

42754



# Disability and Poverty: A Survey of World Bank Poverty Assessments and Implications

Jeanine Braithwaite and  
Daniel Mont

February 2008

**Disability and Poverty:**  
**A Survey of World Bank Poverty Assessments and Implications**

Jeanine Braithwaite & Daniel Mont  
HDNSP  
World Bank

February 2008

This paper has not undergone the full review accorded to official World Bank publications and the findings, interpretations, and conclusions expressed herein are those of the authors and do not necessarily reflect the views of the International Bank for Reconstruction and Development/The World Bank and its affiliated organizations, or those of the Executive Directors of The World Bank or the governments they represent.

The World Bank does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map or graphic in this work do not imply any judgment on the part of The World Bank concerning the legal status of a territory or the endorsement or acceptance of such boundaries.

The research support of Sanae Hayashi and Nicola Rivella and document processing from Karen Peffley are gratefully acknowledged. The authors are indebted to the following for comments and suggestions: Nicholas Krafft, Sándor Sipos, Cem Mete (peer review), Barbara Murray (peer review), Charles Becker (peer review), Karen Peffley, Pia Rockhold, David Crocker, Robert Wachbroit, and the participants of a seminar at the University of Maryland's School of Public Policy.

Any errors of omission or commission are the sole responsibility of the authors and not of any one kind enough to comment on this work.

[jbraithwaite@worldbank.org](mailto:jbraithwaite@worldbank.org) and [dmont@worldbank.org](mailto:dmont@worldbank.org)



## **Abstract**

In this paper we survey the World Bank poverty assessment literature to date on the relationship between disability and poverty. We find that using standard assumptions about the distribution of household consumption among household members and the typical way that poverty lines are set in World Bank poverty assessments, this relationship may not appear to be as quantitatively significant as common sense and anecdotal evidence would suggest. Our assessment is limited by the fact that household surveys which are used by the Bank to determine consumption and consumption-based poverty typically do not include any questions about the disability status of household members. Only in one region of the Bank's work, Europe and Central Asia, do we find poverty assessments with numeric poverty rates for households with disabled member(s). Other poverty assessments done in other regions of the Bank, in some cases, do provide data on disabled people in regard to employment, health, social assistance, or a related subject, but do not provide poverty rates per se. This literature is assessed in this work, and directions for further research the authors will undertake are indicated.

JEL Classification: I32, J17, D13

Keywords: poverty, disability, equivalence scale, capability

- I. Introduction
- II. Poverty Measurement at the World Bank
- III. Defining Disability
- IV. Literature Survey of World Bank Poverty Assessments by Region
- V. Equivalence and Capabilities
- VI. Conclusions and Directions for Future Research

## Acronyms

ECA	Europe and Central Asia
FSU	Former Soviet Union
GDP	Gross domestic product
HDNSP	Human Development Network Social Protection
LSMS	Living Standard Measurement Surveys
NOBUS	Russian acronym for National Sample Survey of Household Welfare and Participation in Social Services
PA	Poverty Assessment
PPP	purchasing power parities
UK	United Kingdom
UN	United Nations
WG	Washington City Group

## **I. Introduction**

1.1 Disability has often been associated with poverty (Yeo and Moore 2003, Hoogeveen 2005, Elwan 1999) but comparatively little rigorous quantitative research has been undertaken. This paper lays out the methodological complexities of estimating the share of the world's poor which consists of disabled people, and puts forth an approach for rigorous quantitative research.

1.2 A common assertion at disability fora and international gatherings is that one of ten people in developing countries is disabled, and further, that one out of five poor people in developing countries are disabled. The World Bank, in cooperation with the UN and other agencies in the Washington City Group (<http://www.cdc.gov/nchs/citygroup.htm>), has led in the development of standard questions for household censuses that can provide an internationally comparable measure of disability suitable for generating prevalence estimates. The functional approach embodied in these questions has already resulted in a more robust and well-substantiated prevalence figure for the number of disabled people in several developing countries, which ranges from about 10-12 percent, of which 1 to 4 percent are severely disabled (Mont 2007a, Metts 2000).

1.3 But disability prevalence is only part of the picture. Beyond how many people are disabled is the question of how many of them are poor, and conversely, of the poor, how many are disabled? These questions are comparatively more difficult to assess, given the complexity of both poverty measurement and disability measurement. The oft-quoted statistic that 20 percent of the world's poor or of the poor in developing countries are disabled can be traced back to an assertion in a World Bank Social Protection Policy Paper (Elwan 1999, p. 15, footnote 76):

“Disabled people are estimated to make up 15 to 20 per cent [sic] of the poor in developing countries.” [Footnote 76] “Einar Helander, communication with P. Dudzik of the World Bank.”

1.4 While at the time this might have been a reasonable guess, this estimate is not rooted in any hard evidence. The purpose of this paper is to move towards generating a more substantiated analysis of the relation between disability and poverty.

1.5 First, the paper looks at poverty measurement at the World Bank. The Bank has been one of the leading agencies in assessing poverty in developing countries, and its methodologies are extremely well-developed. This paper will only indicate the highlights of this huge literature, directing the interested reader to a multitude of other research.

1.6 Second, we consider how to best measure the prevalence of disability in developing countries, based on the UN Washington City Group approach (Mont 2007a, Mont 2007b).

1.7 Third, we briefly survey 154 poverty assessments (PAs) done at the World Bank over the past 20 years. After developing a four-way typology of poverty assessments in terms of their treatment of the issue of disability, we find that only 11 poverty assessments quantified the poverty rate of households with disabled members. Moreover, all of these were in the Europe and Central Asia (ECA) region. A discussion of the particular socio-historic context of these poverty assessments in ECA is included.

1.8 Fourth, using data from ECA, we explore the issue of equivalence scales and the sensitivity of poverty measurements (World Bank 2000) to assumptions about what share of household consumption is consumed by individual members by age and gender. In this context, we take up the issue of Sen's capability approach (Sen 1984, 1985, 1993, and 1999), and how this would affect setting the poverty line or equivalence scale to take into account the extra consumption needs of disabled people (Kuklys 2005).

1.9 Finally, we draw conclusions and indicate directions for our future research, which will draw upon a few household data sets which allow for a fuller definition of disability beyond what is typically feasible for the ECA country poverty assessments we surveyed. Included in this discussion is the application of the Zaidi and Burchardt (2005) methodology for assessing the additional economic costs of living with a disability, Kuklys's methodology for operationalizing Sen's capabilities model, and the more standard approach of constructing equivalence scales.

## II. Poverty Measurement at the World Bank

2.1 Poverty measurement is not a new topic, but a convenient and significant benchmark was the publication of the World Development Report 1990 Poverty (World Bank 1990) and the subsequent Poverty Reduction Handbook (World Bank 1993) which laid out the methodology for World Bank poverty assessments. Pre-dating and also in parallel, the World Bank launched the Living Standards Measurement Surveys (LSMS),<sup>1</sup> primarily to obtain high quality statistical data on poverty and other human welfare indicators in poor countries. Moving beyond the quantitative aspects of measuring welfare solely through the monetary metrics of income or consumption, the World Development Report 2000/2001 Attacking Poverty stressed dimensions of opportunity, empowerment, and security to assess poverty and the Bank, as did the Voices of the Poor initiative (Narayan, et. al. 2000a, 2000b). We will address some of the non-monetary dimensions of poverty in the Section V. Here we present a general overview of three main issues in poverty measurement: the welfare metric, the poverty line, and equivalence.<sup>2</sup> Those with more interest in exploring in depth are referred to the myriad research available at [www.worldbank.org/poverty](http://www.worldbank.org/poverty), <http://go.worldbank.org/2AQMBVLYK0> and [www.worldbank.org/lsms](http://www.worldbank.org/lsms).

