A family of decent work indexes

Florence BONNET*, José B. FIGUEIREDO*
and Guy STANDING**

We first proposed a decent work index in late 1999, when the ILO's InFocus Programme on Socio-Economic Security was set up, and are delighted that so many others are taking up the idea as reflected in this special issue of the *Review* and in the ILO's Inter-Sectoral Task Force set up to promote the idea.[1] An index is indeed a useful tool. But it can be misused and is subject to certain failings that have to be taken into account. An index consists of a set of "indicators" of some underlying phenomena. In recent years, a plethora of indexes have been presented, most notably UNDP's Human Development Index. Often, they suffer from the lack of a theoretical model and from a tendency to consist of a "shopping list" of ad hoc "interesting" variables. It is essential that the proposed decent work index should avoid these pitfalls.

An index must be based on a theoretical model and should be *transparent*. If the variables and formula underlying are hard to understand, there will be a suspicion that the results have been "massaged" into supporting some preconceived view. To complicate matters, any index raises problems of "weighting" of various variables and of "scaling" its components. Since there are no perfect rules for index building, all one can state with conviction is that the methodology should be transparent and replicable.

In the model we set out in 1999, decent work was conceptualized as requiring basic security for all – in society, in the workplace and for individual workers.[2] We identified seven forms of security in the sphere

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* ILO InFocus Programme on Socio-Economic Security, email: bonnet@ilo.org. figueiredo@ilo.org; ** Director, ILO InFocus Programme on Socio-Economic Security, email: standing@ilo.org

[1] The initial proposal was made in the background Technical Paper for the International Workshop on Developing Socio-Economic Security Statistics, held at the ILO on 2-3 December 1999. That Workshop also included a special session on the decent work index.

[2] This is elaborated in the July 1999 Medium-Term Workplan of the ILO's InFocus Programme on Socio-Economic Security. See also Standing (2002a).

of work (see *International Labour Review*, 2002). But for reasons elaborated elsewhere (Standing, 2002a), primacy should be given to basic income security and basic "voice" or representation security. Without reasonable income security, people lack real freedom to make rational choices and be socially responsible. Without collective and individual voice, the vulnerable will remain vulnerable.

At the aggregate (macro) level, the objective can be defined in terms of creating laws, regulations and institutions that enable a growing number of people in all societies to work without oppression, in reasonable security and with steadily improving opportunity for personal development, while having enough income to support themselves and their families. At the workplace (meso) level, a decent work environment is one that provides adequate security for workers while fostering the dynamic efficiency of their enterprises. At the individual worker's (micro) level, decent work consists in having good opportunity to work with adequate levels of all forms of work-related security.

Less abstractly, we may say that seven forms of labour-related security were pursued in the twentieth century, with varying degrees of success, namely: labour market security, employment security, job security, work security, skill reproduction security, income security and representation security. Governments have so far typically given priority to labour market security, employment security and, to some extent at least, work security. But if the Decent Work Agenda is to become reality, new forms of income security and representation security are required. Moreover, and this is a criticism of all the index building so far, we must move to measures of decent *work* rather than decent *labour*.[3]

The first section of this article presents the database and general methodology used to construct the proposed family of decent work indexes. The second section is devoted to the macro-level index, with a sequential presentation of the sub-indexes used for each of the seven forms of socio-economic security. The third section presents the meso-level index, and the fourth, the micro-level index. A short closing section offers some concluding remarks.

The model and database

From the outset, the approach has been to create indexes based on a combination of indicators of the various forms of security. This required a huge effort to create what we have called the Socio-Economic Security Global Database, which has been constructed over

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[3] To put it bluntly, the right to work is not the same as the obligation to labour, and there are forms of work that are not labour that deserve just as much security as any form of labour. For extended discussion, see Chen, Dasgupta, Jhabvala and Standing (forthcoming) and Standing (2002b).

the past three years. This has five components – three at the macro level, one at the meso level and another at the micro level.

At the macro level, three databases provide indicators for ILO member countries, namely:

● *SES Primary Database*, consisting of information collected via a national questionnaire on laws, policies and outcomes relating to the seven forms of labour-related security;

● *SES Secondary Database*, consisting of information from other global and regional sources, such as the ILO Bureau of Statistics, EUROSTAT, the IMF, the OECD and the World Bank;

● *SES Social Security Database*, consisting of numerical data on the eight main branches of social security and other relevant social policy, mainly drawn from the compilation of legislation done by the International Social Security Association.

At the meso level:

● The *Enterprise Labour Flexibility and Security Survey (ELFS)*, an instrument by which data are collected from firms around the world on work practices relating to worker security and enterprise performance. In 2000-02, data were collected from over 12,000 firms in 12 countries.

At the micro level:

● The *People's Security Survey (PSS)*, a household survey instrument by which data on basic needs, the seven forms of socio-economic security and aspects of social justice are collected from individuals. In 2000-02, the PSS collected data from over 50,000 households in 15 countries.

The way the resultant data are used to create the family of decent work indexes is relatively straightforward.[4] First, indicators of each form of security are identified; these are then combined to create a specific security index by using the following normalization procedure pioneered by the UNDP with its Human Development Index:

$$\text{Normalized value } X = \\ [\text{Actual value} - \text{Minimum value}]/[\text{Maximum value} - \text{Minimum value}]$$

where the actual value is the score attained by the country on a particular indicator, the minimum value is the lowest value attained by any country, and the maximum value is the maximum attained by any country.

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[4] More elaborate descriptions are given in the various technical papers produced by the team members of the ILO's Socio-Economic Security Programme. For details, see http://www.ilo.org/ses or Annycke (2003), Bonnet (2003), Bonnet and Standing (2003), Dasgupta and Onobogu (2003), Figueiredo and Bonnet (2003), Khan, Bonnet and Barbattini (2003), Natrajan (2003), and Roskam and Figureiredo (2003).

Then, the average values of all normalized security indexes are calculated, and the result is normalized to give values of the decent work index ranging from 0 (lowest, or worst) to 1 (highest, or best). It is important to bear in mind that the result is a relative ranking and that the notion of "decent" is not the same as that of "ideal".

A macro-level decent work index

We set ourselves the task of identifying countries providing relatively good conditions for decent work and socio-economic security. For each form of security, one can think of three dimensions to be measured – the extent to which the government or constitution of the country is committed formally to its promotion, the extent to which its institutions give effect to that commitment, and the extent to which the observed outcomes correspond to reasonable expectations. Accordingly, three types of indicators were sought:

- *Input indicators* of national and international instruments and rules to protect workers, such as the enactment of basic laws or the ratification of ILO Conventions on work-related hazards, unfair dismissal, the right to organize, etc.

