, etc.) one at a time, then costing

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<sup>21</sup> In some countries the cost of a food basket varies considerably between summer and winter. For a given income, this might place considerably more people below the poverty line in winter than summer. To avoid this seasonal fluctuation, it is proposed here that the cost of the basket (and the extent of poverty) be calculated only once a year, based on average annual prices.

them – as in the estimation of minimal food - is less commonly used, if only because it is difficult to reach agreement on which items are essential.

Scaling. The calculations are initially for a household of standard size and composition. Allowance is usually made not only for the greater number of persons in some households, but also for the economies of scale that arise from sharing common facilities, such as housing space and fuel. As noted above, the 'modified' OECD scale is commonly used in Europe (first adult=1, additional adult=0.5, children=0.3). According to EUROSTAT (1998) the results differ little whether the classical and the modified OECD scale are used in EU member states, but it may be different in CITs.

The results vary according to whether they are expressed in terms of households or persons. The initial calculations are normally in terms of households, which is the unit in terms of which income and expenditure are obtained before recalculation in terms of the number of persons in the household. As in most countries poverty is marginally the greater in the larger households, the proportion of poor individuals - other things being equal – will be greater than the proportion of poor households. The recalculation in terms of persons, weighting each household by the number of household members, is favoured by the European Commission.<sup>22</sup> The reason for this choice is not very obvious since it implies the unrealistic (and usually unstated) assumption that income and needs are evenly divided among household members.<sup>23</sup>

Variations of the 'absolute' concept are used. An example is the 'bread basket' concept in Armenia. This was empirically determined on the basis that (a) bread accounts for a large proportion of total expenditure (which it does in Armenia), (b) that *absolute* expenditure on bread rises fairly systematically with income. Two poverty lines were then constructed, respectively at the levels at which expenditure on bread was 2,244 drams per capita/month<sup>24</sup> (identifying the *very poor* as those with expenditure below this level) and 3,000 drams (identifying the *poor* as those with expenditure on bread between 2,244 and 3,000 drams).

The World Bank's one dollar per day/person criterion is a further example of an absolute monetary poverty line. These are 1985 dollar values at exchange rates. Current values adjusted for inflation and the relative national purchasing power of the dollar would be considerably higher.<sup>25</sup> The one-dollar a day concept was probably never intended as more than a rudimentary approximation to the real needs in any one country.<sup>26</sup>

There is another sense in which income related to the poverty line does not measure deprivation adequately. The term secondary poverty was first used by Rowntree to denote a condition where an income would suffice if optimally spent,

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<sup>22</sup> EUROSTAT 1998.

<sup>23</sup> A variation of this idea is to count the numbers of men and women in poor households and thus arrive at what is intended as a measure of poverty disaggregated by sex. It is so however only on the assumption that men and women share income/expenditure and needs equally within households, a mostly unproven, and in general unlikely, assumption.

<sup>24</sup> 2,244 drams provide (bread and other food combined) 2,100 kilo calories per person/day.

<sup>25</sup> The poverty lines on this basis for eastern Europe and the CIS as listed in the Human Development Report 2001 (Table 4) are respectively \$4 (1990 ppp) and \$11 (1994 ppp).

<sup>26</sup> Acknowledged as such by the World Bank itself (World Poverty Report 2000/2001, p. 18).

but in fact is not so spent.<sup>27</sup> People may smoke and drink instead of spending their meagre income on essentials, such as milk and carrots. It is a consideration of this kind that led George Orwell to comment on a nutritionally optimal diet:

Would it not be better if they spent more money on wholesome things like oranges and wholemeal bread or if they even, like the writer to the letter to the *New Statesman*, saved on fuel and ate their carrots raw? Yes, it would, but the point is that no ordinary human being is ever going to do such a thing. The ordinary human being would rather starve than live on brown bread and raw carrots. And the particular evil is this, that the less money you have, the less inclined you feel to spend it on wholesome food. A millionaire may enjoy breakfasting off orange juice and Ryvita biscuits, an unemployed man doesn't. ... When you are unemployed, which is to say when you are underfed, harassed, bored and miserable, you don't *want* to eat wholesome food. You want something a little bit 'tasty'.<sup>28</sup>

Marres and Van der Wiel made the same point in respect to poverty lines in Lesotho. They pointed out that people living on small incomes in Lesotho behave with a different rationality from those who compile the minimum budgets. They proposed that 50 per cent be added to the minimum budget to allow for the satisfaction of "strongly felt needs". These include tobacco, sweets, alcohol, radios, since in practice this is where some money will go at the cost of essentials.<sup>29</sup>

It is policy in some countries to assess poverty lines for their practical significance in administration. If the purpose of the calculation is to estimate the numbers that require official assistance, governments may reject or modify methods that yield more poor than the government can afford to relieve.<sup>30</sup>

The Kyrgyz Human Development Report in 1996 makes this point explicit:

(The poverty line in Kyrgyzstan is) ... not a figure that is fixed once and for all. Its level depends on various capacities of the economy and the state budget, and on how feasible it is to provide social support and to how many people. It is linked to the minimum consumer budget (MCB) which itself is flexible. The low end of the MCB could be set at the level below which real danger to physical human existence is bound to ensue. The high end depends on the economic conditions of the society. The richer the society, the higher the MCB and conversely ... By lowering the poverty line, the state 'frees' itself from the worry of providing social support to this portion of the population. ... It is the state's profound insolvency that necessitates this step, not any ill will on its part.

It is thus common practice in some of the CITs to calculate at least two absolute lines, one to identify the poor (using normal poverty lines based on food and non-food commodities), the other (based on food needs alone) to identify the very poor.

In conclusion, the criteria to determine poverty lines noted here relate to 'absolute' needs. However carefully defined, however, the lines tend to retain arbitrary

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<sup>27</sup> See B.S.Rowntree 1942. Rowntree made no use of the concept of secondary poverty in his first study.

<sup>28</sup> George Orwell, *The Road to Wigan Pier*, Victor Gollancz, London, 1937.

<sup>29</sup> P.J.Th.Marres and A.C.A.van der Wiel, 1975.

<sup>30</sup> The explicitly relative poverty line (see below) would be the logical outcome of this argument. It seeks merely to identify the poorest five or ten per cent – or whatever percentage the government can hope to succour - without bothering to calculate an absolute minimum.

elements. This is the more so if the final result is based on the assessment of food needs multiplied by a constant for non-food items.

#### **4.1.2 Relative ('explicit relative') monetary poverty lines**

The assumption here is that because of cultural factors poverty is always relative. This being so, poverty might as well be defined as such in formal terms. A more persuasive argument is that the use of explicit relative lines avoids many of the difficulties and ambiguities described in previous paragraphs. There is no need to identify minimum subsistence baskets, for example. The point to note however is that the use of explicit relative lines is justified only when the purpose is measurement of poverty in relative terms. It is no longer a lack of means to buy essentials, but having less income than Mr. Smith next door.

The explicit relative lines usually take one of two forms: (i) the lowest ten (or some other figure) per cent in an income (or expenditure) distribution or, more commonly, (ii) a proportion (commonly 40, 50, 60 or 70 per cent) of mean or median national household income (or expenditure). Households below this figure are defined as poor.<sup>31</sup>

Relative poverty lines of this kind have been recommended for EU Member States, most recently as part of the European Commission's scheme to define social objectives in terms of social inclusion and poverty reduction, set targets and list indicators to assess progress. Recent work towards this end is described in a paper by Atkinson, Cantillon and Nolan (2001).<sup>32</sup>

The indicators of social inclusion/exclusion proposed in the Atkinson paper cover a range of dimensions similar to those in Figure 1, including income, employment, health, housing, education and social participation (social inclusion in the sense of Figure 1). Income poverty is defined in terms of relative poverty lines. A list (the 'Laeken indicators') based in part on Atkinson's recommendations was subsequently approved by the Council of the European Union at its meeting in Laeken, December 2001 and now sets the reporting framework for member states of the EU (Annex E). It includes a single primary indicator<sup>33</sup> of poverty, namely the percentage of individuals living in households where the total equivalised household income is below 60 per cent national equivalised median income (disaggregated by age, gender, activity status, household type, tenure status, and selected household types as illustrative examples). Secondary indicators give the dispersion around the 60 per cent median (corresponding to 40, 50 and 70 per cent below the national median); the low-income rate anchored at a point of time (for temporal comparisons); low income rates before transfers; and the persistence of low income (based on 50 per cent of median income).