---

<sup>1</sup> Please see <http://worldbank.org/lsms/> which includes pdf files of 135 LSMS Working Papers and many data sets as well as a "listing of many hundreds of research papers" using LSMS data at <http://worldbank.org/lsms/research/reshome.html#papers>.

<sup>2</sup> See also <http://go.worldbank.org/2AQMBVLYK0>, click on poverty analysis.

## II. A. Consumption as Welfare Indicator

2.2 Typical monetary measures of well-being are income and consumption. In more developed countries, income is a reasonable proxy for the combination of present and future consumption, while in lower income countries, much consumption is obtained through home production, barter, or other methods that lie outside a monetary system. However, in all countries the timing of income and consumption may differ because families may save or borrow in order to smooth out their consumption. Therefore, the measured poverty status of some households may be different under the two approaches.

2.3 A comprehensive measure of current consumption is generally preferred for three reasons (Deaton 1999, Deaton and Zaidi 2002):

- First, current consumption is often taken to be a better indicator of the current standard of living, since the utility level depends primarily on actual consumption of goods and services. For that reason the consumption measure should be as comprehensive as possible
- Second, current consumption may also be a best possible approximation to long-term average well-being, because consumption tends to fluctuate much less than income does.
- Third, international experience shows that data on consumption are more accurately collected. Respondents in agricultural and informal sectors may have difficulties in recalling correctly all kinds of income they receive. Others may also seek to conceal their income because of taxation and other concerns. Reported income is typically understated (lower) than measured consumption, particularly in the higher deciles.

2.4 The core welfare metric for PAs at the World Bank has been and remains household consumption. In developing countries where there is a large informal sector, it can be very difficult and administratively very costly to verify true household money income. Furthermore, in many countries, a very significant part of household food consumption comes from food grown on private garden plots. It can be very challenging to estimate the true value of home-produced goods, since they are typically produced with “costless” family labor and their quality may differ from items which are produced for sale. Further, certain kinds of income, like remittances from relatives living abroad, are notoriously difficult to measure reliably.

2.5 Beyond these considerations, there are many other practical issues to be resolved in creating a consumption aggregate from household data that we will not address here, but can be found in the PAs we review.<sup>3</sup>

---

<sup>3</sup> For an application of Deaton and Zaidi 2002, see World Bank 2005.



## **II. B. Poverty lines**

2.6 A poverty line specifies a society's minimum standard of living to which everybody in that society should be entitled. This concept is very country-specific. Every society has its own views on what constitutes a minimum standard of living, which is why most countries develop a national methodology to measure poverty accurately and do not solely rely on internationally known poverty lines. However, for international comparisons, the World Bank has developed the well-known "\$1 per person per day" poverty line using purchasing power parities (PPP) and estimating from decile data.

2.7 The \$1 per person per day poverty methodology was developed by the World Bank in the mid-1980s. The World Bank's \$1 a day poverty line assumes that all persons with consumption equivalent to \$1 a day (in PPP) will enjoy the same level of standard of living irrespective of which country they live in. Since different countries have different basic needs, a single poverty line cannot adequately capture these differences. For instance, people living in the countries with an extreme climate require greater energy in calories to maintain the same level of metabolism. Thus their basic food needs are higher. The PPP conversions may not capture these basic needs.

2.8 It must be emphasized that PPP exchange rates were not designed for making international poverty comparisons; they were mainly designed for comparing aggregates from national accounts. The PPP exchange rates are based on prices of commodities that are not necessarily representative of the consumption baskets of the poor. More importantly, the weights in the PPP baskets of goods and services do not adequately represent the consumption basket of the poor.

2.9 The \$1 a day poverty line is appropriate mainly for low-income countries that are situated in tropical regions. People living in the Europe and Central Asia region have to face a harsh cold climate, which requires them to heat their houses, obtain warm clothing and expend even greater energy in kilo calories to maintain the same metabolism. Their basic needs are obviously very different from other countries so their poverty lines will also be different. This is why the Bank's ECA region used \$2.15 and \$4.30 at PPP for inter-regional comparisons (World Bank 2005).

## **II.C. Equivalence**

2.10 If a household is deemed to be poor, all its members are counted as poor. The implicit assumption here is that all individual members of a household benefit equally (or in a constant proportion, called an equivalence scale), from the household's expenditure or income.

2.11 Income and consumption data from household surveys are usually collected at the level of the household rather than the individual. This means that in attributing to individuals within the household their share of household resources, an adjustment based on some allocation rule must be imposed (using the standard per capita scale is such an assumption).

2.12 In many developing countries, the literature on poverty has tended to use per capita measures. But it is possible that there exist economies of scale in consumption, such that the per capita cost of reaching a certain welfare level is lower in large households than in small ones. For example, the cost of heating might depend on dwelling characteristics, irrespective of whether the residing family is large or small, making the per capita cost of heating lower for the large family. The effective number of household members that share a certain welfare should thus be adjusted using an economies of scale parameter indicated by  $\theta$  (theta). The mostly often used form is  $n^\theta$  where  $n$  is the number of household members. A value of theta equal to .6 implies that to achieve the same level of welfare as a single-person household spending one unit, a family of four will have to spend only 2.29 units ( $4^{0.6}$ ), i.e. 0.57 units per each member instead of one. In addition to this parameter, a special coefficient for children is also often used to account for differences in their needs.

2.13 The assumption of an equivalence scale is that either all members benefit equally or children benefit less than adults from an increase in consumption, but this assumption may not hold for disabled children and disabled adults. In some societies, disability is widely viewed as a curse or punishment for past sins, and disabled individuals may not consume equally, even if differences between non-disabled adults and children are correctly captured.

### **Adult Equivalent Size General Formula**

2.14 To measure the effects of economies of scale and the different consumption needs by different household members, household size is converted into *adult equivalent (AE)* using the following formula for the household  $i$ :

$$AE_i = (A_i + \alpha C_i)^\theta$$

where  $A_i$  is the number of adults in the household,  $C_i$  is the number of children, and  $\alpha$  and  $\theta$  are parameters.

### **Adjusted Adult Equivalent Size Based on Modal Household Composition**

2.15 However, as pointed out by Deaton and Zaidi (2002), this adjustment would overestimate the total consumption unless all households were single-adult households. They suggest using an adjusted adult equivalent size of the household using the formula shown below.

2.16 Adjusted adult equivalent size of the household  $i$  ( $AE\_ADJ_i$ ) is defined as

$$AE\_ADJ_i = \frac{A_0 + C_0}{(A_0 + \alpha C_0)^\theta} AE_i$$

where  $A_0$  and  $C_0$  are, respectively, the number of adults and children in the modal household, and  $A_i$  and  $C_i$  are the number of adults and children in the  $i^{\text{th}}$  household. The modal household (e.g., 2 adults and 3 children) varies according to demographic differences and family structures in developing countries. An application of this methodology is found for Turkey in World Bank and State Institute of Statistics (2005).