- *Process indicators* of mechanisms or resources through which legislated principles and rules are realized, such as public expenditure on a particular form of security, labour inspection services, labour-related tripartite boards, etc.

- *Outcome indicators* showing whether or not the inputs and processes are effective in ensuring worker protection. These indicators might include the unemployment rate, the percentage of workers covered by collective agreements or receiving benefits or pensions, etc.

For each of the seven forms of socio-economic security an index is thus created, consisting of the weighted average of the three normalized sub-indexes (input, process and outcome). The seven are then added up and normalized to produce the decent work index. What goes into each of the seven security indexes is summarized below.[5] Calculations were carried out for the year 1999, and the SES Global Database has been used to test the results.

Note that the input, process and outcome sub-indexes or components were combined to produce two variants of each security index – one based on an equal weighting of the three sub-indexes, the other on a double weighting of the outcome sub-index. Since the latter is more appropriate, in that it focuses on actual achievements, while the input and process indicators overlap to some extent, this article reports only

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[5] Full details are available from the authors on request.

those results in which the outcome sub-index was counted as double the weight of the other two. We also report only the indexes as applied to all countries for which there are usable data. Actually, more sophisticated indexes were estimated for OECD countries but, because of the large differences in data availability between these and the developing countries, they could not be extended to the latter.

Note too that countries are classified according to their scores on each of the sub-indexes. If a country's score is equal to or greater than the value of the sixth decile in one of the sub-indexes, the country is deemed satisfactory in that respect; if below, it is deemed unsatisfactory.[6] Using the combination of sub-indexes and their respective scores, four clusters of countries can be identified – *pacesetters*, those that have a high overall score and high scores on the input, process and outcome sub-indexes; *pragmatists*, those that have a satisfactory outcome but not particularly high scores on either of the input or process sub-indexes; "*satisficers*", those with an intermediate-to-low score on outcome but relatively high scores on input and/or process (i.e. those that do badly in spite of being relatively advanced in terms of laws and instruments "guaranteeing" security); and a *much-to-be-done* cluster, consisting of countries with low scores on input, process and outcome.

Labour market security index

Labour market security may be defined in terms of a high level of access to reasonable income-earning activities. Here, input is measured by means of two indicators. A value of 1 is given if the country has ratified the Employment Policy Convention, 1964 (No. 122), 0 if not; and a value of 1 is given if the government or constitution of the country has made a formal commitment to the pursuit of "full employment", 0 if not.

There are three process indicators. First, a value of 1 is given if there exists a public employment service, 0 if not; second, the public consumption share of GDP is included as a proxy for public investment; and third, the average annual growth rate of GDP during the previous decade serves as a measure of economic opportunity.[7]

The outcome indicators of labour market security are complex. The standard measure is the unemployment rate, but this is relatively unsatisfactory in highly industrialized countries, in transition economies and in low-income countries characterized by extensive informal-

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[6] A more usual cutting point in the distribution of scores is the median. But the sixth decile was selected because it reflects a concern for "rigour", in the sense that it avoids having countries with scores just above the median value being classified as "satisfactory". The risk of classifying satisfactory countries as unsatisfactory is minor.

[7] A more elaborate approach also included government expenditure on labour market policies as a share of GDP, but data for this only exist for industrialized countries.

sector activities. Accordingly, the unemployment rate is combined with a set of other indicators which, taken together, measure the pattern of opportunities, taking special account of gender inequalities. The other variables include the percentage annual change in employment over the past ten years,[8] the ratio of male to female unemployment rates, total employment as a percentage of the working-age population, the ratio of female to male employment rates, and the wage employment share of all those in income-earning activities – both total and by sex.

Finally, a "dummy" variable is applied as a correcting factor for the outcome score, giving a value of 0.5 if the country is known to have a high level of unpaid or partially paid "administrative leave", and a value of 1 if not. The former applies to transition countries of eastern Europe and to China, where millions of workers who appear to enjoy labour market and employment security are actually on extended lay-off.

The labour market security index covers 94 countries. As with most security indexes, country performances show that the northern European countries are the best among the *pacesetters* together with some non-European OECD countries, such as Canada, Japan, the United States, Australia and New Zealand. The group of *pragmatists* include all the Latin American countries in the set, as well as some European countries such as Switzerland and Poland and a few Asian countries (Republic of Korea and Bangladesh among others). Among the worst *much-to-be-done* cluster are many African countries, with the lowest scores going to Ghana, Burundi and Algeria.

Employment security index

Employment security exists where there is protection against unfair and arbitrary dismissal, and where workers can obtain redress if they are subject to unfair dismissal. It is also a function of the type of economy and structure of employment, so that it tends to be stronger where large-scale firms predominate and where the public sector is large.

Here, the input indicators are ratification of the Termination of Employment Convention, 1982 (No. 158), which provides that employment shall not be terminated unless there is a valid reason for doing so; and the strictness of employment protection legislation, which covers prior notice of dismissal, severance pay and the definition of unfair dismissal.

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[8] A refinement that has been considered is to adjust the open unemployment rate by multiplying it by the ratio of "informal" to total employment.

The process indicators evaluate workers' access to institutions protecting them from loss of work or ensuring that legal provisions of employment security are applied. Specifically, the two indicators used are the proportion of workers covered by collective bargaining agreements and the existence or absence of independent labour tribunals.

The outcome indicators relate to the notion of secure employment, defined as full-time, regular wage or salaried employment, associated with rights and benefits, whereas insecure employment is defined as including part-time or temporary wage work and various activities covered by the term "self-employment". The two selected indicators are the shares of employees (i) in secure employment (regular wage employment), and (ii) in the public sector.[9] Finally, the same dummy as applied to the labour market security index, for countries with high levels of unpaid or low-paid leave, is also added to the employment security index.

The employment security index covers 99 countries. Of these, only 11 come out as *pacesetters*, all of them west European except three – Israel, Turkey and Mauritius. Twenty-nine countries emerge as *pragmatists* – the cluster displaying satisfactory employment security outcomes without scoring particularly well on the input or process indicators. In most cases, this is due to non-ratification of Convention No. 158 (which has an overall ratification rate of 17 per cent) and below-average periods of prior notice of dismissal. Contrary to other forms of insecurity, employment insecurity is not largely associated with the African continent. Countries with unsatisfactory performance – in the *much-to-be-done* cluster – are from all parts of the world, including central Asia (Turkmenistan) and eastern Europe (Croatia and Albania).