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<sup>31</sup> See EUROSTAT 1998 for an interesting discussion of relative poverty lines in the European Union. As of mid-2000, the lines favoured by the European Commission were (explicit) relative lines at respectively 40, 50 and 60 per cent of the national median (EUROSTAT 2000). Further work was recommended on absolute poverty lines and on a common EU line. See also Atkinson 2001.

<sup>32</sup> Presented at the Conference on Indicators of Social Inclusion: Making Common EU Objectives Work, Antwerp, September 2001

<sup>33</sup> Two levels of indicators are proposed for common use by Member States: leading indicators (Level 1) and complementary indicators (Level 2). A third level of indicators would cover specific national concerns.

The advantages of relative poverty lines, as noted, include conceptual clarity and simplicity. The disadvantages are several:

- ◆ The cut-off point – whether it is 40, 50, 60, 70 or some other percentage below the average – remains arbitrary.<sup>34</sup>
- ◆ The choice between national mean and median, similarly, is to some extent arbitrary, even if an argument can be made for the median on the grounds of avoiding extremes and skewness.
- ◆ Comparisons over time within the same country or among countries at a point of time are difficult to evaluate – since it is in reality national averages and distributions below the line that are compared. A fall in the proportion of poor so defined may be the result of a decline in the national average or a change in the distribution of income amongst those below the line, while the condition of the poor remains unchanged in absolute terms.<sup>35</sup> This is consistent with the definition of poverty as a purely relative concept, but it needs explaining, and may not match the purpose of the exercise.
- ◆ The method requires the calculation of a national mean or median, which presupposes precise information on the incomes of the upper income group, information that in practice is highly unreliable (the potential error is eliminated if the median is used rather than the mean). The absolute poverty line requires only approximate information on the upper income groups.

#### **4.1.3 Poverty concepts involving non-monetary factors**

Three quite different situations can be distinguished:

##### **(a) Non-monetary, material items**

In Ireland in recent years (as part of an official anti-poverty strategy) poverty has been measured, as well as through income, in such terms as having to go without a substantial meal all day, inability to afford adequate heating or buying second-hand rather than new clothes.

In Estonia, similarly, use has been made of concepts such as ownership of a secondary residence (datcha), a private motor car, the number of rooms relative to the number of people living in them, and central heating, adding an element of stock to the flow concept of income (UNDP, Estonia 1996). A sample of households was rated according to possession of five items: ownership of a secondary residence (datcha), a private motor car, household income above 1,500 krona, housing: in terms of the number of rooms relative to the number of people living in them, and central heating. Households with zero or only one of the five items were defined as poor.

One trouble with this kind of measurement (apart from the somewhat arbitrary selection of these, rather than some other, items) is that all items are given the same importance or weight (or what is the same thing, they are unweighted). An attempt to introduce weights was attempted in a subsequent study in Estonia. The study, in which poverty was compared among Estonia, Sweden and the United Kingdom, was in two parts. In a first stage, a sample of households was asked how essential they deemed each of 20 items such as a washing machine, new

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<sup>34</sup> Curiously, a cut-off point of 60 per cent below the median (with alternative lines at 40 and 50 per cent) was recommended on the basis that it provides an *absolute* minimum subsistence (EUROSTAT 1998).

<sup>35</sup> Similarly, the relatively large proportion of poor in Luxembourg, the wealthiest country of the EU, arises from the relatively high median income in Luxembourg.

clothes, a hobby, an annual holiday involving travel, a special meal once a week. On the basis of the replies each item received a rating. Thus, if 82 per cent of the respondents considered a washing machine essential then the washing machine received a rating or weight of 0.82. In a second stage, respondents were asked which of the 20 items they actually owned or if not owning would like but cannot afford to own. Each household in the sample next received a score according to ownership of the item, weighted according to stage one results. Households were then ranked according to this score, and those with a score below certain minima defined as very poor, poor, etc.<sup>36</sup>

This and similar methods using non-monetary items have advantages and disadvantages compared with monetary poverty lines.<sup>37</sup> Advantages include the fact that no equivalencies are required, nor is it necessary to collect income or expenditure data – a very important advantage, given the difficulty of such data.

The disadvantages include first the choice of items, a choice that tends to be arbitrary. No two researchers would select the same list, but depending on which items are selected the results would certainly differ. Second, there is no logical means of determining thresholds. To say, as was done in Estonia, that households without at least two of the five items are poor might make perfect sense in the context, but it is nonetheless an arbitrary act. Why not one or three items? Changing the contents of the list, on the one hand, and shifting the criterion, on the other hand, would greatly affect the final result.<sup>38</sup> Third, interpretation of the results is uncertain. A lack of possessions may indicate a lack of means or deliberate choice. Adequacy of possessions may indicate past, rather than present, conditions.

Still another technique consists of mapping small local areas according to degree of poverty. Mainly housing variables are selected because of their known correlation with monetary poverty. Information on these variables is then collected in the census and mapped.

#### (b) Non-monetary, non-material poverty

Another case arises if poverty is defined in a non-material sense. “Happiness cannot be bought with money”, and similarly there may be other poverty-related aspects that money cannot buy. The UNDP approach to poverty measurement is a case in point:

More than a lack of what is necessary for material well being, poverty can also mean the denial of opportunities and choices most basic to human development. To lead a long, healthy, creative life. To have a decent standard of living. To enjoy dignity, self-esteem, the respect of others and the things that people value in

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<sup>36</sup> An alternative to the weighting method as used in Estonia would have been to construct Guttman scales which assume a mathematical relationship between the items included in the scale.

<sup>37</sup> The Engel coefficient (consumption expenditure on food as per cent of total consumption expenditure) is another commonly used indicator to determine the level of poverty. It is applied to sub-national regions, groups or countries rather than individual households, however.

<sup>38</sup> The relationship of a lack of possessions to poverty is complex. This is because of historical factors, such as the scarcity of goods as distinct from money in Soviet times or the fact, related to this phenomenon, that especially in the older households many of the possessions are worn and thus of little value.

life. Human poverty thus looks at more than a lack of income. (*Human Development Report 1998*, p.25)<sup>39</sup>

Some of these items (for example a 'decent standard of living') can be obtained with money. Others presumably cannot, for example if poverty is defined in terms of "the absence of basic human capabilities to function at a minimally acceptable level within a society." (R. Lok-Dessallien, *Review of poverty concepts and indicators*, UNDP poverty website). To function properly and escape from income-poverty a person should be healthy and well educated. In other words, the emphasis here is not so much on current income, but on the qualities that enable a person to earn sufficient income any time.<sup>40</sup>

To accommodate this concept, UNDP has created two versions of a human poverty index, one for developing, another for industrialised, countries.<sup>41</sup> It is the latter which is said to be relevant to Eastern Europe and the CIS. However, for lack of data (or conviction?) many countries of the region make use of the index for developing countries. The indicators for industrialised countries are as follows:

- ◆ the percentage of persons not expected to survive to age 60
- ◆ the percentage of persons who are functionally illiterate (in terms of the OECD standard P2 literate test)
- ◆ the percentage of persons in households with incomes below 50 per cent of average national disposable household income
- ◆ the long-term (12 months or more) unemployment rate.

The indicators are combined with equal weights to form the human poverty index (HPI). The HPI differs from the methods discussed earlier in three major respects:

(i) Poverty is broadly defined to embrace as well as a measure of relative income and unemployment aspects of the capability to avoid poverty, such as health (longevity), education (basic literacy). While the concept may be sound, it is questionable (especially in the countries in transition which have conditions different from those of most developing countries) whether the proposed indicators match the concepts. Human poverty is defined by the index in terms of the capacity of people to avoid, or extricate themselves from, poverty. The indicator in education is adult or functional literacy, but it is doubtful whether in this technological age bare literacy (or even simple functional literacy) is sufficient to avoid poverty, and especially so in the changed situation in which people found themselves after the collapse of the Soviet regime. More specifically professional skills are required, but for these no indicators are proposed.<sup>42</sup>

(ii) The index serves to identify poor *countries* (or major groups and areas within countries). It cannot be used to identify poor individuals or households

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<sup>39</sup> A 'decent standard of living' and 'the things that people value in life' may be material as well as immaterial, however.

<sup>40</sup> The concept is based mainly on the work of Amartya Sen, e.g., Sen 1999.

<sup>41</sup> For example *Human Development Report 2000*, p.141ff, 269ff.