### **Differences in Needs and Consumption Patterns within the Household**

2.17 While intuitively, it seems obvious that the consumption needs of children would differ from adults, and by extension, the elderly from children, and further, of disabled people from non-disabled individuals, it has proven to be exceptionally difficult to theoretically disentangle these “within the household” dynamics. Since one of the main developers of the Engels approach (Deaton and Muellbauer 1986) has subsequently repudiated it on theoretical grounds (Deaton and Paxton 1998), there has been a gap in the theoretical literature, thus leading recent texts to state that “none of [the techniques to estimate equivalence] can be considered as accurate” (Marquez et al. 2007). While the problem of estimating child costs still is unresolved in the literature, we explore below a promising approach for estimating the extra costs of disability (Zaidi and Burchardt 2005) as opposed to simply extending the traditional approaches repudiated in Deaton and Paxton (1998) for children to disabled individuals (such as done in Jones and O’Donnell 1995).

2.18 It should also be noted that beyond the extra cost for goods specific to disabled household members, households can lose welfare from non-participation in the labor market of the disabled member (owing to discrimination and stigma) or non-participation in paid employment by family members who must help care for the disabled member in the absence of adequate social services including respite care. An ad hoc estimate of the cost of foregone GDP world-wide owing to these two issues is 5-7 percent (Metts 2004).

### **III. Disability Measurement at the World Bank and UN**

3.1 In examining the relation between disability and poverty, it is important not only to define what is meant by poverty, but what is meant by disability, as well. In recent years, a functional approach to measuring disability that draws upon the social model of disability has become more standard, and has recently been adopted by the World Health Organization’s International Classification of Functioning, Disability and Health and the UN’s Washington Group (WG) on Disability Statistics (Mont 2007a, Mont 2007b)

3.2 According to the social model, disability is the outcome of the interaction of a person’s functional status and their environment. People are not identified as having a disability based upon a medical condition, but rather are classified according to a detailed description of their functioning, along various domains ranging from specific body functions to basic activities (e.g., walking and seeing) to the extent of their participation in work, school, family life, and other endeavors.

3.3 Moreover, disability is not an “all or nothing” concept. Disabilities can not only be mental, physical, sensory, or psycho-social, but also range from mild to severe. How researchers construct a binary variable for disability will influence the correlations they find between disability and various socio-economic characteristics, such as poverty.

3.4 The WG, established by the UN Statistical Commission and with the involvement of at least 50 nations, has recommended using the presence of difficulties in at least one of a core set of basic activities – seeing, hearing, walking, cognition, communication, and self-care – as an operational proxy for a person with a functional limitation that puts them at risk of being disabled in the social model sense (Mont 2007a). The WG also recommends examining the data on disability using multiple thresholds for the level of difficulty to obtain a sense of the impact of mild, moderate and severe limitations in functioning. The importance of looking at activities of daily living or functional ranges is also recommended in Gertler and Gruber (2002).

3.5 This paper follows this approach to measuring disability, while at the same time acknowledging that surveys with more extensive sets of questions are capable of generating a more detailed, nuanced, and extensive analysis of disability.

3.6 What is clear, however, is that the approaches of relying on answers to questions such as “Do you have a disability” or asking about a string of possible diagnoses or conditions (e.g., diabetes, epilepsy, blindness, etc) generate particularly poor data.

3.7 Asking some variant of “Do you have a disability?” generates very low rates of disability for several reasons. First, the word “disability” has very negative connotations, often associated with stigma. Second, it is often interpreted as meaning only very significant difficulties and so misses mild and moderate limitations. Finally, people think of disability relative to some normative standard of how they should be functioning, so disability related to the elderly can be missed. Their difficulties in functioning will be considered merely “being old”.

3.8 A list of diagnoses is not effective because many people do not know their diagnoses (especially those with limited contact with the health care system). Moreover, two people with the same diagnosis might have very different levels of functioning. Finally, any list of diagnoses will not be complete. Even a category like “blind” will miss people with significant vision problems who are not completely blind.

#### **IV. Literature Survey of Poverty Assessments at the Bank**

4.1 Limitations in the availability of data on disability in developing countries pose restrictions on the extent of analysis that can be done to examine the relationship between disability and poverty. However, some existing World Bank analysis offers insight into this relationship, although it must be said that the quality of data on disability can vary substantially (Mont 2007a).

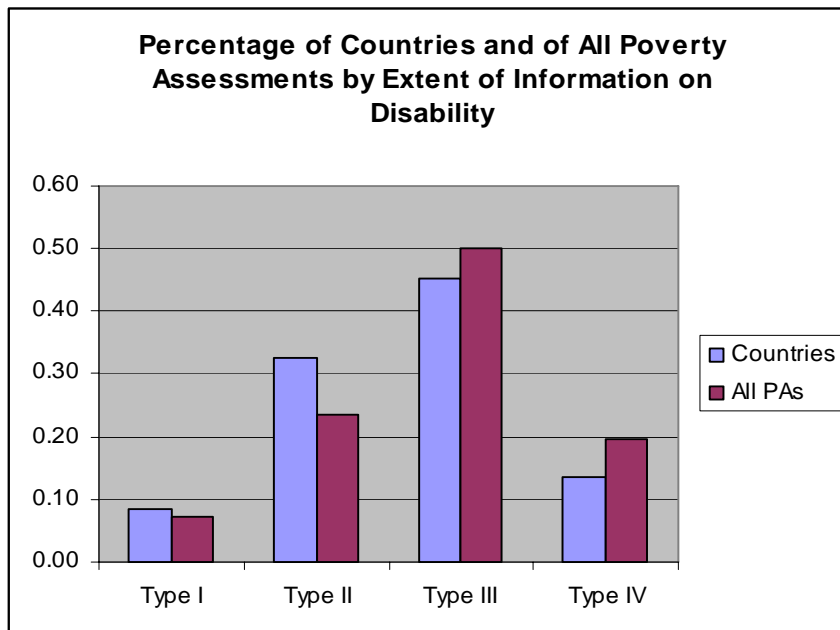
4.2 Overall, most Poverty Assessments (PAs) undertaken by the World Bank have not addressed the issue of disability in an extensive or systematic manner. Figure IV-1 shows the breakdown of PAs by the degree to which they deal with disability. PAs are divided into four groups:

- Type I – Statistics reported on poverty rates of disabled people vs. the general population
- Type II – Some data are reported on disabled people, in regard to employment, health, social assistance, or some other subject pertaining to poverty, but not poverty rates per se.
- Type III – Mention is made of the importance of disability in relation to poverty or factors related to poverty, but no data are available.
- Type IV – No mention is made of disability.

4.3 In Figure IV-1, the blue bars represent the distribution of countries' most inclusive PA (some have more than one in the time period examined: 1995-2006). For these bars, only the “most inclusive” PA is tabulated, where most inclusive is understood to denote the PA with the greatest attention to disability in the analysis. The red bars show the distribution of all PAs. As can be seen in the chart, fewer than 10 percent of countries with a PA reported statistics on poverty broken down by the presence of a disability (Type I), and all of these were in one region of the world, namely ECA.

4.4 This is not to say that disability is totally ignored. In roughly one-third of countries with a PA some data on disability was available in regard to employment, health, social assistance, or some other subject pertaining to poverty, and nearly half of all countries that did not have any data made reference to the role disability most likely plays in generating, or at least sustaining, poverty. Only about 12 percent of PAs totally ignored the issue.

**Figure IV-1**



4.5 Europe and Central Asia (ECA) is the region which has paid most attention to disability and poverty from an analytical point of view. As can be seen in Figure IV-2, eight out of 25 countries have at least one PA that reports data on disability and poverty. Only one country can be categorized as having only a Type IV PA. In fact, all the Type I countries in Figure IV-1 are from ECA. This relates strongly to the historical context, and the availability of information in household surveys which enable a variable denoting disability to be constructed.