Job security index

Job security is interpreted as the possession of a "niche" at work, allowing some control over job content, i.e. what the worker actually does and the opportunity he or she has of building a career. A worker could have employment security but no job security when, for instance, within the same firm his/her tasks and skills undergo such changes as to force him/her to adjust or even discontinue the job or change occupations. This form of security is related to both employment and skills

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[9] In this case, and in other security indexes, experiments have also been carried out in which separate indexes are estimated for industrialized countries and for developing countries. This enabled us to estimate a more refined index for the former group, using the share in part-time employment and in self-employment, the average tenure of employment, the share of workers with employment tenure of less than one year. While attractive, dividing countries into two groups is bound to be arbitrary and, in any case, the objective is to measure where security occurs, and ultimately where decent work conditions are most likely.

security, but it is different in the sense that it refers to the worker's own development over his/her entire working life.

Of all the forms of work-related security, this is the dimension on which data are the most difficult to collect, even in affluent industrialized countries. Accordingly, this index is based on more indirect proxies than the others; it focuses on access to relatively "skilled" jobs and measures to combat discrimination in job opportunities.

The input indicators of job security are relatively numerous. There are four ILO Conventions, each given a score of 1 if ratified and 0 if not, namely: the Equal Remuneration Convention, 1951 (No. 100), the Discrimination (Employment and Occupation) Convention, 1958 (No. 111), the Workers with Family Responsibilities Convention, 1981 (No. 156), and the Vocational Rehabilitation and Employment (Disabled Persons) Convention, 1983 (No. 159). In addition, a value of 1 is added in each of the following three cases: if there is a law prohibiting employment discrimination against women; if there is a law providing for paid maternity leave; and if there is a law banning discrimination against workers with disabilities.

There are five process indicators. The first is the overall literacy rate, taken from UNESCO estimates. The second, as a measure of equality of opportunity, is the ratio of female to male literacy rates. The third, as a second measure of gender equality, is the ratio of the percentage of women completing post-secondary education to the percentage of total population completing that level of education. The rationale for including these two scholastic measures is that basic education is presumed to be essential for gaining access to secure jobs. The fourth process indicator of job security is the duration of standard statutory paid maternity leave; and the fifth, the level of maternity benefits as a percentage of average earnings (with a score of zero being given if there is no national law on maternity benefits).

There are three outcome indicators. These are, first, the share of professional occupations in total employment; second, the ratio of the percentage of professional women in total female employment to the percentage of professional men in total male employment; and third, a value of 1 if the law allows for transferability of parental leave between mothers and fathers.

The job security index covers 89 countries. Country performances in terms of job security suggest that the *pacesetters* include a mix of western and eastern European countries with Finland and Belgium as the top performers. Among the *pragmatists*, there is a similar regional mix, prominent examples being the United Kingdom and Spain. In the *much-to-be-done* cluster, African countries predominate, as expected. But, somewhat surprisingly, this cluster also includes Australia and the Republic of Korea, largely because of their lower scores on the gender equality indicators.

Work security index

Work security is about safe and healthy working conditions. But while embracing issues traditionally treated under the rubric of "occupational health and safety", it means more than that. It is not just about mechanisms to protect workers against occupational hazards, disease and injury; it is also about the so-called modern scourges of stress, over-work and "presenteeism".

While all of these aspects cannot be dealt in the macro-level work security index, the latter does contain several proxies that go beyond standard measures. The input indicators are the ratification of the relevant ILO Conventions,[10] and the existence of national laws providing for occupational safety and health, protection of disabled workers, paid maternity leave and paid leave.

The process indicators consist of the level of government expenditure on workers' compensation and labour-management as a percentage of GDP, the existence of bipartite or tripartite boards or committees for occupational safety and health, and the level of statutory disability or invalidity benefits provided to workers injured in work-related accidents expressed as a percentage of previous average earnings.

There are four outcome indicators. The first is the work-related injury rate (fatal and non-fatal), expressed as the annual number of injuries divided by total employment.[11] The second is average annual paid leave (vacation days), adjusted for the share of workers in formal wage employment. The third is the share of the economically active population with guaranteed compensation for sick leave and occupational injury. The fourth is average reported usual working time expressed in hours per week.

The work security index covers 127 countries. The top two *pacesetters* are Luxembourg and Sweden, and the *pragmatists* include Australia and the United States. Nearly half the countries have poor outcomes. The number of countries in the *much-to-be-done* group is relatively small and they are not as concentrated in Africa as is the case with some other indexes. African countries are mostly classified as *satisficers*, since most of them have formally enacted relevant legislation.

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[10] The Hours of Work (Industry) Convention, 1919 (No. 1), the Maternity Protection Convention (Revised), 1952 (No. 103), the Holidays with Pay Convention (Revised), 1970 (No. 132), the Occupational Safety and Health Convention, 1981 (No. 155), the Vocational Rehabilitation and Employment (Disabled Persons) Convention, 1983 (No. 159), the Occupational Health Services Convention, 1985 (No. 161), and the Night Work Convention, 1990 (No. 171).

[11] In some countries, data are available only for specific sectors, such as manufacturing, mining and construction. In such cases, the rate is calculated by dividing the number of injuries by the number of workers employed in those sectors covered. We appreciate that this is not an ideal measure.

The major problem lies in the enforcement of their laws, coupled with poor data.

Skills reproduction security index

Skills reproduction security should be understood as a situation in which there is a wide range of opportunities for training, apprenticeship and education whereby knowledge and skills can be acquired and refined. It requires broad access to basic education as well as vocational training to enable people to develop their capabilities and acquire the qualifications they need to pursue a socially and economically valuable occupation.

International data on these issues are much weaker than might be expected. There are no data on the global distribution of "skills", for example. Even "schooling" data should be treated with caution, particularly on such measures as "years of school completed" and "literacy"; the former may be artificially inflated by drop-out and "repeat" years (as in South Africa), and the latter, by widespread "lapsed literacy".

For the macro-level skill security index, the input indicators are ratification of the most relevant ILO Conventions – namely the Human Resources Development Convention, 1975 (No. 142), the Minimum Age Convention, 1973 (No. 138), and the Paid Educational Leave Convention, 1974 (No. 140) – together with the statutory number of years of compulsory schooling, and the existence of legislation requiring firms to provide for continuing vocational training.[12]

The process indicators consist of the level of public expenditure on education and on training as a percentage of GDP corrected for the percentage of the population under 15 years of age, and the level of expenditure on education per capita.

The outcome indicators consist of measures of educational attainment – both total and by sex – that profile the adult population most likely to be economically active (25 to 64 years), namely: the literacy rate, median number of years of schooling, and the percentage of the age group having completed tertiary-level education.