<sup>42</sup> This is fairly typical of the 'indicator movement'. Indicators are proposed as a 'best approximation' to what they are intended to indicate (e.g. literacy as an indicator of professional capability). The best may not be very good, but this is forgotten in subsequent analysis, which reverts to the basic concepts, ignoring the fact that the indicators do not adequately represent the concept.

within a country, as can the poverty lines discussed earlier.<sup>43</sup> This critically affects its effectiveness as a tool in analysis, for example to relate income-poverty to other components of human welfare at the level of the individual. Since households or individuals cannot be identified it also affects the role of the index in intervention (e.g., supplying the poor with food parcels). None of this matters, however, if the purpose of measurement is inter-country comparison (its principal purpose in human development analysis in UNDP's global reports, for example).

(iii) The usefulness of the method depends on the purpose of the measurement and its relation to policy. It is however hard to conceive of any purpose for which measurement in terms of a multi-dimensional index would be more suitable than measurement in terms of its separate components. In the end we wish to know how each separate component factor changes over time, and on this basis evaluate the role of policies and programmes.

(c) Subjective poverty

The method is to ask respondents questions such as whether they consider themselves to be poor (or unable to make ends meet, etc.) and to classify them as poor if the response is in the affirmative.<sup>44</sup> When several questions of this kind are combined the problem of weights arises. Moreover, the choice of threshold becomes an arbitrary act: the proportion of poor can be raised and lowered almost at will by adding or subtracting questions and by moving the threshold.<sup>45</sup> As noted above, the usefulness of this concept depends on the purpose of measurement. It is of little use if the purpose is to identify the destitute. It is useful, on the other hand, in a political context if for example the purpose is to gauge popular satisfaction and how this changes over time.

(d) Multi-dimensional measures

On the understanding that poverty is multi-dimensional, several countries have recently reported estimates of poverty derived jointly from parallel concepts of poverty.<sup>46</sup> To give Poland as an example, three concepts were used: (a) A relative line, 50 per cent below national median household income, (b) Household possessions (households defined as poor if they had fewer than 11 out of 21 items), (c) Subjective poverty.<sup>47</sup> As the cut-off points were apparently selected to this end, the three concepts yielded about the same degree of poverty, about 10 per cent of households.<sup>48</sup> Since the data were obtained from a common survey it was possible, moreover, to calculate the correlations in poverty derived from the three dimensions and identify those who were classified as poor in respect of one,

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<sup>43</sup> Thus, one of the indicators, life expectancy (survival to age 60) is a measure of central tendency that cannot be applied to the individual household or person. Similarly, long-term unemployment can be measured in respect of a country or large area or group but, because most households have no unemployed persons, not for the majority of households or individuals.

<sup>44</sup> A combination of eight subjective items was used in a recent study in Poland (Poland 2000).

<sup>45</sup> I.e., a threshold may be defined in terms of the number of positive answers received, a household being defined as poor if it replies positively to a given number of questions.

<sup>46</sup> SUSR, EUROSTAT, INSEE, Seminar on International Comparisons of Poverty, Bratislava, 2000.

<sup>47</sup> Anna Bienkunska, Multidimensional analysis of poverty in Poland, Seminar on International Comparisons of Poverty, Bratislava, 2000.

<sup>48</sup> It is not clear from the report whether the cut-off points were chosen deliberately to give this result, and if so why.

two or all three criteria. The correlations among the three concepts were low,<sup>49</sup> so that only about one per cent of the households were poor in all three dimensions.

The usefulness of this approach again depends on the purpose. As it so happens in the example none of the three measures identifies the poor in absolute terms. As noted above, even adequacy of household possessions, which comes the closest, may indicate past, rather than present, conditions, while a lack of possessions may indicate choice as well as necessity. However, the multi-dimensional approach may do very well if the purpose is to identify those lacking in possessions as well as the poorest in income terms as well as those who perceive themselves as poor whether or not they are so in objective terms.

#### **4.2 Temporary and chronic poverty**

As panel studies have shown, many households move into and out of poverty. A distinction sometimes made between temporary and chronic poverty is possible only through the use of panel-type studies whereby the same households are examined over several years. They might be counted as chronically poor if in poverty three (or some other number) years running. Changes in poverty might then be measured in terms of the chronic poor only, or the chronic combined with the temporary. As few countries in transition conduct regular panel studies the choice rarely arises.

#### **4.3 Regional poverty lines**

Special precautions may be required in the case of wide differences within a country in respect of patterns of income and expenditure. The cost of living in rural areas may be well below that in urban areas and similarly as regards income. Let us take an extreme, fictitious case. The rural population constitutes half the total population in a country. All rural inhabitants earn 100 units of income. The cost of necessities is also 100 units per rural dweller, so that nobody falls below the poverty line. In urban areas, income and the cost of necessities are 200 units. A national poverty line would therefore be 150 (the average of 100 and 200). Half the population, namely all rural dwellers since they earn only 100 units, would lie below this line and be identified as poor. All urban dwellers would be non-poor.

This is an extreme case, which nonetheless demonstrates the risks of a single national poverty line in conditions of heterogeneity. In practice, urban and rural conditions are not so far apart in terms of the cost of necessities. Extreme conditions are more likely to be found as between the capital cities, that in the region have tended to attract what wealth there is, and the remainder of the country. In any case, given the complexities and the lack of data, countries might find it difficult to calculate regional poverty lines and regional poverty.

#### **4.4 Conclusions**

Purpose. A large number of alternative concepts and methods are available to measure poverty. Their appropriateness in any particular instance depends on the purpose of the measurement (which should be, but rarely is, made explicit). Most commonly, the (implicit) purpose in CITs is to obtain an estimate of the number of persons in various degrees of absolute poverty, to count them and to identify them in terms of socio-economic categories (the elderly, the underemployed, large families, etc.). A subsequent step on the basis of the figures, if the government can afford it, is intervention to reduce poverty.

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<sup>49</sup> The people with relatively low income were rarely the same as perceived themselves in poverty nor the same as had few possessions.

Options. But even if the purpose is clear, many options remain in respect of both concept and measurement, resulting in any one country in a variety of alternative estimates. Most commonly, the options are between monetary and non-monetary concepts, and within each between absolute and relative poverty lines. There is agreement that poverty is a multi-dimensional problem, but confusion over what this means and how the results are best evaluated.

Monetary concept. The monetary concept is the most widely used. It means for any one household calculating a monetary equivalent of real income and comparing it with a monetary equivalent of needs (absolute lines) or with national average income. The poor are those for whom the balance between income and needs is negative or who fall a specified distance below the average. Options remain. The use of absolute lines requires the identification of a minimum subsistence basket, containing food and non-food items. While there is usually approximate agreement on the food items, estimates of what are essential non-food items vary widely. This choice is avoided by relative lines, but in turn these require other, often quite arbitrary decisions, for example in respect of cut-off points (where does poverty begin, at 40%, 50%, 60% of the national average, for example?). And quite apart from this, the significance for policy purposes of a relative line is very different from that of an absolute line. We always return to the need to match concept with purpose.

Non-monetary, material factors. The use of non-monetary, material factors, such as possession of household possessions or consumption patterns, provide still different alternatives. They have certain advantages, for example immunity from short-term fluctuations, and do not depend on possibly dubious estimates of income. On past experience, however, it is difficult to reach agreement on a suitable list of such items (and their relative importance) within a single nation, and much more so for purposes of international comparison. The cut-off points, again, are arbitrary (where does poverty begin, if 5 or 6 or 7 or more items are missing?).

Subjective methods. The validity of *subjective* methods (another non-monetary concept) depends largely on the purpose of measurement. Subjective estimates are of little use if the purpose is to identify the destitute (those unable to satisfy basic needs) with a view to providing them with minimal assistance. On the other hand, they may be of considerable interest in the broader context of sociological or political studies. Some governments may be more concerned with how people feel about their condition (and by implication how they feel about the government) than in knowing the extent of objective poverty. In response to an objective assessment, governments may assist those in genuine need. A logical response to those *considering* themselves poor might be propaganda to make them *feel* better.

Multi-dimensional. A so-called *multi-dimensional* approach, finally, has arisen in response to the lack of agreement over any one concept. If in doubt, why not present all the alternative estimates, and perhaps derive a common factor, which is poverty writ large. There are several problems with this approach. It confounds the different purposes of measurement. Secondly, it shifts the burden of decision to politicians who probably understand the issues less than the technicians. Nor, thirdly, does the expedient of taking the common element, that is households who are poor whichever method is used, altogether solve the problem. There is understandably little correlation among the methods, so that the selection (a mere

one per cent of all households in Poland, for example) may not be typical of the poor in general.