4.6 In ECA, social protection was the sector mostly closely associated with disability in terms of policy and fiscal impact, owing to the system of disability pensions and the pervasive free or low-cost provision of goods and services to certain categories of the population in Russia and some other former Soviet Union (FSU) countries.<sup>4</sup> After the transition, virtually every region in Russia and many FSU countries adopted additional privileges for veterans and persons with disabilities although the basic system had been set up during the Soviet period.

4.7 Under the Soviet system, disabled people were both protected and isolated from the general population. Disability was one of the very few accepted reasons for an adult not to work, but disability was viewed in a narrow, medical way. Parents were encouraged to place children in residential institutions and non-institutionalized children with disabilities were typically segregated in special schools. Disability was highly stigmatized, and the built environment was not accessible even in good weather. Adults with disabilities were encouraged to join collectives of persons with the same medically defined disability. Working in sheltered workshops and living apart in special company towns, people with disabilities were isolated from Soviet society. Mental disability was even more highly stigmatized. The Soviet system worked to produce a still commonly-held belief that “we don’t have any disabled.”

4.8 The impact of transition on disability was pronounced — the number of persons counted as having a disability in Russia more than doubled between 1990 and 2003, reflecting several factors, including changes in the reporting of pensions to include disabled people previously classified as old-age pensioners, the preference of employers to avoid paying severance pay to fired workers by placing them on disability rolls, moral hazard in the application process, and the sharp deterioration in health indicators (particularly for adult men) and disruptions in the health system.

4.9 A legacy of this system was the payment of a disability pension for acquired disability (either from work injury or general illness) and for congenital impairments for children. As a result, household survey questionnaires often included a question in the income section about disability pensions. Two specialized surveys financed with World Bank technical assistance, the NOBUS in Russia (Russian acronym for National Sample Survey of Household Welfare and Participation in Social Services),<sup>5</sup> and the Bosnian

---

<sup>4</sup> For details on Kazakhstan, see Seitenova and Becker (2008). For details on Russia, see Braithwaite (forthcoming), Merkuruyeva (2007), and Becker and Merkuruyeva (forthcoming).

<sup>5</sup> Available at

<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/ECAEXT/RUSSIANFEDERATIONEXT>

Living Standards Measurement Survey (LSMS)<sup>6</sup>, and a survey in three areas of Uzbekistan (not nationally representative) provided significantly more detail (2008).<sup>7</sup> In particular, the Bosnia and Herzegovina LSMS included a detailed block on mental health and illness issues, while the NOBUS<sup>8</sup> captured data about privileges. The Uzbek survey included a detailed block on functioning, discussed below.<sup>9</sup>

4.10 However, with these exceptions, general household budget or income and expenditures surveys did not typically include detailed information about disability or capability. Thus, the PAs constructed a variable of whether a household reported receipt of one or more disability pensions as the “disability” variable. We discussed above why this measure is not the best way to capture disability in survey analysis. However, this is the only information that was available for most ECA countries in order to quantitatively assess poverty rates among households with and without disabled members (as proxied by receipt of a disability pension).

4.11 Statistics on poverty rates for all households and households with disability pensions can be found in Table IV-3. The relationship reported in that table is not straightforward. In Ukraine, Armenia, and Kosovo we find slightly higher rates of poverty and extreme poverty for households with disabled members. In the Kyrgyz Republic there is only a slightly higher rate of poverty when disabled people are present, but the rate of extreme poverty is much higher. And in Georgia and Poland poverty is much higher for households with disabled members. This relationship is documented in other countries as well. Controlling for a range of demographic factors, households in Uganda, for example, were found to be 38 percent more likely to be poor in a study unconnected with a PA (Hoogeveen 2005).

---

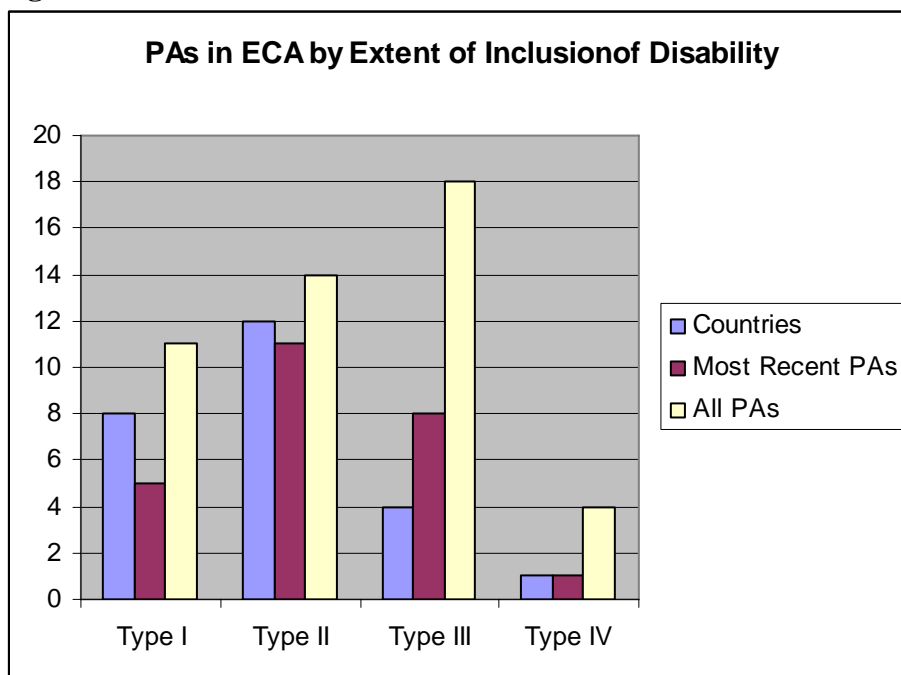
<sup>6</sup> Available at <http://www.worldbank.org/LSMS/>

<sup>7</sup> Mete, Cem (Ed.). Economics Implications of Chronic Illness and Disability in Eastern Europe and the Former Soviet Union. World Bank. 2008.

<sup>8</sup> see: <http://go.worldbank.org/VWPUL3S9F01>

<sup>9</sup> Other sources of survey information on disability are another survey for Russia, the Russian Longitudinal Monitoring Survey (<http://www.cpc.unc.edu/rlms/>), the Ukrainian Longitudinal Monitoring Survey (not freely accessible, but described in point 37 in <http://www.eerc.kiev.ua/library/stat-databases.shtml>), South Africa’s Cape Area Panel Study <http://www.caps.uct.ac.za/>, and the Indian National Sample Survey study on disabled persons ([http://mospi.nic.in/stat\\_act\\_t14.htm](http://mospi.nic.in/stat_act_t14.htm)).

**Figure IV-2**



**Table IV-3**

**Poverty Rates by Presence of Disabled Household Member in ECA PAs**

Country	Year	Poverty		Extreme Poverty	
		All	Disabled Member	All	Disabled Member
Armenia	1999	54.7	58.6	8.5	10.6
Georgia	1999	42.7	60.0	8.9	17.0
Kosovo	2002	50.3	n.a.	12.0	15.5
Kosovo	2005	n.a.	n.a.	15.2	17.9
Kyrgyz	1995	40.0	41.1	15.0	33.1
Kyrgyz	2003	56.4	56.0	24.7	38.2
Poland	2004	14.8	21.0	8.6	12.8
Russia	1995	26.8	35.4	10.4	14.0
Russia	1999	24.6	23.8	12.5	12.4
Ukraine	1996	30.0	32.4	6.7	n.a.
Uzbekistan	2003	27.5	23.7	9.7	n.a.