The skills reproduction index has been estimated for 105 countries. The overall results are, as might have been expected, closely correlated with national per capita income levels. Thus, *pacesetters* in skills security are almost all high-income countries – as defined by the World Bank – and all *pacesetter* and *pragmatist* countries are either high-income or

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[12] Continuing vocational training (CVT) is defined as training measures and activities financed wholly or partly by enterprises for their employees (i.e. persons employed on a contract, excluding apprentices and trainees). Unfortunately, CVT as an indicator was not kept in the more extensive version of the Index because data were available only for a limited number of OECD countries. It is mentioned here because we believe it is an important indicator which should be incorporated. For a more detailed discussion of this index, see Figueiredo and Bonnet (2003).

middle-income, with the exception of Lesotho, which is low-income but provides a satisfactory level of skills security. As a consequence, most low-income countries are in the large *much-to-be-done* cluster, with the exception of Singapore and Kuwait, which are high-income but which have only modest levels of skills reproduction security.

One interesting aspect derives from the comparison of the provision of skills security as a whole and by sex.[13] Although a majority of countries are consistent in providing satisfactory (or unsatisfactory) skills security for men and for women, two important groups of countries are not. One group delivers skills security to both men and women roughly equally in spite of having a low overall score (e.g. Nicaragua and Swaziland). By contrast, the countries in the other group achieve a high score on skills security overall but do relatively badly in terms of male-female balance. Switzerland, Germany and the Republic of Korea are examples of this tendency.

Income security index

Assurance of an adequate income is a fundamental form of security, a key to freedom of choice, opportunity and other forms of security. For the purposes of measurement, what is required are indicators of income security among those "earning" incomes, those at the margins of the labour "market" and those outside it. This is quite complex, and the full rationale for the selected input, process and outcome indicators is elaborated elsewhere (see ILO, forthcoming, ch. 3).

The input indicators represent government commitment to income security. Thus, a positive value is given if the country has ratified each of the Social Security (Minimum Standards) Convention, 1952 (No. 102), the Minimum Wage Fixing Convention, 1970 (No. 131), and the Minimum Wage-Fixing Machinery Convention, 1928 (No. 26). Also included are dummy variables for commitment to the income security of the employed, the unemployed and the old-age population – a positive value for the existence of a minimum wage law, a positive value for the existence of an unemployment benefits scheme, and a positive value for the existence of a state pension scheme.

The process indicators are the social security expenditure share of GDP and the percentage of the population targeted for coverage by social security schemes of all kinds, both of which are taken from the SES Social Security Database.

The outcome indicators are the national poverty rate, GDP per capita expressed on a purchasing power parity basis, the Gini coefficient measuring income distribution, life expectancy at birth, the percentage of the unemployed receiving unemployment benefits (which in

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[13] This comparison is done by contrasting solely the scores on the outcome sub-index.

many countries is zero because they do not have a benefit scheme), the wage share in total value added/GDP, an old-age income security index generated from the social security database, and a measure of foreign indebtedness (external debt relative to GDP).[14] The latter is used to reflect a country's vulnerability to a sudden loss of whatever level of national income security it has achieved.

The income security index covers 99 countries. An overview of results indicates that income security is highest in OECD countries, followed by eastern Europe and Latin America. The 15 most insecure countries are in Africa; particularly so are Nigeria, Ethiopia, Mali and Burundi. The Asian countries are "average" performers, with central Asian countries (notably, Kyrgyzstan, Kazakhstan, Azerbaijan, Armenia, Turkmenistan and Uzbekistan) plus Thailand and China coming out on top of this middle group, and south-east Asian countries lagging behind, including Malaysia, Indonesia, Philippines, Pakistan, Bangladesh, Nepal, India and Viet Nam.

Voice representation security index

Representation security is about "voice". Ideally, this should combine both individual representation and collective representation. Security in this sense means that any individual or group must have the effective right to be represented by a body that can bargain on their behalf. This requires that any individual has access both to institutional bodies and processes that give him or her individual rights and to a collective body that can represent his or her interests effectively, meaning that the body must be sufficiently large, independent and competent to do so.

Representation security has long implied membership of trade unions. But the main model within which representation security has been pursued has changed dramatically over the past century, and several models have emerged. The point here is that any unionization rate statistic may reflect very different bargaining structures and representation capabilities. Moreover, recent years have witnessed widespread de-unionization and, in many parts of the world, an erosion of freedom of association.[15] Some countries have made it harder for workers to organize or bargain collectively, and many have chipped away at bargaining rights.

With these concerns in mind, and recalling that input indicators should measure formal commitment to the relevant forms of security, desirable input indicators of voice representation security might

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[14] Also considered was the ratio of female to male average wages, but there are only a relatively small number of countries with such data.

[15] For a review of the factors involved, see Standing (2002a).

include measures such as whether or not the country has ratified well-established international Conventions on freedom of association, and whether or not there is a law explicitly allowing trade unions and making it easy for them to organize. They could also include measures of bargaining scope and freedom to bargain, freedom to strike, to picket, and so on.[16]

Four input indicators have been selected. The first three take account of the most relevant ILO Conventions, with a value of 1 given if the country has ratified the Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87); a value of 1, if it has ratified the Right to Organise and Collective Bargaining Convention, 1949 (No. 98); and a value of 1, if it has ratified the Rural Workers' Organisations Convention, 1975 (No. 141). For the fourth indicator, a value of 1 is given if the country's laws impose no restriction on the type of union that can be formed. The reason for this is that national and sectoral unions give a greater degree of collective representation than when only local or plant-level unions are allowed.

In order to avoid giving disproportionate weight to the most formal and international components of the input index, the four input indicators are divided into two sets. The first set includes the three Convention-ratification indicators and is given only half the weight of the second, which is the national law component.

Here, the process indicators measure mechanisms for strengthening "voice"; three indicators have been selected. First, a value of 1 is given if there is a national tripartite board or council dealing with labour and social policies, and 0 if not. Second, a value of 1 is given if the country's legislature effectively allows non-governmental organizations to promote workers' interests, and 0 if not. Third, a scale is used to assess the proportion of the workforce covered by collective agreements. In some countries, actual figures on coverage do exist, but in many they do not. Accordingly, secondary information had to be used and a five-point scale has been estimated: insignificant, low, medium, high and very high. Because we believe actual coverage by collective bargaining is crucial to representation, this third variable is given double the weight of each of the first two.

Devising appropriate outcome indicators is relatively difficult for representation security. Yet, these deserve more weight in the overall index than the input and process indicators, in keeping with the principle of valuing effectiveness over formal arrangements.

Five outcome indicators have been selected. The first is the standard "outcome" indicator of collective representation security, namely, the rate of unionization (i.e. the percentage of the workforce belonging

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[16] For a detailed discussion of the issues sketched in this section, see Bonnet and Standing (2003).

to trade unions). However, even on the assumption that it does make a valid proxy for representation security, unionization is hard to measure satisfactorily. In some countries, the figure comes from reports submitted by the unions themselves; in others it comes from sample surveys (the most reliable method, in principle); and in others still, from enterprise surveys.