Given the present confusion (and arbitrariness) it is relatively simple, whichever the method, by manipulating thresholds, concepts and definitions, to modify the degree of measured poverty, or even to determine whether poverty should fall or rise over time. With this concern in mind, the question is posed in the next section whether poverty lines are the only satisfactory approach to poverty measurement or whether alternatives exist that reduce the arbitrary element not so much in the measurement itself as in its evaluation, since this after all is the ultimate purpose.

## **5 Criteria of satisfactory measurement<sup>50</sup>**

The following are criteria that might be used in judging the effectiveness of poverty measurement and evaluation:

- The results should correspond to the given purpose. If the purpose is to identify all those in need, some form of absolute measurement is required. It could be a poverty line based on food plus non-food essentials, converted or not to its monetary equivalent, or based on household possessions or behaviour. One or more lines might be constructed to reflect various degrees of poverty. If alternatively, the purpose is to identify the poorest, whether or not they are poor in an absolute sense, a relative monetary or non-monetary line might be appropriate. If, again, the purpose is to identify those who consider themselves as poor (whether or not they are so in an objective sense) then the measurement might be through the use of questions on such perceived poverty. In any case, a clear statement of the purpose is the first, essential step.
- The method should be transparent and intelligible to the layman as well as expert. As there is almost always an element in arbitrariness in the choice of concepts and methods underlying assumptions should be clearly explained. This process in itself would tend to favour the least complex methods because they are the more easily explained.
- Concept and method should be subject to the usual norms, such as robustness, timeliness and the like.

## **6. Improved poverty measurement**

It is assumed in what follows that poverty measurement serves to identify various categories of poor, including the poorest, in terms that make it possible to

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<sup>50</sup> The European Union has proposed the following criteria:

1. Indicators should capture the essence of the issue to which they relate.
2. Indicators should have a clear normative interpretation.
3. Calculation of indicators should be transparent.
4. Calculation of indicators should be robust.
5. Calculation of indicators should be timely.
6. List of indicators should be balanced and internally consistent.
7. List of indicators should be a minimum requirement, to be expanded as necessary to suit national circumstances.
8. List of indicators should not impose an excessive collection/processing/validation burden on reporting countries.
9. List of indicators should be complemented by appropriate context indicators in any eventual presentation of results.

intervene. There is consensus at the same time that the poor, however defined, are deficient also in dimensions other than income. They may be undereducated, sick, malnourished and socially excluded. In the conditions of the CITs, however, a lack of money is still the critical factor. With enough money, household durables, medical services and even education can be bought. It is proposed therefore to begin with income-related poverty and in a later section see how this can be related to other human welfare factors. A household income distribution (or valid proxy, such as distribution of expenditure) is a first requirement.

## 6.1 Household income and its distribution

Household income may be defined in many different ways, depending on the purpose.<sup>51</sup> The distinction might be between regular and occasional sources of income and issues such as whether imputed rent in owner-occupied and rent-free accommodation or government transfers might be included or not. Whether and how to include income in kind is another key-question. A clear statement of the purpose is essential. Where for example the purpose is to ascertain whether people can manage without government or other assistance, income *before* such assistance is relevant.<sup>52</sup> A study in one country in transition in 2000, for example, showed income of the local population as well as of two categories of internally displaced persons (IDPs) both before and after government transfers (Table 3, lines 4 and 6).

Table 3  
Estimates of real income before and after government assistance

units/month/household	Local	IDP	IDP	
	Population	Private	Collective	
1. Mean income as in survey	104	112	83	As reported in the survey
2. Mean cash expenditure as in survey	123	120	98	Substitute this as more reliable
3. Ratio of total SDS expenditure to SDS cash expenditure**	1.24	1.21	1.16	Ratio of total, to cash, expenditure
<b>4. Estimated average h'hld expenditure of this:</b>	<b>152</b>	<b>146</b>	<b>114</b>	3. Applied to 2. to compensate for non-cash expenditure in survey
5. Government assistance	-12	-40	-38	less govt. assistance
<b>6. Estd. av. h'hld expenditure as it would be without government assistance</b>	<b>140</b>	<b>106</b>	<b>76</b>	expenditure before assistance

\* IDP non-cash expenditure weighted to account for differences in urban/rural distribution

\*\* SDS = State Department of Statistics

PS1/2

IDPs in this country were said to receive considerably more government assistance than the local population. The question was whether or not this practice is justified and should be continued. For this purpose, data were required on income *prior* to government assistance as well as the amount of assistance. The figures suggest that IDPs in private accommodation (with better chances of employment than those in collective accommodation) nonetheless have critically smaller incomes than the local population before government aid – and the more so IDPs in collective centres. Government transfers restore the balance, but only to some extent. A large gap remains in the case of IDPs in collective centres.

The figures also show the impact of using reported consumer expenditure rather than reported income (lines 1 and 2), and between cash and total expenditure

<sup>51</sup> The United States Bureau of the Census makes use of 58 variations of income. Cf. Weinberg 1997.

<sup>52</sup> IFRC 2000.

(lines 2 and 4).<sup>53</sup> In the above table, the survey figures (which included only cash income) were 'corrected' by using independent data from the National Statistical Office. At any rate, it is important in analysing income data to be aware of the methods used and possible pitfalls. The difference between lines 1 and 4, each of which provides an estimate of income (or expenditure as a proxy for income), is very large indeed.

What matters in monitoring is that definitions should be the same over time, and when methods are changed, as may become inevitable over time, that the new and old series be linked. But clearly, which definition is used becomes a major issue in evaluation.

**As will become clear in the following sections, income should always be reported in terms of a distribution as well as in terms of the mean and median.** Because household incomes vary with household size (the larger households tending on an average to have more earners as well as dependants) a common method is to report per capita household data (i.e. dividing total income by the number of persons in the household). Alternatively, and depending on the purpose, allowance might be made for the sex and age of household members, using a concept such as adult equivalency (a child being counted as one third of an adult, for example). EUROSTAT has recommended for its Member States in this context the use of the OECD modified scale (the first adult equals one, the second equals 0.5, each juvenile under 15 equals 0.3).

Other recommendations by EUROSTAT include the following, some of which may apply also to CITs.<sup>54</sup>

♣ Use of the following definition of income:

**Plus**

+ Income from activity	1. Compensation of employees 2. Income from self-employment 3. Operating surplus of the owner-occupied dwelling 4. Income from other activity
+ Income from property	5. Income from property
+ Transfer income	6. Social security benefits and social welfare assistance 7. Other money transfers

**Minus**

Compulsory payable transfers	8. Taxes on income and wealth 9. Social security contributions 10. Other
Voluntary transfer payments	11. Inter-household transfers received

- ♣ That income should include an item for net imputed rent.
- ♣ That income should include income in kind as well as cash.
- ♣ The use of individuals, rather than households, as unit of analysis.

<sup>53</sup> Including the equivalent of non-cash expenditure. The results, further, vary according to the method of collecting the information, for example the way questions are put in a survey.

<sup>54</sup> 31<sup>st</sup> Meeting of the Statistical Programme Committee, Luxembourg, November 1998. The definitions have since been modified. Cf. European Union, Draft income manual. See also the draft EU-SILC regulations, which give an extended definition of income.

- ♣ The use of income directly (rather than consumption expenditure) as an indicator of income.

These recommendations were derived on the basis of experience (and simulation) in EU Member States and do not necessarily apply to CITs. It is common practice in many of the CITs to consider consumer expenditure as a better indicator of real income than reported income itself, for example.

The International Labour Office, similarly, has recently updated its recommendations on household income and expenditure surveys. The references are given in the bibliography (Annex D).

Data on household income and its distribution are normally obtained from household sample surveys. Any single question on total household income in a survey is unlikely to obtain valid results in the region, given the variety of sources of income, some of them illicit or illegal, little of it reported to the tax collector. The data might be improved by asking for income separately from each household member with earnings, and in respect of each potential source (formal and informal, continuous and casual). Asking for income data in a consumer budget survey would further provide an opportunity to check income against consumer expenditure.

## 6.2 Evaluation of poverty measurement

The following shows (by means of a fictive, but realistic, example) how income distributions might be used to interpret various monetary poverty lines. Certain simplifications have been made for the sake of clarity.