4.12 Evidence from a study in India also unconnected to a PA highlights some of the reasons behind higher poverty rates in households with disabled member (World Bank 2007). First, disabled people receive less education, having only a 52 percent illiteracy compared to 35 percent for the general population. The share of disabled children not enrolled in school is over five times the general rate, even in relatively well-off states. Disabled children very rarely progress beyond primary school.



4.13 Disabled people in India also have lower employment rates, and the gap between their employment and that of non-disabled people is growing. According to the study,

“The large majority of persons with disability in India are capable of productive work. Despite this fact, the employment rate of disabled population is lower (about 60 percent on average) than the general population, with the gap widening in the 1990s. Having a disability reduces the probability of being employed by over 30 percent for males in rural Uttar Pradesh and Tamil Nadu, though the effect is lower for women...[and] Around 45 percent of households with a person with a disability report an adult missing work to care for [disabled] member, the bulk of these every day and on average for 2.5 hours. However, other adult men are more likely to be working in households with disabled members, due to the need to compensate for lost income. (Executive Summary)”

4.14 Overall, poor prospects for education and employment among disabled people, and the intense stigma that they often face, are expected to drive them into poverty.

4.15 The situation looks very different in Russia and Uzbekistan, however. In Russia, poverty was associated with disability in the 1995 PA, but that relationship disappeared in the more recent PA conducted in 1999 (Table IV-3). And in Uzbekistan, the disability rate for households with disabled members was actually lower than for households without such members.

4.16 Interpreting these statistics, however, should not be undertaken without a deeper understanding of how disability is defined in these studies. For example, a 2006 Bank survey in Uzbekistan found that the relationship between poverty and disability changes depending on the threshold for what constitutes a disability. When minor and moderate disabilities are included there is no significant relationship between poverty and disability, and to the extent one exists the correlation is negative. However, when a higher threshold is used so that only significant disabilities are counted, there is a strong positive correlation between poverty and disability (Scott and Mete, 2008).

4.17 These 11 poverty assessments all looked at post-transfer poverty, in other words, no subtraction from income or consumption for the value of disability pensions received was made.<sup>10</sup> An analysis of pre-transfer poverty would show higher poverty rates for households with disabled members.

---

<sup>10</sup> See World Bank (2001) for a discussion of why pre-transfer as well as post-transfer poverty should be assessed.

## V. Equivalence and Capabilities

5.1 Standard welfare economics began by measuring poverty as a lack of income. As discussed earlier, consumption is a more appropriate measure in developing countries because of the extent of informal markets, in-kind transfers, bartering, and home production. However, even measuring poverty by consumption goods is problematic. Different people in different situations may require a different set of consumption goods to have a quality of life we consider to be free of poverty. This cuts to the very core of what we mean by poverty. Is it just lack of income or consumption, or is it something more? And if so, how does disability fit into this?

5.2 According to Amartya Sen's capabilities approach (Sen 1984, 1985, 1993, 1999) poverty is not solely a function of material goods. Rather, it is based on a standard of living described by the capability to conduct various "functionings." These functionings are defined as the attainment of states of being that are fundamental to living an acceptable quality of life. They include things such as being well-sheltered, being well-nourished, being able to move about freely, or being able to form and maintain a family. As such, they are not input based, like income and consumption measures. They are output based. Does a person have the capability to combine the resources at their disposal to live a complete and dignified life?

5.3 Functionings result from a production process. Consumption goods are combined with technical constraints, called "conversion factors", to produce states of being. These conversion factors can be at the individual, social or environmental level. For example, to achieve the functioning of being able to move about freely, the required consumption goods will depend in part on the ability to move one's legs, the type of terrain, and the presence of public transportation. What's important in Sen's model is not whether a person owns a car or a mule or a bicycle, but whether they are capable of getting to where they need to go.

5.4 Critics sometimes cite Sen's unwillingness to present a detailed list of functionings as a weakness in his approach, but Sen maintains that there is no universal list of functionings. Rather, he says that in each situation democratic processes and social choice procedures should dictate the functionings used to build and evaluate policies (Clark 2005, Robeyns 2005).

5.5 Other authors have attempted to come up with a set of core functionings that they maintain can be adapted to take into account different cultures and stages of economic development (Alkire 2002). Some have built these on what they consider basic values. Others rely on categories that specify institutional or legal means to achieve capabilities, while others have generated their lists from extensive community exercises in a wide range of localities, or by reviewing the development literature to see what core activities are most referenced. But in every case, the core concept remains: quality of life (or poverty) should not be measured by material goods absent of the considerations of what those goods are used for and the other resources people have at their command.

5.6 This approach is fundamentally multidimensional and requires analysts to make more explicit value choices over what constitutes poverty. Sen also points out that being multidimensional – and inclusive of the broader social and physical environments – his capabilities approach helps identify unintended consequences (Sen 1999). This approach also is more indicative of how poor people view poverty, as the recent “Voices of the Poor” project at the World Bank emphasized (Narayan, D, et al. 2000a, 2000b). When interviewed, poor people around the world listed not only material well-being as important, but a range factors that can all be seen as relating back to Sen’s capabilities approach (see Table V-1).

**Table V-1**

**Well-being According to *Voices of the Poor***

Material Well-being: having enough

Food

Assets

Work

Bodily Well-being: being and appearing well

Health

Appearances

Physical Environment

Social Well-being:

Being able to care for, bring up, marry and settle children

Self-respect and dignity

Peace, harmony, good relations in the family and community

Security

Civil peace

Physically safe and secure environment

Personal physical security

Lawfulness and access to justice

Security in old age

Confidence in the future

Freedom of choice and action

Psychological Well-being

Peace of mind

Happiness

Harmony (including a spiritual life and religious observance)

5.7 Reviewing Sen's capabilities approach and Table V1-3, it is not difficult to see where disability fits in to all of this. Disability operates via all the conversion factors previously mentioned to alter the production function people use to turn material goods into functionings.

5.8 In fact, Sen's model dovetails extremely well with the social model of disability. That model conceptualizes disability as arising from the interaction of a person's functional status with the physical, cultural, and policy environments (Shakespeare and Watson 1997, Hughes and Patterson 1997). If the environment is designed for the full range of human functioning and incorporates appropriate accommodations and supports, then people with functional limitations would not be "disabled" in the sense that they would be able to fully participate in society.

5.9 "Participation" in the social model of disability can be seen as nothing other than having the full range of Sen's capabilities. In Sen's model, people's well being is a function not only of consumption goods, but also individual, social and environmental conversion factors. To improve well-being, therefore, it is not just material consumption that needs to be addressed. Similarly, with the social model of disability, policy interventions aimed at increasing disabled people's participation in social and economic life should not be made only at the individual level (e.g., medical rehabilitation) but also at the societal level, for example the introduction of universal design to make infrastructure more accessible, inclusive education systems, and community awareness programs to combat stigma.

5.10 The next question is, what are we missing about the relationship between disability and poverty as defined by the capabilities approach if we use standard consumption measures of poverty? By using similar consumption poverty lines for disabled and non-disabled people, are we seriously underestimating the impact of disability on the quality of people's lives?