Another difficulty with the available data is that the union membership figures recorded for the countries of the former Soviet Union are misleadingly high, partly because until the late 1980s or early 1990s all workers were required to belong to unions, formally at least. To take account of this legacy, the recorded values have been halved for all these countries, which still put most of them in the high-level bracket. Unionization figures for all countries have also been adjusted by multiplying the recorded rate – or half of it in the case of the ex-Soviet countries – by the percentage of the workforce in wage and salaried employment.

The second indicator is an estimate of the change in unionization during the 1990s. Because of data unreliability and because we had to rely on "guesstimates" in a few cases, the estimated changes are classified into groups: big fall, small fall, little or no change, small increase, and big increase. The most common outcome was a big fall in unionization, followed by countries with small declines.

The third indicator is the field in which voice mechanisms and institutions are mostly represented. This aspect is predicted through the proportion of wage and salaried workers in total employment.

The fourth is the Civil Liberties Index developed by the non-profit organization Freedom House, which has a scale from 1 down to 7 (lowest in terms of freedom).[17] For the purposes of the representation index, the numbering is reversed, since larger numbers are given a greater weight. Finally, because an improving or deteriorating situation conditions security, the fifth indicator measures the change in the Civil Liberties Index between 1990 and 1999, expressed as a ratio of the two values.

Calculations were carried out for the 99 countries for which data were available. The input, process and outcome sub-indexes were combined to produce a voice representation security index based on a double weighting of the outcome sub-index (see table 1). The results call for three general comments.

First, the ranking of countries is consistent with other social indicators and relevant sources of information. Second, it shows how

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[17] The Civil Liberties Index includes indicators of "association and organization rights", "freedom of expression and belief", "rule of law and human rights", and "personal autonomy and economic rights" (Freedom House: *Freedom in the world: The Annual Survey of Political Rights and Civil Liberties* (New York, NY, Freedom House, various years)).

Table 1. Voice representation security index, by region

Region	Pacesetters	Pragmatists	Satisficers	Much-to-be-done
Western Europe	Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, Norway, Spain, Sweden, United Kingdom	Netherlands, Switzerland	Greece, Portugal, Turkey	
Eastern Europe and central Asia	Bulgaria, Czech Republic, Hungary, Lithuania, Russia	Estonia, Latvia, Slovenia, Ukraine	Albania, Azerbaijan, Belarus, Croatia, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Romania, Tajikistan, Turkmenistan	Armenia, Uzbekistan
Africa and Middle East	South Africa	Mauritius	Algeria, Benin, Burkina Faso, Burundi, Congo, Congo DR, Côte d'Ivoire, Ghana, Israel, Madagascar, Morocco, Rwanda, Senegal, Sierra Leone, Tanzania, Tunisia, Zimbabwe	Egypt, Ethiopia, Guinea-Bissau, Lebanon, Mauritania, Nigeria
Americas	Barbados	Brazil, Canada, Chile, St. Kitts, St. Lucia, St. Vincent, United States	Argentina, Colombia, Costa Rica, Ecuador, Dominica, Mexico, Panama, Peru, Venezuela	Honduras
Asia and Pacific		Australia, China, Republic of Korea, New Zealand, Philippines,	Fiji, Indonesia, Japan, Sri Lanka	Bangladesh, India, Kiribati, Nepal, Pakistan, Papua New Guinea, Thailand
Total	**20**	**19**	**44**	**16**

"voice" is treated and distributed around the world. Only a relatively small group of countries has severely neglected or rejected this aspect of security. The majority of countries seem convinced of the need for voice and have taken the necessary formal steps to secure it, but have so far failed actually to provide it. This large cluster of *satisficers* does not follow any regional or political pattern. It includes countries from all continents with a variety of political systems. Their common features appear to be lack of financial resources and/or political will. Third, the group of countries that has been effective in providing "voice security" has done so through two different models. One, predominantly western European, secures voice in an explicit way, reflecting a rights-based and state-based approach to social development. The other, which cuts across geographical areas, secures equivalent levels of representation, but has done so through an economic-minded and liberal approach. Here, a major role is played by the private sector, and only "low-intensity" formal guarantees exist, if any.

A more detailed examination of results shows that the highest scores are generally achieved by European OECD countries. The top performers are Sweden, Finland, Denmark and Norway. Also in this group is the best-performing developing country, namely, South Africa, which is one of the very few countries where the unionization rate rose quite strongly in the 1990s.

By contrast, almost two-thirds of the countries have unsatisfactory levels of representation security, and one-quarter of these are in the *much-to-be-done* cluster. They would need to make a major effort to build institutions and develop instruments if their workers were to overcome voice insecurity. Countries where representation security is weakest include Bangladesh, Ethiopia, Guinea-Bissau, Mauritania, Honduras and Thailand.

There is a group of countries that could generally be called "average performers", although their outcomes are fairly good. One interpretation is that, having been relatively efficient in providing voice to workers, they have not maintained mechanisms to guarantee it. These are mainly industrialized countries, such as Australia, the Republic of Korea, the United States, Canada, the Netherlands, Switzerland and New Zealand, plus a few from the Caribbean. But some middle-income countries and transition countries also follow this pattern. They are Brazil, Chile, China, Mauritius, the Philippines, Slovakia, Ukraine, Estonia and Latvia.

The macro-level decent work index: Country scores

The national decent work index (DWI) is obtained by adding up the indexes for the seven forms of work-related security and normaliz-

ing the result. This can be done for 84 countries, i.e. those for which all seven of the component indexes could be estimated with the data available.

When compared to other indexes, the DWI correlates significantly with standard macroeconomic indexes, such as GDP per capita (correlation coefficient = 85.6 per cent) and the UNDP's Human Development Index (correlation coefficient = 84.9 per cent). More interestingly, it also correlates strongly with measures of inequality such as the Gini coefficient for income distribution (correlation coefficient = –51.3 per cent) or the percentage of income in the upper decile (–54.4 per cent) of the income distribution. Decent work and social protection are associated positively with the development process, and negatively with the level of inequalities in societies.

As can be seen in figure 1, the highest scores on the DWI are European. The best performers are west European, though Canada is also in the top ten. The countries just below the top 25 are mostly in eastern Europe, although Argentina, Brazil, Costa Rica and South Africa are also in this cluster.

At the other extreme, among the worst performers – the lowest two deciles – two-thirds of the countries are African and the rest Asian, with the exception of one Latin American country (Honduras). Most Latin American countries actually have slightly better security levels – deciles 5 and 6 – comparable to those of North African countries.