- ♣ Income, rather than consumption expenditure, is used for convenience of exposition, but this by no means precludes the use of the latter where it is likely to yield more accurate data.
- ♣ Similarly, in the place of per capita household income, some other measure, such as per adult equivalent household income, might be used. The argument itself is not affected by the simplification.
- ♣ In the tables below, showing changes over time, it is assumed that neither prices nor the number of households changed between 1995 and 2000, which again does not affect the basic argument.
- ♣ All changes are given as net.
- ♣ In the tables that follow, the distribution proceeds by 50 units to 99, then at intervals of 100. This is to emphasise the importance of detailed information for the poorest groups, although of course the classification actually used in any country depends on local conditions.

Table 4 is the basic table, which shows how many households have how much per capita income:

Table 4  
**Income distribution 1995**  
(Data fictive)

Per capita household income/month	No. of households '000 <b>1995</b>
-49	234
50 - 99	523
100 - 199	678
200 - 299	512
300 - 399	495
400 - 499	324
500 - 599	298
600 - 699	201
700 - 799	125
800 - 899	101
900 - 999	87
1000 plus	79
Total	3 657
Median	276

PS1/9

How had the distribution changed by the year 2000?

Table 5  
**Income distribution 1995 and 2000 (data fictive)**  
**Prices as of 1995**

Per capita household income/month	No. of households '000	
	<b>1995</b>	<b>2000</b>
-49	234	99
50 - 99	523	456
100 - 199	678	520
200 - 299	512	841
300 - 399	495	499
400 - 499	324	329
500 - 599	298	305
600 - 699	201	204
700 - 799	125	127
800 - 899	101	105
900 - 999	87	91
1000 plus	79	81
Total	3 657	3 657
Median	276	290

PS1/9

Table 5 shows that between 1995 and 2000 the number of households in each of the three lowest categories declined, compensated largely by a net increase in the 200–299 group, and much smaller increases in the higher categories.

Let us now enter one or more poverty lines in the table. As we saw in the previous section, the process of determining these lines is to some extent arbitrary. Two lines of the 'absolute' kind are proposed in Table 6, one at 100 units of income (line A), corresponding to the cost of a minimum diet, another at 300 units, corresponding to the cost of a minimum diet plus non-food items (line B).

Table 6  
**Absolute poverty lines, 1995  
 and 2000 (figures fictive)**  
**Prices as of 1995**

Per capita household income/month	No. of households '000		
	1995	2000	
-49	234	99	
50 - 99	523	456	Poverty line A: 21% very poor in 1995, 15% in 2000
100 - 199	678	520	
200 - 299	512	841	Poverty line B: 53% poor in 1995, 52% in 2000
300 - 399	495	499	
400 - 499	324	329	
500 - 599	298	305	
600 - 699	201	204	
700 - 799	125	127	
800 - 899	101	105	
900 - 999	87	91	
1000 plus	79	81	
Total	3 657	3 657	
Median	276	290	

PS1/9

The number and proportion of poor households (line B: those with incomes below 300 units) has barely changed in this example. If however, we examine the lower line (line A) we see that the proportion of households below this line has greatly declined, a significant change which is all the more apparent if we compare the income distributions in detail: a considerable net improvement in the lowest category, smaller but still significant improvements in the following two categories. The change is almost entirely at the expense of the 200 – 299 category. There is virtually no net change in the higher categories.

**In this form of presentation, making use of an income distribution, and where the purpose is to monitor change, the weight of the statistical evidence no longer rests entirely on the choice of poverty lines.** The pattern of change is fairly clear if the lower ends of the two income distributions are compared. In one sense, indeed, the comparison of two income distributions is equivalent to the use of x poverty lines where x is the number of categories in the distribution (12 in this example).

Use of an explicit relative line (defining as relatively poor those below 50 per cent of the median: 276 units in 1995, 290 units in 2000) would give results similar to

those of the extreme poverty line in the previous table: namely a decline in poverty (Table 7) from 28 to 22 per cent. However, the information would still be incomplete as well as unrelated to an administrative concept of poverty. It would gain from the comparison of the respective income distributions.

Table 7  
**Relative poverty line, 1995  
 and 2000 (figures fictive)**  
**50 % of median h'hld income**  
**Prices as of 1995**

Per capita household income/month	No. of households '000	
	1995	2000
-49	234	99
50 - 99	523	456
100 - 138	258	234
<b>Relatively poor: 28% in 1995, 22% in 2000</b>		
139 - 199	420	286
200 - 299	512	841
300 - 399	495	499
400 - 499	324	329
500 - 599	298	305
600 - 699	201	204
700 - 799	125	127
800 - 899	101	105
900 - 999	87	91
1000 plus	79	81
Total	3 657	3 657
Median	276	290

(the drawing of the poverty line, which is 138 units in 1995 and 145 units in 2000, is approximate)

PS1/9

The assumption was made in the above tables that prices did not change in the five-year period. Table 8 below demonstrates the impact of relaxing this assumption and stipulating an increase in consumer prices of five per cent annually.

Table 8  
**Income distribution 1995 and 2000**  
 (Data fictive)  
**Income at current prices**

Per capita monthly household income		No. of households '000	
1995	2000	1995	2000
-49	- 63	234	99
50 - 99	64 - 126	523	456
100 - 199	127 - 254	678	520
200 - 299	255 - 381	512	841
300 - 399	382 - 509	495	499
400 - 499	510 - 637	324	329
500 - 599	638 - 764	298	305
600 - 699	765 - 892	201	204
700 - 799	893 - 1020	125	127
800 - 899	1021 - 1147	101	105
900 - 999	1148 - 1275	87	91
1000 plus	1276 plus	79	81
Total		3 657	3 657
Median		276	370

\*Income at current prices (increase of consumer prices assumed to be 5% per annum)

PS1/8

Incomes in year 2000, equivalent to those in 1995, are shown in the second column. The numbers of households in columns 3 and 4 remain unchanged as compared with previous tables.

The income distribution can be used also to throw light on what is called the depth of poverty (how many households/persons are how far below a given poverty line). Use is normally made for this purpose of the Sen or the Thorbeck index<sup>55</sup> but, as in the example of Table 6, income distributions provide a more immediate and transparent picture of what changes occurred.

A few technical details remain to be settled. As noted above, given the difficulty in many countries of compiling valid income data (especially in countries, such as the CITs, in many of which the proportion of wages to total receipts has greatly declined during transition) the distribution of consumption expenditure might be

<sup>55</sup>  $P = H [I + (1-I) G]$ , where P is the poverty index (Sen index), H the proportion of those below the poverty line to the total population, I the average distance of the poor from the poverty line, G the Gini coefficient of those below the line. A later, generalised form of the Sen index was developed. It includes the head count ratio, the Sen index (distance below the poverty line) and an index which assigns weights to distance -the greater the distance below the line the greater the weight:

$$P_a = \text{Sum} (0 \text{ to } z) (z_e - y_e / z_e)^a \times f(y) dy \quad a \geq 0$$

where  $z_e$  is the poverty line,  $y_e$  individual incomes, 'a' a parameter equal to or greater than 0. With  $a=0$  this becomes H (i.e., the proportion below the poverty line), with  $a=1$  it becomes Sen's P, with  $a = 2$  or more, increasing weight is given to the poorest. (Amartya Sen, "Poverty: An ordinal approach to measurement", *Econometrica*, 44, 2, March 1976; J.Foster, J.Greer and E.Thorbecke, "A class of decomposable poverty measures", *Econometrica*, 1984)

used instead. Secondly, as mentioned in the previous section, income and consumption expenditure should be defined in line with the purpose of the measurement. They would normally include goods obtained in kind as well as cash as well as imputed income. Whether or not income should also include social transfers, gifts, loans and the like depends on the use that is to be made of the data. As noted, to assess the need for assistance (for example by IDPs or refugees) the relevant figure is income *excluding social transfers*. If consumption expenditure is used rather than income, the data should, if at all possible, be adjusted to exclude such transfers.

The distributions may be disaggregated as in Table 9:

Table 9  
Income distributions 1995 and 2000 by gender  
(fictive data)

Per capita household income/month	No. of households ('000)				
	1995		2000		
	Male*	Female	Male	Female	
-49	156	78	59	40	
50 - 99	298	225	243	213	
100 - 199	391	287	281	239	<b>Poverty line set at 100 units:</b>
200 - 299	265	247	481	360	20% male h'hlds, 21% female h'hlds in poverty in 1995
300 - 399	271	224	318	181	14% male h'hlds, 18% female h'hlds in poverty in 2000
400 - 499	169	155	170	159	
500 - 599	234	64	237	68	
600 - 699	144	57	140	64	
700 - 799	75	50	79	48	
800 - 899	70	31	69	36	
900 - 999	73	14	76	15	
1000 plus	78	1	71	10	
Total	2 224	1433	2224	1433	
Median	300	251	315	263	

\*Male households are those with one or more adult males;  
female households are those without an adult male.