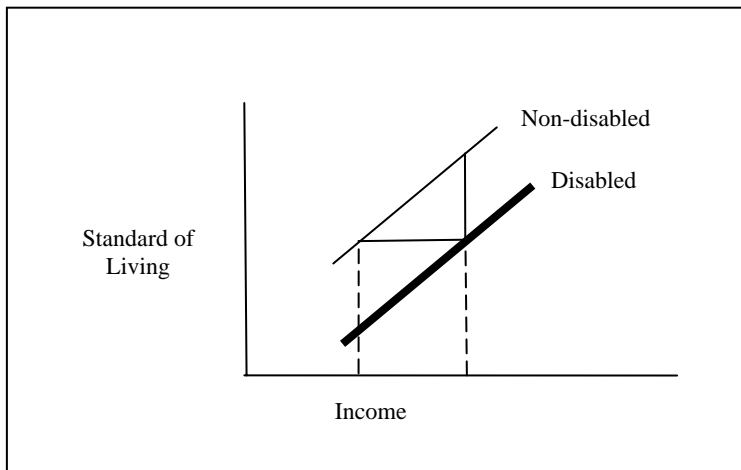
5.11 In fact, in estimating a structural equations model of functionings achievement, Kuklys (2005) finds that the importance of income in assessing the quality of health and housing in the UK diminishes when incorporating the Sen approach. She undertakes a factor analysis of responses to a list of questions to create latent variable scores for health and housing. She then uses this to estimate structural equations, with income and a variety of demographic variables. Income is found not to be significantly related to health, but for housing, results were mixed. Income was significantly correlated with housing in 2000 but not in 1991.

5.12 Kuklys (2005) goes on to address the importance of disability in assessing poverty. Her method relies on combining aspects of the capabilities approach with the estimation of equivalence scales. Without using an equivalence scale, she finds in a sample from the UK that in 1999 23% of households with disabled members had less than 60% of the median income, but when adjustments were made for the additional demands placed on disabled people that percentage rose to over 47%.

5.13 Rather than trying to estimate the extra costs of disability from an equivalence scale<sup>11</sup> which approach has not been theoretically verified (Deaton and Paxton 1998), a conceptual approach to estimating the additional costs of disability is provided by Zaidi and Burchardt (2003 and 2005) called the “standard of living approach.” The intuition is quite clear and appealing — disabled people may have a lower standard of living than non-disabled people with the same income, owing to their differing needs – both for items specifically designed for disabled people (Braille, wheelchairs, etc.) and for greater quantities of general items, such as transportation, heating, or medical services. Households with disabled members have to spend on these items, diverting consumption from other items that would raise the general standard of living of the household. The standard of living is expected to rise for with income for all households, but households with greater needs because of disability would have a lower standard of living.

5.14 Zaidi and Burchardt (2005) depict this graphically (Figure V-2) as follows, where the higher standard of living attainable at the same income for households without disabled members is shown as the top line (or vertical distance CB). This depiction assumes that the standard of living is linear with respect to income. Zaidi and Burchardt (2003) also draw logarithmic and decreasing return curves, but the idea is the same.

Figure V-2: Standard of living, income and disability (Zaidi and Burchardt 2005)



<sup>11</sup> Lelli (2005) uses the functionings approach to estimate equivalence for Belgium and Italy for the functioning of “shelter” but did not analyze disability-related functional utilization limitations.

5.15 Zaidi and Burchardt (2005) formulate the standard of living approach as

$$(1) \quad S = \alpha Y + \beta D + \gamma X + k$$

where  $S$  is an indicator of the standard of living,  $Y$  is household income,  $D$  is disability status,  $X$  is a vector of other household characteristics (household composition), and  $k$  is an intercept term representing a constant absolute minimum level of standard of living (under which the household could not survive). The extra cost of disability,  $E$ , is given by

$$(2) \quad E = dY/dD = -\beta/\alpha$$

5.16 This can also be seen graphically. The parameter  $\beta$  is the distance  $CB$  between the lines and  $\alpha$  is the slope or  $CB$  over  $AB$ . Thus  $\beta/\alpha$  is  $CB/(CB/AB) = AB$  which is the extra cost of disability.

5.17  $S$  is a latent variable that is unobservable in the data, so they substitute  $U$ , a count of consumer durables, for  $S$  and estimate (1) by using an ordered logit. The estimates of the extra cost are derived from the ratio of coefficients on disability and income as in (2 and 3).

$$(3) \quad U = \alpha Y + \beta D + \gamma X + k$$

5.18 Specification of both the income and the disability variables are driven by empirically testing many various definitions, and of course reflect the information available in the surveys which are used for the empirics.

5.19 Zaidi and Burchardt (2005) find that in the UK the sum of disability scores for an individual and partner performs best for the disability variable specification, while the natural log of income was the best specification for  $Y$ . As noted in the preceding section on the definition of disability, it would be necessary to test whatever disability definitions would be supported by the data sets available in developing countries to assess whether the extra costs of disability in developing countries were similar to those found by Zaidi and Burchardt for the UK. Their specification of log income implies that an additional amount of income makes more difference to a poor household than a rich one. It will be very interesting to see if this generalizes across lesser-developed countries. To date, their approach has been used for Australia (Saunders 2006) and their implications for UK policy surveyed in Tibble (2005), but no studies have applied the standard of living approach to developing countries.

## **VII. Conclusions and Directions for Future Research**

6.1 The relationship between disability and poverty in developing countries has not been well-established in the quantitative literature. The few World Bank poverty assessments which did provide numeric estimates for the poverty rate of households with and without disabled members are limited to one region of the world, and typically, the disability definition used is receipt of a disability pension, which is not a particularly good measure of whether individuals are in fact disabled. None of these poverty assessments made any allowance for the additional costs that households with a disabled member would face. Recent theoretical work (Zaidi and Burchardt 2005) suggests the feasibility of estimating the extra costs of disability directly from a multivariate modeling of the relationship between the standard of living, income, and disability. To date, this has been done only for the data-rich and high income countries of the UK and Australia.

6.2 Future directions for research would require application of the Zaidi and Burchardt approach to some developing countries. The authors have access to several household data sets for developing countries which will allow for a variety of specifications of the disability variable, and that have not been fully exploited for even the basic cross-tabulation of disability definitions with poverty unadjusted for the extra costs of disability. The authors propose to take up these important questions in future quantitative work with household data sets in developing countries.

## Bibliography

- Alkire, S. (2002). "Dimensions of Human Development," *World Development*, Vol. 30, No. 2, pp.181-205.
- Becker, C. and I. Merkurjeva. (2008, forthcoming). "Disability Risk and Miraculous Recoveries in Russia." *SP Discussion Paper*, The World Bank.
- Braithwaite, J. (2008, forthcoming). "Russia: Disability Issues Note." *SP Discussion Paper*, The World Bank.
- Clark, D. A. (2005). "Sen's Capability Approach and the Many Spaces of Well-being," *The Journal of Development Studies*, Vol. 41, No. 8, pp.1339-1368, November 2005.
- Deaton, A. (1999). *The Analysis of Household Surveys: A Microeconometric Approach to Development Policy*. Baltimore and London: The World Bank and the Johns Hopkins University Press.
- Deaton, A. and J. Muellbauer, (1986). "On Measuring Child Costs: With Applications to Poor Countries." *Journal of Political Economy*. Vol. 94. No. 4.
- Deaton, A. and C. Paxson. (1998) "Economies of Scale, Household Size, and the Demand for Food." *Journal of Political Economy*. Vol. 106. No. 5.
- Deaton, A. and S. Zaidi. (1999). "Guidelines for Constructing Consumption Aggregates For Welfare Analysis," Working Papers 217, Princeton University, Woodrow Wilson School of Public and International Affairs, Research Program in Development Studies.
- Elwan, A. (1999). "Poverty and Disability: A Survey of the Literature," *SP Discussion Paper No. 9932*. The World Bank, December 1999.
- Gertler, P. and J. Gruber. (2002). "Insuring Consumption Against Illness." The American Economic Review. Vol. 92. No. 1. pp 51-70.
- Hoogeveen, J. (2005). "Measuring Welfare for Small but Vulnerable Groups: Poverty and Disability in Uganda," *Journal of African Economies*, Vol. 14, No. 4, pp.603-631, August 2005.
- Hughes, B. and K. Paterson.(1997). "The Social Model of Disability and the Disappearing Body: towards a sociology of impairment," *Disability and Society*. Vol. 12 No. 3 pp 325-340, June 1997.