On comparison, the top and bottom groups of countries display large differences not only in scores but also in terms of their coefficients of variation.[18] This implies, for instance, that those scoring high on the DWI are associated with balanced achievements across the seven forms of security (R = 63.3 per cent). By contrast, among the countries that perform worst, achievements vary greatly from one form of security to another. In other words, good performance in terms of security is associated to comprehensive policy approaches. It is not surprising that the most secure country – Sweden – has the lowest coefficient of variation (4.4 per cent). Not surprising either is that the fifth and sixth most insecure countries – Bangladesh and Burkina Faso – have the largest (76.6 per cent and 84.6 per cent). In other words, another finding of this analysis is that good performance in terms of security is usually associated with comprehensive policy approaches.

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[18] Defined as the ratio of the standard deviation to the mean. In the present case, it is an indication of how dispersed the scores are across the forms of security within a country.

Figure 1.   Decent work index (DWI) – 25 best scores
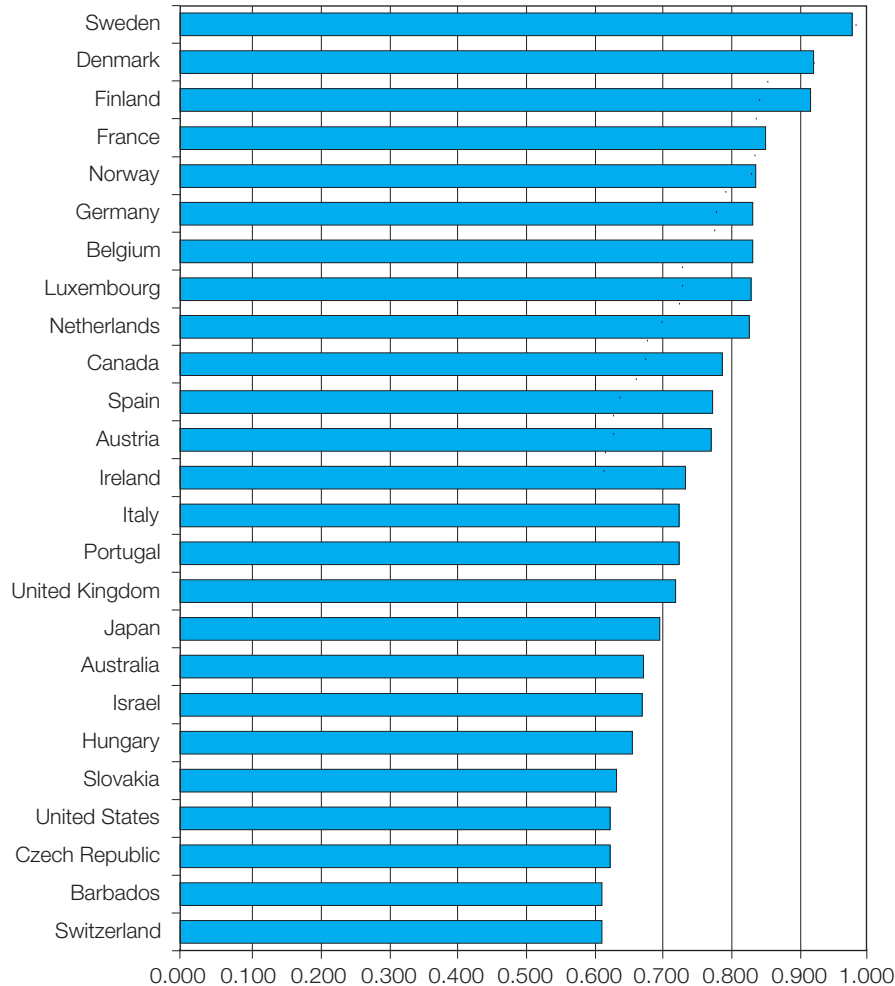
Sources: IFP/SES Databases

A meso-level decent work index

Decent work is sometimes thought of as being only a macro-economic issue, with the idea that it is pointless to try to measure it at the level of a firm or workplace. Another objection is that if there were such a measure, it might somehow be used by opponents of trade unions to argue against the very need for unions. Both of these positions, however, seem unnecessarily defensive, not to say untenable. Without some idea of what a decent workplace embodies, the concept of decent work itself would remain rather hollow.

What we propose here is consistent with the best spirit of corporate social responsibility as expressed in codes of conduct and other voluntary initiatives – in which there is a great deal of interest. Essentially, we define a decent workplace as one in which worker security is relatively good while remaining compatible with the dynamic efficiency of the firm or organization.[19]

The proposed "decent workplace index" (henceforth DWE) draws on data from the Enterprise Labour Force Survey, a survey of managers that examines attitudes, practices and outcomes. The DWE methodology is analogous to that used for the macro-level DWI. The normalization procedure is used for each sub-index, but in this case the index is constructed by steps, along the lines shown in figure 2.

A DWE requires indicators of the principles (input), practices (process) and outcomes that deserve to be promoted. Inevitably, this implies some subjectivity and pragmatism, partly because of the lack of data or difficulty of obtaining measurable information on some issues. Besides, "what firms should do" is a difficult concept to measure, and appropriate performance indicators are hard to identify.

We start with the idea that a decent workplace is one that promotes *skills reproduction security* among its workers. Three input indicators have been selected: whether or not the firm provides entry-level training for newly recruited workers; whether or not it provides retraining to improve job performance or to transfer workers to other jobs with similar skills; and whether or not it provides retraining for upgrading workers or for promotion.

The process indicators focus on the type of training provided. For example, if a firm provides only informal, on-the-job training, it scores less than if it gives structured "classroom" training, including apprenticeship. Accordingly, for each of the three levels determined by the input indicators, a distinction is made between "informal" and "formal" training, with the latter being presumed to have greater value. Although differences between formal and informal may be exaggerated, concentrated training that involves a monetary cost should be preferable to "on-the-job-pick-it-up-as-you-go" training.

The selected outcome indicator is whether or not the establishment actually pays for training directly by funding a training institute, by paying training fees to an institute where it sends workers for training, or by giving stipends to workers who go on training courses.

Beyond skills reproduction security, a decent workplace might be expected to provide its workers with adequate *employment security*. This index measures the extent to which a firm provides its workers with regular employment contracts, whether it gives predetermined prior notice in case of retrenchment, whether it provides benefits to

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[19] For an extended description of what is outlined in this section, see Standing (2003).