PS1/6

Households are here divided in terms of income into respectively those with and without an adult male. Median income was higher for male households in both years in this example. Mainly because of an increase in income of the lowest paid households it rose between 1995 and 2000 approximately to the same degree in both male and female households. If the poverty line is drawn at 100 units of income, male households improved their conditions more than female households. However – again - the income distribution as a whole provides a better indication of change than do single poverty lines.

**In conclusion, no magic formula is presented here. Concepts and methods depend on the purpose of poverty measurement and even at best some inconsistency must remain. Nonetheless, insofar as the income distribution is the common element in most of the currently used approaches, its presentation will greatly help to evaluate the figures that result from the use of poverty lines. The relationship of monetary to non-monetary lines and other dimensions of human welfare, further, can be shown as in Section 7 below.**

## 7. Relationship of income-related poverty to other dimensions of human welfare

A lack of income is generally related to other forms of deprivation, the degree of association differing according to region and country, as well as the components (dimensions) and indicators used in measurement. As noted earlier, contrary to the experience in the developing world, where poverty is linked closely with low education, poverty in the CITs is consistent with high levels of completed education, although perhaps less so with current educational services, especially when the quality of education is considered.

Similarly, social exclusion in the sense that people cannot associate socially with others has a different significance in countries where the poor are a small minority, as in Denmark, for example, than where they are the large majority, as in many countries in transition. Thus, the 1996 Human Development Report for Armenia speaks of the sharp division between the 80 per cent poor, the 'people', and the 20 per cent non-poor, the 'they'. "The latter (in the words of the report) enjoy all the advantages: access to government and private loans, the opportunity to dispose of state property, the means to engage in private business, legal protection – everything of which 'the people' are deprived." (p.12) On the other hand, the social disapproval of the 'they' reaches such proportions, according to the report, that 'the people' hesitate to change their status, given the opportunity. Who in this context are the socially excluded? The vast majority of the poor or the small proportion of the affluent? And what are the implications for human welfare in this country and others like it in Eastern Europe and the CIS?

The approach proposed here is appropriate to such alternative criteria of poverty as household possessions or perception of poverty as well as education and health. The poor (or poorest, depending on the definition) are first identified, as in the previous section, for example as the first four categories in the income distribution of Table 4. The association between this group and the deprived on other definitions is then shown as in Table 10 below. For example, the less the income the lower the level of upper secondary education. Again, while we might stipulate that the poverty line is at 200 units, the association is also shown with groups having income less than this.

Table 10  
Association between income-related poverty and other forms of deprivation, 2000  
(fictive data)

	Various categories of poor households per cap. monthly household income				non- poor 300+	Total
	-49	50 - 99	100 - 199	200 - 299		
	- per cent -					
% sharing kitchen or toilet	16	15	16	13	3	7
% who do not own colour television	21	19	17	15	6	15
% who consider that they cannot 'make ends meet'	83	73	71	50	23	49
School enrolment in age group 15-18 (per cent)	11	14	16	19	45	32
% who failed to consult a physician during previous six months	98	95	95	87	49	75
% with electricity less than 6 hours per day	71	69	62	51	32	45
% socially excluded (inability to entertain guests)	41	35	36	26	11	21
% persons in h/hids of which a member has been the object of crime	23	23	20	18	9	15
Total number of persons	99 000	456 000	520 000	841 000	1 741 000	3 657 000

PS1/3

The degree of association (the difference between various income groups in any one line) is greater for some factors than others.<sup>56</sup> For example, whereas between 87 and 98 per cent of the poor were unable to consult a physician the incidence is less as regards social exclusion where the percentage varies between 26 and 41. The degree of association in any one dimension, however, depends on the choice of indicator(s).

The position can be reversed. Thus, we might ask how many of those who claim that they cannot make ends meet are poor also in an objective sense:

**Extract from Table 10 (percentages reversed)**

	Various categories of poor households per cap. monthly household income				non- poor 300+	Total
	-49	50 - 99	100 - 199	200 - 299		
	- per cent -					
% sharing kitchen or toilet	6	27	33	43	20	100
% who do not own colour television	4	16	16	23	19	100
% who consider that they cannot 'make ends meet'	5	19	21	23	22	100

PS1/3

It is also possible, using such tables, to identify the households that are poor on two or more criteria, and in respect of any combination of them.

## 8. The use of poverty profiles in evaluation

The answer to the question who are the poor in terms of socio-economic characteristics also helps to identify factors associated with poverty, and thus eventually with policies to alleviate it.<sup>57</sup> The procedures follow from the results of Section 6.2 above. The four categories in Table 4 identified as poor are compared in Table 11 with the non-poor or with other groups. As an example, among the various categories of economic status, wage earners are the numerically most prominent category in each of the four groups in poverty, more so than pensioners, the self-employed or 'others'. This is confirmed by the greater incidence among the poor of households with no or only one earner, as distinct from the non-poor households who have a slightly greater proportion of two or more earners, a crucial factor when it comes to feeding families. While these figures are fictitious, this is indeed a real phenomenon in many of the countries of the CITs, where poverty arises from a combination of low earnings, insufficient earners in a household and the number of mouths to feed.

<sup>56</sup> The data are fictive, but fairly typical of real conditions.

<sup>57</sup> Leaving aside the question of causality, which is more difficult to establish.

Table 11  
Some socio-economic characteristics of the poor, 2000  
(fictive data)

	Various categories of poor households per cap. monthly household income				non- poor	All households
	-49	50 - 99	100 - 199	200 - 299	300+	
	- per cent -					
<b>Economic status of chief earner</b>						
Pensioner	8	9	8	9	25	21
Wage earner	59	58	58	56	23	37
Self-employed	28	29	27	27	37	32
Other	5	4	7	8	15	10
<b>No. of earners with gainful activity in household</b>						
0	27	26	27	25	18	23
1	68	68	69	68	50	57
2	5	6	4	6	18	13
3+	0	0	0	1	14	7
<b>Refugee status</b>						
Refugees	62	51	47	25	5	11
Resident population	38	49	53	75	95	89
<b>Urban/rural</b>						
Urban	etc.					
Rural						
<b>Region</b>						
north						
north-west						
south						
east						
<b>Household size</b>						
1						
2						
3						
4						
5+						
<b>Household structure</b>						
<b>Children in household</b>						
with children						
without children						
<b>Ethnicity</b>						
.....						
Total	100	100	100	100	100	100
Total population	99 000	456 000	520 000	841 000	1 741 000	3 657 000

PS1/7

## 9. Required data and data sources

As proposed here, measurement of poverty requires the following data:

- ◆ Income distributions (per capita, or similar, household distributions of income or consumption expenditure, using the appropriate definition of income, according to the purpose of the measurement (Section 6.1 above). The figures should be

disaggregated, as far as appropriate and possible, by gender, geographic regions, ethnic groups, etc.

- ◆ An estimate of one or more poverty lines.
- ◆ Household data on characteristics associated with poverty, such as housing conditions, health, education, and on household characteristics used for disaggregative purposes as in Tables 10 and 11 above.

The data are most conveniently collected jointly in household sample surveys.<sup>58</sup>

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<sup>58</sup> Population censuses provide essential background data, such as population totals, or for small geographic areas. They do not, nonetheless, take place with sufficient regularity or frequency as would be required for regular poverty monitoring. Nor are they necessarily a suitable media for the collection of complex data, such as income, employment or earnings.



