International
Labour
Office
Geneva

Employment Sector
Employment Working Paper No. 3

2008

Recognizing ability:

The skills and productivity of persons with disabilities

Literature review

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Employability
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Recognizing ability: The skills and productivity of persons with disabilities. Literature review / Tony Powers; International Labour Office, Skills and Employability Department. - Geneva: ILO, 2008
43 p. (Employment Sector Employment Working Paper ; No. 3)

ISBN 978-92-2-121271-3 (print); 978-92-2-121272-0 (web pdf)
ISSN 1999-2939 (print); 1999-2947 (online)

International Labour Office; Skills and Employability Dept.

skill / vocational training / training employment relationship / labour productivity / disabled person / disabled worker / literature survey / developed countries / developing countries

13.02.2

ILO Cataloguing in Publication Data

Printed in Switzerland

Preface

The primary goal of the ILO is to achieve full and productive employment and decent work for all, including women and young people, a goal which has now been widely adopted by the international community. Working towards this goal is the fundamental aim of the ILO.

In order to support member States and the social partners to reach the goal, the ILO pursues a Decent Work Agenda which comprises four interrelated areas: Respect for fundamental worker's rights and international labour standards, employment promotion, social protection and social dialogue. Explanations of this integrated approach and related challenges are contained in a number of key documents: in those explaining and elaborating the concept of decent work,[1] in the Employment Policy Convention, 1964 (No. 122),[2] and in the Global Employment Agenda.

The Global Employment Agenda was developed by the ILO through tripartite consensus of its Governing Body's Economic and Social Policy Committee. Since its adoption in 2003 it has been further articulated and made more operational and today it constitutes the basic framework through which the ILO pursues the objective of placing employment at the centre of economic and social policies.[3]

The Employment Sector is fully engaged in the implementation of the Global Employment Agenda, and is doing so through a large range of technical support and capacity building activities, advisory services and policy research. As part of its research and publications programme, the Employment Sector promotes knowledge-generation around key policy issues and topics conforming to the core elements of the Global Employment Agenda. The Sector's publications consist of books, monographs, working papers, employment reports and policy briefs.[4]

The *Employment Working Papers* series is designed to disseminate the main findings of research initiatives undertaken by the various departments and programmes of the Sector. The working papers are intended to encourage exchange of ideas and to stimulate debate. The views expressed are those of the author(s) and do not necessarily represent those of the ILO.

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[1] See the successive Reports of the Director-General to the International Labour Conference: *Decent work* (1999); *Reducing the decent work deficit: A global challenge* (2001a); *Working out of poverty* (2003a).

[2] In 1964, ILO Members adopted Convention No. 122 on employment policy which states that "With a view to stimulating economic growth and development, raising levels of living, meeting manpower requirements and overcoming unemployment and underemployment, each Member shall declare and pursue, as a major goal, an active policy designed to promote full, productive and freely chosen employment". To date, 97 member States have ratified this Convention.

[3] See http://www.ilo.org/gea. And in particular: *Implementing the Global Employment Agenda: Employment strategies in support of decent work, "Vision" document*, ILO, 2006a.

[4] See http://www.ilo.org/employment.

Foreword

Skills development is a central factor in enabling people with disabilities to take part in the labour force. Those who have had the opportunity to acquire marketable skills have demonstrated their potential to earn a living and contribute in the world of work. Yet access to appropriate skills training is not available to a significant number of disabled women and men for differing reasons. In many cases, inclusive policies are not in place and training programmes fail to encourage or accommodate the participation of disabled persons. In other cases, the training available to them is outdated or fails to make the appropriate links to the workplace or self-employment. But the fact is that most disabled persons, especially those in developing countries, fail to get any vocational training at all. Most remain socially excluded and in poverty. The result is a loss of potential, with implications for individuals and for societies.