Figure 2.   Hierarchy of decent workplace indexes (DWE)
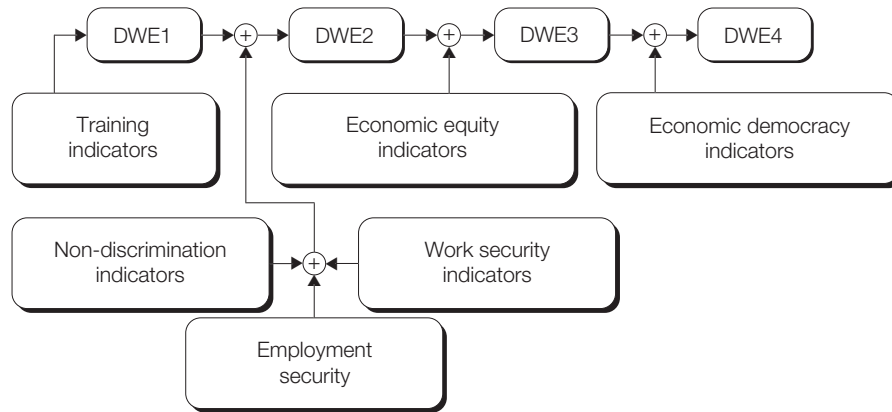
workers being retrenched, and whether it has dismissal procedures regulated by collective agreement.[20]

The indicators of *work security* include a positive value if there is a safety committee or department in the firm, a positive value if the number of occupational accidents as a proportion of the workforce was less than the mean average, and a positive value if there were no accidents resulting in a closure or any death in the firm. In some surveys, most notably in Tanzania, the available data also made it possible to give a positive value if the workplace had separate toilets for men and women, a positive value if there were childcare facilities on the premises and a positive value if there was a health clinic.

A fourth dimension of measurement, related to the notion of job security, involves an index of *non-discrimination*. Non-discriminatory labour practices are indeed essential to social equity: ideally an enterprise should act in ways that avoid labour segregation based on personal characteristics such as race, sex or disability. Although measuring discrimination is notoriously difficult, both employer attitudes (inputs) and outcomes should be taken into account. Neither one would be sufficient on its own. For instance, an employer might have a "preference" but not put it into effect, or have no preference yet discriminate indirectly by hiring on the basis of characteristics that had the (perhaps inadvertent) effect of excluding certain groups from various jobs.

What is needed is a set of easily understandable indicators of social equity. Accordingly, the enterprise surveys focused on equality of opportunity in hiring and training, with the main indicators targeting discrimination by sex, although they can be adjusted to include other

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[20] In eastern Europe and China, where ELFSs were conducted, a variable was added giving a negative value if the firm was putting workers on "administrative leave".

grounds for discrimination, as in South Africa where race was also taken into account.[21]

Regarding recruitment, if management reported no preference for either men or women, this was taken as a positive factor, such neutrality being regarded as equitable. Indeed, just as it would be inequitable to give a positive value to a firm with a preference for men, it would be inequitable to give a positive value to one preferring to recruit women, as is sometimes the case. The primary concern here, however, is to address the more typical case of discrimination against women.

Another input indicator is a stated commitment to provide training equally to men and women. On this point, preferences are likely to be revealed, especially where there is no law against discrimination. It must be recognized, however, that stated preferences may be rationalizations, or norm-induced. In other words, though preferences cannot be ignored, their measurement must be complemented with indicators of actual outcomes.

One outcome indicator relates to women's share of employment. If the proportion of higher-level "employee" jobs taken by women was greater than 40 per cent, a positive score was given to the firm. Although this measure is not ideal because the outcome could reflect male-female differences in the supply of labour, it does focus on the better jobs and identifies relatively good performance in a key area of discrimination.[22] Another measure of outcome is the percentage of all workers trained who are women; if greater than or equal to women's share of total employment, a positive value was given.

In addition to indicators of discrimination by sex, another indicator of discrimination is whether or not a firm employs workers with registered disabilities. Here, a positive score is given to any firm employing any workers with disabilities. Taken together, this combination of measures provides an index of non-discrimination suitable for all workplaces.

Combining the work security, employment security and non-discrimination indexes with the skills reproduction index gives an overall measure of what could be called the "socially decent workplace". At this point, however, matters become potentially more controversial.

A decent workplace is, we reason, one in which there is reasonable *income security*. The literature on economic equity is vast, yet scarcely

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[21] The approach does not deal with an important form of training discrimination, between higher-level and lower-level workers. There is indeed international evidence of strong intra-firm discrimination against those perceived to be less skilled. With respect to training, under the diminishing marginal utility principle, a social welfare function might weight desirable characteristics for those at the "bottom" of the firm more than for others.

[22] One could have made the threshold sectorally specific, giving a positive score if a firm had, say, a high percentage of women in training relative to the average for all firms in the sector. But this is not as justifiable as it might appear, since it allows for sex-based segregation by industry.

any of it addresses the microeconomics of the firm. What is an economically equitable firm? It is surely one in which the differences in earnings and benefits between its members are minimized without jeopardizing efficiency. This might be called the "principle of efficient inequality". Since this is rather utilitarian, one should add a Rawlsian caveat – with priority given to improvement of the position of the "worst-off" workers.

In an economically equitable workplace, there should be few, if any, workers who are paid a small fraction of the firm's average wage. In seeking a proxy for this principle, the minimum wage received by the lowest-paid full-time workers was taken as the initial yardstick. Then, if less than 5 per cent of the workers received that wage, the firm was given a positive score on economic equity. A positive score was also given to any firm in which the minimum amount paid was equal to or greater than 50 per cent of the average wage. While these are only proxies for what needs to be measured, they do seem reasonable.

Another indicator is whether the firm's average wage itself is equitable relative to that paid in other firms. Here, a sectoral measure is used, to reflect technological and market factors. If the firm's average wage was higher than the industry average, then a positive score was given.

Finally, economic equity is deemed better if the firm provides benefits and entitlements that give workers security against various contingencies and improve their standard of living. Since wages are only part of the remuneration system, a positive value was given if the firm provided production workers with more than eight specific types of non-wage benefits.

The proposed decent workplace measure also needs to incorporate a *representation security* index. This is obviously most controversial. In the twenty-first century, workplace democracy will surely come to be recognized as essential not only to decent work but also to dynamic efficiency and sustainable corporate governance.

Representation security is measured with a variety of indicators, depending on the type of economy and the structure of industrial relations. The core factors are straightforward, however.[23] Positive values are given if the firm recognizes a union, and if more than 50 per cent of the workforce is unionized. A positive value is given if there is a collective agreement operating in the firm, covering wages and other labour matters. A positive value is given if there is a joint management-worker committee of some sort, such as a "work forum" in the South African case. A positive value is also given if the workers own more than 10 per

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[23] What is proposed here is illustrative, and could be modified through negotiation between employers, workers and government. In other words, if a particular indicator is deemed unsuitable, an alternative could be used.