## Annex C

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## Annex E

### The European Union's Laeken Council List of Indicators

(Extract from: European Commission, Eurostat, Working Group: "Statistics on Income and Social Exclusion", Indicators Approved at Laeken Council, December 2001, Doc. E2/IPSE/37 app.1)

#### PRIMARY INDICATORS

	Indicator	Definition	Data sources + most recent year available *
1a	Low income rate after transfers with breakdowns by age and gender	Percentage of individuals living in households where the total equivalised household income is below 60% national equivalised median income. Age groups are: 1.0-15, 2.16-24, 3.25-49, 4.50-64, 5. 65+. Gender breakdown for all age groups + total	Eurostat ECHP 1997
1b	Low income rate after transfers with breakdowns by most frequent activity status	Percentage of individuals aged 16+ living in households where the total equivalised household income is below 60% national equivalised median income. Most frequent activity status: 1.employed, 2.self-employed, 3.unemployed, 4.retired, 5.inactives-other. Gender breakdown for all categories + total	Eurostat ECHP 1997
1c	Low income rate after transfers with breakdowns by household type	Percentage of individuals living in households where the total equivalised household income is below 60% national equivalised median income. 1. 1 person household, under 30 yrs old 2. 1 person household, 30-64 3. 1 person household, 65+ 4. 2 adults without dependent child; at least one person 65+ 5. 2 adults without dep. child; both under 65 6. other households without dep. Children 7. single parents, dependent child 1+ 8. 2 adults, 1 dependent child 9. 2 adults, 2 dependent children 10. 2 adults, 3+ dependent children 11. other households with dependent children 12. Total	Eurostat ECHP 1997
1d	Low income rate after transfers with breakdowns by tenure status	Percentage of individuals living in households where the total equivalised household income is below 60% national equivalised median income. 1. Owner or rent free 2. Tenant 3. Total	Eurostat ECHP 1997
1e	Low income threshold (illustrative values)	The value of the low income threshold (60% median national equivalised income) in PPS, Euro and national currency for: 1. Single person household 2. Household with 2 adults, two children	Eurostat ECHP 1997
2.	Distribution of income	S80/S20: Ratio between the national equivalised income of the top 20% of the income distribution to the bottom 20%.	Eurostat ECHP 1997

3.	Persistence of low income	Persons living in households where the total equivalised household income was below 60% median national equivalised income in year n and (at least) two years of years n-1, n-2, n-3. Gender breakdown + total	Eurostat ECHP 1997
4.	Relative median low income gap	Difference between the median income of persons below the low-income threshold and the low-income threshold, expressed as a percentage of the low-income threshold. Gender breakdown + total	Eurostat ECHP 1997
5.	Regional cohesion	Coefficient of variation of employment rates at NUTS 2 level.	Eurostat LFS (2000)
6.	Long term unemployment rate	Total long-term unemployed population (=12 months; ILO definition) as proportion of total active population; Gender breakdown + total	Eurostat LFS (2000)
7.	Persons living in jobless households	Persons aged 0-65 (0-60) living in households where none is working out of the persons living in eligible households. Eligible households are all except those where everybody falls in one of these categories: - aged less than 18 years old - aged 18-24 in education and inactive - aged 65 (60) and over and not working	Eurostat LFS (2000)
8.	Early school leavers not in education or training	Share of total population of 18-24-year olds having achieved ISCED level 2 or less and not attending education or training. Gender breakdown + total	Eurostat LFS 2000
9.	Life expectancy at birth	Number of years a person may be expected to live, starting at age 0, for Males and Females.	Eurostat Demography Statistics
10.	Self defined health status by income level.	Ratio of the proportions in the bottom and top quintile groups (by equivalised income) of the population aged 16 and over who classify themselves as in a bad or very bad state of health on the WHO definition Gender breakdown + total	Eurostat ECHP 1997

## SECONDARY INDICATORS

11.	Dispersion around the low income threshold	Persons living in households where the total equivalised household income was below 40, 50 and 70% median national equivalised income	Eurostat ECHP 1997
12.	Low income rate anchored at a moment in time	Base year ECHP 1995. 1. Relative low income rate in 1997 (=indicator 1) 2. Relative low income rate in 1995 multiplied by the inflation factor of 1994/96	Eurostat ECHP 1997
13.	Low income rate before transfers	Relative low income rate where income is calculated as follows: 1. Income excluding all social transfers 2. Income including retirement pensions and survivors pensions. 3. Income after all social transfers (= indicator 1) Gender breakdown + total	Eurostat ECHP 1997
14.	Gini coefficient	The relationship of cumulative shares of the population arranged according to the level of income, to the cumulative share of the total amount received by them	Eurostat ECHP 1997

15.	Persistence of low income (below 50% of median income)	Persons living in households where the total equivalised household income was below 50% median national equivalised income in year n and (at least) two years of years n-1, n-2, n-3. Gender breakdown + total	Eurostat ECHP 1997
16.	Long term unemployment share	Total long-term unemployed population ( $\geq 12$ months; ILO definition) as proportion of total unemployed population; Gender breakdown + total	Eurostat LFS 2000
17.	Very long term unemployment rate	Total very long-term unemployed population ( $\geq 24$ months; ILO definition) as proportion of total active population; Gender breakdown + total	Eurostat LFS 2000
18.	Persons with low educational attainment	Educational attainment rate of ISCED level 2 or less for adult education by age groups (25-34, 35-44, 45-54, 55-64). Gender breakdown + total	Eurostat LFS 2000

\* Available in Member States.



## Annex F

### **International Labour Office Resolution concerning the measurement of underemployment and inadequate employment situations (1998)**

The Sixteenth International Conference of Labour Statisticians,

Having been convened at Geneva by the Governing Body of the International Labour Office and having met from 6 to 15 October 1998,

Having reviewed the relevant texts of resolution III adopted by the Eleventh International Conference of Labour Statisticians concerning measurement and analysis of underemployment and underutilisation of manpower (1966), and of resolution I adopted by the Thirteenth International Conference of Labour Statisticians concerning statistics of the economically active population, employment, unemployment and underemployment (1982),

Having acknowledged that resolution I adopted by the Thirteenth International Conference of Labour Statisticians provides the framework, within which the present resolution is formulated,

Recognising the need to revise the existing standards on the measurement of underemployment and to broaden the scope to cover also inadequate employment situations, in order to enhance the standards' usefulness as technical guidelines to countries and improving the international comparability of the statistics,

Acknowledging that the relevance of underemployment and inadequate employment situations in a given country depends on the nature of its labour markets and that the decision to measure one or both of these is therefore determined by national circumstances;

Adopts this fifteenth day of October 1998 the following resolution in substitution for resolution III of the Eleventh International Conference of Labour Statisticians and paragraphs 14 to 20 and 21(5) of resolution I of the Thirteenth International Conference of Labour Statisticians:

#### **Objectives**

1. The primary objective of measuring underemployment and inadequate employment situations is to improve the analysis of employment problems and contribute towards formulating and evaluating short-term and long-term policies and measures designed to promote full, productive and freely chosen employment as specified in the Employment Policy Convention (No. 122) and Recommendations (Nos. 122 and 169) adopted by the International Labour Conference in 1964 and 1984. In this context, statistics on underemployment and indicators of inadequate employment situations should be used to complement statistics on employment, unemployment and inactivity and the circumstances of the economically active population in a country.
2. The measurement of underemployment is an integral part of the framework for measuring the labour force established in current international guidelines regarding statistics of the economically active population; and the indicators of inadequate employment situations should as far as possible be consistent with this framework.

#### **Scope and concepts**

3. In line with the framework for measuring the labour force, the measurement of underemployment and indicators of inadequate employment should be based primarily on the current capacities and work situations as described by those employed. Outside the scope of this resolution is the concept of underemployment based upon theoretical models about the potential capacities and desires for work of the working age population.

4. Underemployment reflects underutilisation of the productive capacity of the employed population, including those which arise from a deficient national or local economic system. It relates to an alternative employment situation in which persons are willing and available to engage. In this resolution, recommendations concerning the measurement of underemployment are limited to time-related underemployment, as defined in subparagraph 8(1) below.

5. Indicators of inadequate employment situations that affect the capacities and well-being of workers and which may differ according to national conditions, relate to aspects of the work situation such as use of occupational skills, degree and type of economic risks, schedule of and travel to work, occupational safety and health and general working conditions. To a large extent, the statistical concepts to describe such situations have not been sufficiently developed.

6. Employed persons may be simultaneously in underemployment and inadequate employment situations.

### **Measures of time-related underemployment**

7. Time-related underemployment exists when the hours of work of an employed person are insufficient in relation to an alternative employment situation in which the person is willing and available to engage.