- Jones, A. and O. O'Donnell. (1995). "Equivalence scales and the costs of disability." *Journal of Public Economics*. Vol. 56, pp.273-289.
- Kuklys, W. (2005). *Amartya Sen's Capability Approach: Theoretical Insights and Empirical Applications*, Studies in Choice and Welfare, Springer-Verlag.
- Lelli, S. (2005). "Using Functionings to Estimate Equivalence Scales." Review of Income and Wealth. Series 51. No. 2. (June) 2005, pp.255-284.
- Marquez, J. et al. (2007). *Income Elasticity and Economic Development Methods and Applications*. Springer Netherlands.
- Mete, C. (Ed.), (2008). *Economic Implications of Chronic Illness and Disease in Eastern Europe and the Former Soviet Union*. The World Bank.
- Merkuryeva, I. (2007). "The System of Disability Benefits in Russia: Estimation of Targeting Accuracy." Economics Education and Research Consortium Working Paper Series. ISSN 1561-2422. No. 07/04.
- Metts, R. (2004) . "Disability and Development". Background Paper Prepared for the Disability and Development Meeting, World Bank, November 16, 2004.
- Metts, R. (2000). "Disability Issues, Trends, and Recommendations for the World Bank." Social Protection Working Paper. No. 0007, February 2000.
- Mont, D. (2007a). "Measuring Disability Prevalence," *SP Discussion Paper* No. 0706. The World Bank, March 2007.
- Mont, D. (2007b). "Measuring Health and Disability," *The Lancet*, Vol 369, pp.1658-63, May 2007.
- Narayan, D., Patel, R., Schafft, K., Rademacher, A. and Koch-Schulte, S. (2000a). *Voices of the Poor: Can anyone hear us?* New York: Oxford University Press for the World Bank
- Narayan, D., Chambers, R., Shah, M.K., and Petesch, P. (2000b). *Voices of the Poor: Crying out for change*, New York: Oxford University Press for the World Bank
- Robeyns, I., (2005). "Selecting Capabilities for Quality of Life Measurement," *Social Indicators Research*, Vol. 74, pp.191-213.
- Saunders, P. (2006). "The Costs of Disability and the Incidence of Poverty." *Social Policy Research Centre Discussion Paper*. No. 147. August 2006.

- Scott, K. and C. Mete. (2008), "Measurement of Disability and Linkages with Welfare, Employment and Schooling: The Case of Uzbekistan," in Mete, C. (Ed.), *Economic Implications of Chronic Illness and Disease in Eastern Europe and the Former Soviet Union*.
- Seitenova, A. and C. Becker. (2008). "Disability in Kazakhstan: An Evaluation of Official Data." Social Protection Discussion Paper. No. 0802. The World Bank, February 2008.
- Sen, A. (1984). "The Living Standard," *Oxford Economic Papers*, Vol 36, pp.74-90, 1984.
- Sen, A. (1985). *Commodities and Capabilities*, North Holland, Amsterdam, 1985.
- Sen, A. (1993). "Capability and Well-Being," in M. Nussbaum and A.K. Sen, eds. *The Quality of Life*, pp.30-53, Clarendon Press, Oxford, 1993.
- Sen, A. (1999). *Development as Freedom*, Oxford University Press, Oxford, 1999.
- Shakespeare, T. and N. Watson, (1997). "Defending the Social Model," *Disability and Society*, 12(2):293-300, April, 1997.
- Tibble, M. (2005). "Review of the existing research on the extra costs of disability." *Department for Work and Pensions Working Paper*. No. 21.
- The World Bank and State Institute of Statistics. (2005). *Turkey: Joint Poverty Assessment Report*. Report No. 29619. 2005.  
[http://www.worldbank.org.tr/external/default/main?pagePK=51187349&piPK=51189435&theSitePK=361712&menuPK=64187510&searchMenuPK=361741&theSitePK=361712&entityID=000012009\\_20051012161856&searchMenuPK=361741&theSitePK=361712](http://www.worldbank.org.tr/external/default/main?pagePK=51187349&piPK=51189435&theSitePK=361712&menuPK=64187510&searchMenuPK=361741&theSitePK=361712&entityID=000012009_20051012161856&searchMenuPK=361741&theSitePK=361712)
- The World Bank. (2000). *Making Transition Work for Everyone: Poverty and Inequality in Europe and Central Asia*. August 2000.
- The World Bank. (2001). *World Development Report, 2000/2001 Attacking Poverty*.
- The World Bank. (2007). *People with Disabilities in India: From Commitment to Outcomes*. May 2007.  
<http://siteresources.worldbank.org/INDIAEXTN/Resources/295583-1171456325808/DISABILITYREPORTFINALNOV2007.pdf>
- The World Bank. (1993). *Poverty Reduction Handbook*, 1993.
- The World Bank, (1990). *World Development Report, 1990, Poverty*.

Yeo, R. and K. Moore. (2003). "Including Disabled People in Poverty Reduction Work: Nothing About Us, Without Us," *World Development*, Vol. 31, No. 3 pp.571-590, 2003.

Zaidi, A. and T. Burchardt. (2005). "Comparing Incomes when Needs Differ: Equivalization for the Extra Costs of Disability in the U.K." *Review of Income and Wealth*. Series 51. No. 1. March 2005.

Zaidi, A. and T. Burchardt. (2005). "Comparing incomes when needs differ: equivalization for the extra costs of disability in the UK". *Centre for Analysis of Social Exclusion Paper*. No. 64. February 2003.