Figure 3.   Tanzania: Distribution of DWE4, 2001
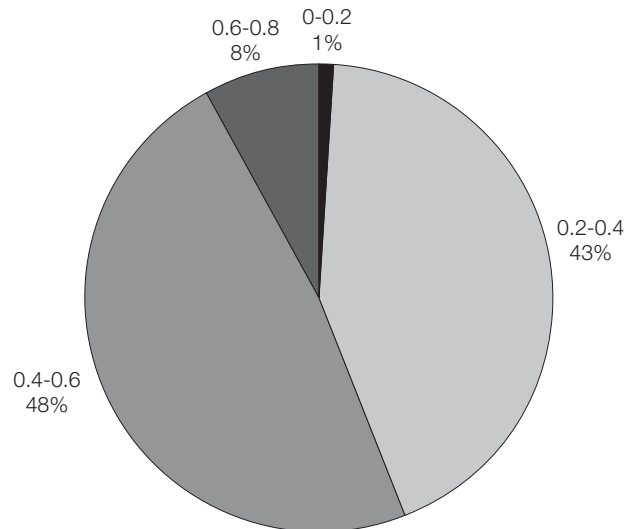
cent of the shares of the firm, and if there is a collectively bargained profit-sharing scheme for workers.

Though these indexes could obviously be improved, they surely capture the essence of what a decent workplace is about. Adding them together and normalizing them yields interesting results. The DWE has been estimated for 14 countries. By way of illustration, figure 3 presents the distribution of the resultant scores for Tanzania, showing that no firms scored above 0.8. For some other countries, a few firms do achieve such high scores. But in general, the distribution is like a squat diamond, with few really bad workplaces, a large band of mid-range scores, and a tapering off to a few with high scores – the meso-level *pacesetters*.

What is encouraging is that there is a positive correlation between the DWE and various measures of workplace performance, such as productivity and employment growth. While the direction of causality is debatable, this suggests at the very least that decent workplace practices are compatible with good economic performance, contrary to what some might contend.

A micro-level decent work index

Suppose you are interested in defining what constitutes a reasonably good working life – "decent work". At the aggregate level, it can be defined in terms of laws, regulations and institutions that enable a growing number of people in all societies of the world to work without

oppression, in reasonable security and with steadily improving oppor-
tunities for personal development, while earning enough to support
them and their families. But at the micro level, any attempt to translate
those objectives into a set of necessary and sufficient conditions runs
into all sorts of pitfalls.

As at the macro level, one way of measuring decent work at the
micro level is through the prism of security. If a person has good income
security, good skill reproduction security, good occupational security,
good representation security and good work security, he/she could be
said to have decent work – and to be extremely fortunate. Good
employment security and labour market security could also be added,
though they may be regarded as having lower priority than the other
items on the list – as instrumental needs rather than desirable attributes
of decent work itself. In the event, employment security is included;
labour market security, treated as a contextual variable, is excluded. So
the micro-level DWI is based on indexes of the other six forms of secur-
ity, using subjective and objective indicators. The following overview
merely notes what is included in the micro-DWI (for a fuller explana-
tion, see Standing, 2002b).

For the *employment security index*, the subjective indicator is the
degree of security felt by the person about retaining his or her current
main work. The objective indicators are measures of contract status and
size of the unit in which the person is working.

For the *job security index*, the subjective indicator is whether or
not the person anticipates having a good job in a year's time. The objec-
tive indicators are whether or not the person has experienced a rise in
income from work over the past five years; whether or not he or she has
a job in which responsibilities have increased; and whether or not an
advance in grade or occupational title has been achieved.

For the *work security index*, the subjective indicator is whether or
not the person feels safety and health conditions in his or her work are
good. The objective indicators are whether or not there is a safety com-
mittee or department at his or her workplace; and whether or not he or
she has worked with dangerous equipment or chemicals.

For the *skills reproduction security index*, the subjective indicator
is "partly objective", namely: whether or not the person uses the quali-
fications and skills he or she possesses. The objective indicator is
whether or not the person has received formal training.

For the *representation security index*, the subjective indicator is
whether or not the person believes available organizations represent
his or her interests in work-related matters.[24] The objective indicators
are whether or not the person belongs to a union; whether or not a

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[24] In some of the surveys, this subjective indicator was not included.

union is operating in his or her workplace; and whether or not there is another organization representing workers' interests.

Finally, for the *income security index*, the subjective indicator is whether or not the person feels "well off" by comparison with other people living and working locally. The objective indicators are measures of income adequacy and of income stability, and whether or not the person has access to income-supplementing or income-replacing benefits or entitlements.

Normalizing each of these indexes separately, using the standard formula, and then aggregating them gives a DWI with a range of values from 0 to 1. The distribution of decent work statuses can thus be determined for all working respondents in the People's Security Surveys.[25]

A micro-level decent work index could serve for several analytical purposes. First, it would show what type of person is likely to face the greatest constraints in the pursuit of decent work. Second, it would identify what type of job or occupation is associated with relatively decent working conditions. Third, it would provide a basis for making comparisons between, say, educational categories or people living in rural and urban areas. Then one could design policies to improve the prospects of the relatively disadvantaged in each case.

Above all, though, such a composite measure would be an analytically disciplining device, obliging the observer to make explicit and transparent what would otherwise prove to be too vague to be meaningful.

Concluding remarks

Most selected indicators of any phenomenon are actually indexes, in that they aggregate what are conceptually dissimilar phenomena. Any index (or indicator) will be criticizable. The challenge is to ensure that it makes clear what it is trying to measure and to ensure that it is reasonably transparent and replicable.

What we have tried to do here is to present an exploratory set of indexes based on the theoretical view that basic security is the essence of decent work, at the level of society, in the workplace and for the individual worker. The immediate challenge is to refine the sub-indexes in all cases, and to improve the data that are available.

What is already clear is that one can conceptualize and measure decent work in ways that are meaningful and measurable. Every reader will have – or should have – alternative preferences for variables that

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[25] For an illustration using the Indonesian PSS, see Standing (2002b). This survey of 3,200 households was carried out in 2001. For analysis of the data on patterns of social and economic insecurity, see Pincus, Sender and Standing (2001).

should be included or excluded. Alternatives can be tested and debated. That is the point of making a start, so that others can do better!

There are two points that deserve particular emphasis by way of conclusion. Some countries achieve environments in which decent work opportunities are much better than elsewhere, and this is not merely correlated with affluence, industrialization or economic growth. Indeed, the most striking conclusion is that countries with a highly unequal distribution of income also tend to do badly in terms of broadly-based decent work.

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