8. (1) Persons in time-related underemployment comprise all persons in employment, as defined in current international guidelines regarding employment statistics, who satisfy the following three criteria during the reference period used to define employment:

- (a) "willing to work additional hours", i.e. wanted another job (or jobs) in addition to their current job (or jobs) to increase their total hours of work; to replace any of their current jobs with another job (or jobs) with increased hours of work; to increase the hours of work in any of their current jobs; or a combination of the above. In order to show how "willingness to work additional hours" is expressed in terms of action that is meaningful under national circumstances, those who have actively sought to work additional hours should be distinguished from those who have not. Actively seeking to work additional hours is to be defined according to the criteria used in the definition of job search used for the measurement of the economically active population, also taking into account activities needed to increase the hours of work in the current job;
- (b) "available to work additional hours", i.e. are ready, within a specified subsequent period, to work additional hours, given opportunities for additional work. The subsequent period to be specified when determining workers' availability to work additional hours should be chosen in light of national circumstances and comprise the period generally required for workers to leave one job in order to start another;
- (c) "worked less than a threshold relating to working time", i.e. persons whose "hours actually worked" in all jobs during the reference period, as defined in current international guidelines regarding working time statistics, were below a threshold, to be chosen according to national circumstances. This threshold may be determined by e.g. the boundary between full-time and part-time employment, median values, averages, or norms for hours of work as specified in relevant legislation, collective agreements, agreements on working time arrangements or labour practices in countries.

(2) To provide analytical flexibility for policy formulation and evaluation, as well as for international comparability, countries should endeavour to identify all workers who during the reference period were willing and available to work additional hours, regardless of the hours they actually worked during the reference period.

#### *Analytical groups within time-related underemployment*

9. (1) Among time-related underemployed persons, countries may want to identify separately the following two groups:
- (a) persons who usually work part-time schedules and want to work additional hours;
  - (b) persons who during the reference period worked less than their normal hours of work.
- (2) Countries may want to study the relationship between the size and composition of these groups of workers and the economically active population at different points in time.

#### *Volume of time-related underemployment*

10. The volume of time-related underemployment relates to the additional time that persons in time-related underemployment were willing and available to work during the reference period up to the chosen threshold, as described in paragraph 8(1)(c) above. It may be computed in units of working days, half-days or hours as may be convenient in national circumstances. In addition, countries may want to estimate the volume of time-related underemployment by aggregating the number of days, half-days or hours that each person in time-related underemployment is willing and available to work in addition to the hours actually worked during the reference period without reference to a threshold.

#### *Analytical indicators on time-related underemployment*

11. Based on the concepts and definitions given in paragraphs 7 to 10 above, a variety of analytical measures can be derived. For instance:
- (a) a rate of time-related underemployment may be calculated as the ratio between the population in time-related underemployment and in employment. Wherever considered useful, the ratio between the populations in time-related underemployment and the economically active population may also be calculated;
  - (b) a rate of the volume of time-related underemployment may be obtained as the ratio between the volume of time-related underemployment and the potential time for work of persons in employment, calculated as the sum of the "hours actually worked" by the employed population and the volume of time-related underemployment.

#### *Topics related to time-related underemployment*

12. Statistics may be collected on the "duration of time-related underemployment", understood as the number of days, weeks, months or years that time-related underemployed persons have been continuously in this situation, i.e. willing and available to work additional hours and working less than the chosen threshold. Information about the number of days or weeks of employment, unemployment and time-related underemployment experienced by a worker throughout the year may also be instructive.
13. In countries where multiple jobholding is common, it may be useful to produce statistics on the reasons for having more than one job, covering all multiple jobholders.

### *Classifications for time-related underemployment*

14. (a) The time-related underemployed population should be classified by significant demographic, social and economic characteristics. Appropriate cross-classifications should be used with due regard to the need for confidentiality and statistical significance.
- (b) The number of persons in time-related underemployment, and the rates suggested in paragraph 11 above, should be classified by sex in respect of specified age groups and levels of education, and for each branch of economic activity, occupational group, institutional sector (including a category on the informal sector, where relevant) and status in employment categories. The classification by presence of young children and of adults requiring care would also be useful.
- (c) For the purpose of classification by branch of economic activity, occupation, institutional sector and status in employment, reference should be made to the main job. The main job should be understood as the job at which the worker has worked the longest hours or which has provided the highest income from employment during the period, or which can be expected to provide the highest income from work carried out in that period, if payment can only be expected in the future.
- (d) In order to provide flexibility for analysis, it is important to classify persons, where possible, by the component groups covered in the definition of time-related underemployment, i.e. by whether they wanted to work additional hours, by whether they had actively sought to work additional hours, were available to work additional hours, and by the hours they actually worked during the reference period.

### **Inadequate employment situations**

15. Indicators of inadequate employment situations describe situations in the workplace that reduce the capacities and well being of workers as compared to an alternative employment situation. To a large extent, the statistical definitions and methods necessary to describe such situations still have to be developed further.
16. Countries may want to consider as persons in inadequate employment situations, all those in employment who during the reference period, wanted to change their current work situation, or (particularly for the self-employed) to make changes to their work activities and/or environment, for any of a set of reasons, chosen according to national circumstances. Such reasons might include, for example: inadequate use and mismatch of occupational skills; inadequate income in current job(s); excessive hours of work; precarious job(s); inadequate tools, equipment or training for the assigned tasks; inadequate social services; travel to work difficulties; variable, arbitrary or inconvenient work schedules; recurring work stoppages because of delivery failures of raw material or energy; prolonged non-payment of wages; long overdue payments from customers. It should be noted that these reasons will not be mutually exclusive nor exhaustive of inadequate employment situations. Workers' availability to change their current work situation, as well as their active job search, as understood in the definition of time-related underemployment, may also be applied.

### *Particular types of inadequate employment situations*

17. Countries may in particular wish to consider, among the various types of inadequate employment situations, whether it is important to produce separate indicators for:
- (a) skill-related inadequate employment, characterised by inadequate utilisation and mismatch of occupational skills, thus signifying poor utilisation of human capital. Persons in this form of inadequate employment may be understood to include all persons in employment who during the reference period wanted or sought to change their current

work situation in order to use their current occupational skills more fully, and were available to do so;

(b) income-related inadequate employment, resulting from low levels of organisation of work or productivity, insufficient tools and equipment and training or deficient infrastructure. Persons in this form of inadequate employment may be understood to include all persons in employment who during the reference period wanted or sought to change their current work situation in order to increase income limited by factors such as those mentioned above, and were available to do so. Countries may wish to apply a threshold, chosen according to national circumstances, above which persons do not qualify for inclusion;

(c) inadequate employment related to excessive hours, may be understood to refer to a situation where persons in employment wanted or sought to work less hours than they did during the reference period, either in the same job or in another job, with a corresponding reduction of income. Countries may wish to apply a threshold of hours below which persons do not qualify for inclusion.

#### *Analytical indicators associated with inadequate employment situations*

18. For persons in the various inadequate employment situations separately identified according to national circumstances, countries may want to derive analytical indicators such as the following:

(a) persons in each chosen type of inadequate employment situation, expressed as a percentage of the employed;

(b) persons simultaneously in two or more inadequate employment situations, expressed as a percentage of the employed.

#### *Classifications for inadequate employment situations*

19. The analysis of the various inadequate employment situations may include their classification by significant demographic, social and economic characteristics, as well as appropriate cross-classifications with due regard to the need for confidentiality and statistical significance.

### **Data collection and international reporting**

20. The use of household surveys, and in particular specialised labour force sample surveys, has advantages when producing statistics on time-related underemployment and indicators of inadequate employment situations. Other sources, such as those based on administrative records, may also provide an adequate basis for such statistics. When a household-based survey exists in a country, its results may be used to calibrate the results from other sources.

21. In order to enhance international comparability, it is recommended that countries, as far as possible, design their data collection and processing procedures so that they will be able to report:

(a) estimates on the time-related underemployed population, as defined in subparagraph 8(1) above, who wanted to work additional hours, regardless of whether or not they sought to do so;

(b) estimates on the sub-group of the time-related underemployed population, as defined in subparagraph 8(1) above, who sought to work additional hours;

(c) information on the manner in which the threshold, mentioned in subparagraph 8(1)(c) above, has been determined;

(d) where feasible, information on workers who during the reference period satisfy the criteria mentioned in subparagraphs 8(1)(a) and (b), without reference to a threshold, i.e. criterion 8(1)(c).

### **Further action**

22. Subject to the availability of funds, a programme of work should be sponsored by the ILO to refine the measurement of time-related underemployment and to further develop concepts and definitions for the indicators of inadequate employment situations. The ILO should also sponsor work relating to the measurement and presentation of these statistics in a number of developing, transition and industrialised countries and evaluate and document the results.

23. As far as possible, the ILO should co-operate with countries in the implementation of the definition of time-related underemployment and in the development and application of methods to describe indicators of inadequate employment situations as recommended in this resolution, and disseminate the information about the experiences gained.

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