## **Social Protection Discussion Paper Series Titles**

<b><u>No.</u></b>	<b><u>Title</u></b>
0805	Disability and Poverty: A Survey of World Bank Poverty Assessments and Implications by Jeanine Braithwaite and Daniel Mont, February 2008
0804	Poverty Traps and Social Protection by Christopher B. Barrett, Michael R. Carter and Munenobu Ikegami, February 2008
0803	Live Longer, Work Longer: Making It Happen in the Labor Market by Milan Vodopivec and Primož Dolenc, February 2008 (online only)
0802	Disability in Kazakhstan: An Evaluation of Official Data by Ai-Gul S. Seitenova and Charles M. Becker, February 2008 (online only)
0801	Disability Insurance with Pre-funding and Private Participation: The Chilean Model by Estelle James, Augusto Iglesias and Alejandra Cox Edwards, January 2008
0719	The Life-Course Perspective and Social Policies: An Issues Note by A.L. Bovenberg, November 2007
0718	Social Safety Nets and Targeted Social Assistance: Lessons from the European Experience by Chris de Neubourg, Julie Castonguay and Keetie Roelen, November 2007 (online only)
0717	Informality and Social Protection: Preliminary Results from Pilot Surveys in Bulgaria and Colombia by Franco Peracchi, Valeria Perotti and Stefano Scarpetta, October 2007 (online only)
0716	How Labor Market Policies can Combine Workers' Protection with Job Creation: A Partial Review of Some Key Issues and Policy Options by Gaëlle Pierre and Stefano Scarpetta, October 2007 (online only)
0715	A Review of Interventions to Support Young Workers: Findings of the Youth Employment Inventory by Gordon Betcherman, Martin Godfrey, Susana Puerto, Friederike Rother, and Antoneta Stavreska, October 2007

- 0714 Performance of Social Safety Net Programs in Uttar Pradesh  
by Mohamed Ihsan Ajwad, October 2007
- 0713 Are All Labor Regulations Equal? Assessing the Effects of Job Security,  
Labor Dispute and Contract Labor Laws in India  
by Ahmad Ahsan and Carmen Pagés, June 2007
- 0712 Convention on the Rights of Persons with Disabilities: Its Implementation  
and Relevance for the World Bank  
by Katherine Guernsey, Marco Nicoli and Alberto Ninio, June 2007
- 0711 Reaching the Poor and Vulnerable: Targeting Strategies for Social Funds and  
other Community-Driven Programs  
by Julie Van Domelen, May 2007
- 0710 The Macedonia Community Development Project: Empowerment through  
Targeting and Institution Building  
by Caroline Mascarell, May 2007
- 0709 The Nuts and Bolts of Brazil's Bolsa Família Program: Implementing  
Conditional Cash Transfers in a Decentralized Context  
by Kathy Lindert, Anja Linder, Jason Hobbs and Bénédicte de la Brière, May  
2007 (online only)
- 0708 Globalization and Employment Conditions Study  
by Drusilla K. Brown, April 2007
- 0707 The Kosovo Pension Reform: Achievements and Lessons  
by John Gubbels, David Snelbecker and Lena Zezulin, April 2007 (online  
only)
- 0706 Measuring Disability Prevalence  
by Daniel Mont, March 2007
- 0705 Social Safety Nets in World Bank Lending and Analytic Work: FY2002-  
2006  
by Annamaria Milazzo and Margaret Grosh, March 2007 (online only)
- 0704 Child Labor and Youth Employment: Ethiopia Country Study  
by Lorenzo Guarcello and Furio Rosati, March 2007
- 0703 Aging and Demographic Change in European Societies: Main Trends and  
Alternative Policy Options  
by Rainer Muenz, March 2007 (online only)

- 0702 Seasonal Migration and Early Childhood Development  
by Karen Macours and Renos Vakis, March 2007
- 0701 The Social Assimilation of Immigrants  
by Domenico de Palo, Riccardo Faini and Alessandra Venturini, February 2007 (online only)
- 0616 Pension Systems in Latin America: Concepts and Measurements of Coverage  
by Rafael Rofman and Leonardo Lucchetti, November 2006 (online only).  
Also available in Spanish.
- 0615 Labor Market Outcomes of Natives and Immigrants: Evidence from the ECHP  
by Franco Peracchi and Domenico Depalo, November 2006 (online only)
- 0614 The Relative Merits of Skilled and Unskilled Migration, Temporary and Permanent Labor Migration, and Portability of Social Security Benefits  
by Johannes Koettl under guidance of and with input from Robert Holzmann and Stefano Scarpetta, November 2006 (online only)
- 0613 The Limited Job Prospects of Displaced Workers: Evidence from Two Cities in China  
by Gordon Betcherman and Niels-Hugo Blunch, October 2006
- 0612 Unemployment Insurance in Chile: A New Model of Income Support for Unemployed Workers  
by Germán Acevedo, Patricio Eskenazi and Carmen Pagés, October 2006
- 0611 Evaluating Social Fund Impact: A Toolkit for Task Teams and Social Fund Managers  
by Sarah Adam, October 2006
- 0610 Risk and Vulnerability Considerations in Poverty Analysis: Recent Advances and Future Directions  
by Carlo Cafiero and Renos Vakis, October 2006
- 0609 Comparing Individual Retirement Accounts in Asia: Singapore, Thailand, Hong Kong and PRC  
by Yasue Pai, September 2006 (online only)
- 0608 Pension System Reforms  
by Anita M. Schwarz, September 2006 (online only)
- 0607 Youth Labor Market in Burkina Faso: Recent Trends  
by Daniel Parent, July 2006

- 0606 Youth in the Labor Market and the Transition from School to Work in Tanzania  
by Florence Kondylis and Marco Manacorda, July 2006
- 0605 Redistributing Income to the Poor and the Rich: Public Transfers in Latin America and the Caribbean  
by Kathy Lindert, Emmanuel Skoufias and Joseph Shapiro, August 2006 (online only)
- 0604 Uninsured Risk and Asset Protection: Can Conditional Cash Transfer Programs Serve as Safety Nets?  
by Alain de Janvry, Elisabeth Sadoulet, Pantelis Solomon and Renos Vakis, June 2006
- 0603 Examining Conditional Cash Transfer Programs: A Role for Increased Social Inclusion?  
by Bénédicte de la Brière and Laura B. Rawlings, June 2006 (online only)
- 0602 Civil-service Pension Schemes Around the World  
by Robert Palacios and Edward Whitehouse, May 2006 (online only)
- 0601 Social Pensions Part I: Their Role in the Overall Pension System  
by Robert Palacios and Oleksiy Sluchynsky, May 2006 (online only)

**To view Social Protection Discussion papers published prior to 2006, please visit [www.worldbank.org/sp](http://www.worldbank.org/sp).**



## Summary Findings

In this paper we survey the World Bank poverty assessment literature to date on the relationship between disability and poverty. We find that using standard assumptions about the distribution of household consumption among household members and the typical way that poverty lines are set in World Bank poverty assessments, this relationship may not appear to be as quantitatively significant as common sense and anecdotal evidence would suggest. Our assessment is limited by the fact that household surveys which are used by the Bank to determine consumption and consumption-based poverty typically do not include any questions about the disability status of household members. Only in one region of the Bank's work, Europe and Central Asia, do we find poverty assessments with numeric poverty rates for households with disabled member(s). Other poverty assessments done in other regions of the Bank, in some cases, do provide data on disabled people in regard to employment, health, social assistance, or a related subject, but do not provide poverty rates per se. This literature is assessed in this work, and directions for further research the authors will undertake are indicated.

**HUMAN DEVELOPMENT NETWORK**

### **About this series...**

Social Protection Discussion Papers are published to communicate the results of The World Bank's work to the development community with the least possible delay. The typescript manuscript of this paper therefore has not been prepared in accordance with the procedures appropriate to formally edited texts. The findings, interpretations, and conclusions expressed herein are those of the author(s), and do not necessarily reflect the views of the International Bank for Reconstruction and Development / The World Bank and its affiliated organizations, or those of the Executive Directors of The World Bank or the governments they represent. The World Bank does not guarantee the accuracy of the data included in this work.

For free copies of this paper, please contact the Social Protection Advisory Service, The World Bank, 1818 H Street, N.W., Room G7-703, Washington, D.C. 20433 USA. Telephone: (202) 458-5267, Fax: (202) 614-0471, E-mail: [socialprotection@worldbank.org](mailto:socialprotection@worldbank.org) or visit the Social Protection website at [www.worldbank.org/sp](http://www.worldbank.org/sp).