ILO standards on Human Resources Development (Convention No. 142, 1975, and Recommendation No. 195, 2004) in addition to the ILO Convention concerning the Vocational Rehabilitation and Employment of Disabled Persons (No. 159), 1983, are of particular relevance to promoting access of persons with disabilities to skills development and life-long learning, This theme is reflected in the UN Convention on the Rights of Persons with Disabilities, 2006, which requires States to ensure access of disabled persons to vocational training, adult education and lifelong learning without discrimination, on equal basis with others.

The ILO will increase its efforts to advocate access to adequate skills development opportunities for disabled persons, in the coming years, as part of the process of implementing these international standards. To provide a solid knowledge base for these activities, a literature review of skills development initiatives targeting persons with disabilities was commissioned, focusing in particular on the contribution of skills development to enhancing the productivity of disabled persons. It is hoped that the review will contribute to opening opportunities for disabled persons to acquire skills which will lead them to obtaining and keeping decent work.

Tony Powers of Powers and Associates (Australia) was the author of this working paper. The research was guided by Barbara Murray, Senior Specialist on Disability, Jo-Ann Bakker edited and prepared the manuscript for publication. The research was conducted as part of the preparation of the report for the General Discussion on Skills for improved productivity, employment growth and development at the 97th session of the International Labour Conference (2008).

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Contents

List of case studies

Abbreviations

APPT	Alleviating Poverty through Peer Training project of the ILO in Cambodia
ARMDS	Animators for Rural Multipurpose Development Society
BDS	Business Development Service
DDD	Digital Divide Data
DEWD	Developing Entrepreneurship among Women with Disabilities project of the ILO/Irish Aid in Ethiopia
DISTAT	Disabilities Statistics Database
DPOs	disabled persons' organizations
ICT	information and communication technologies
IT	Information Technology
JEIU	Japanese Electrical, Electronic and Information Union
MFI	Micro Finance Institution
MODE	Medunsa Organization for Disabled Entrepreneurs in South Africa
NOD	National Organization on Disability
NCVER	National Centre for Vocational Education Research
NGO	non-governmental organization
OECD	Organisation for Economic Co-operation and Development
OHR	Office of Human Resources in South Carolina
OTJ	On-the-Job training
SCR	Success Case Replication Methodology
TTCs	Technical Training Certificates
UNSD	United Nations Statistics Division (UNSD)
VET	vocational education and training
WED	women's entrepreneurship development
WEDGE	Women's Entrepreneurship Development and Gender Equality project of the ILO/Irish Aid
WEWDs	women entrepreneurs with disabilities

1. Introduction

Overview

This working paper reviews the available evidence connecting the employment and economic status of disabled persons with their skills and productivity. It examines skills development strategies and their effect on employment, income-generation and productivity in both the formal and informal sectors in developed and developing countries. It also considers the impact of policies and practices designed to assist disabled people to achieve their productivity potential at work, including workplace accommodations and teleworking. It includes a number of illustrative case studies. It concludes with key policy messages which emerge from the literature review.

The diversity of disabled people and disabilities

Disabled people are not a homogeneous group. Like all people, their identities, personal situations and needs are shaped by a multiplicity of factors including their gender, age, personality, location, education, ethnicity, colour, class, family, religion and sexual orientation. Disability is simply another dimension of human diversity. It is a normal part of human experience and anyone in society may experience disability at some time in life.[5]

Disabilities are themselves also diverse in nature. The main types include sensory disabilities, such as visual and hearing impairments; physical disabilities, such as mobility and orthopaedic impairments; intellectual disabilities, such as impairments in learning, understanding and concentrating; and psychosocial disabilities, such as impairments brought about by mood disorders, maladaptive behaviours and mental illnesses.

For each of these disability types, there is a range of associated, specific needs that might need to be met to ensure that the productivity of individuals is maximized. For example, people who are deaf or hard of hearing might require their supervisors and co-workers to use alternative communication methods, such as sign language. People with mobility impairments might need additional attention given to the physical layout and accessibility of the workplace. People with intellectual disabilities might need job tasks analyzed and broken down into a sequence of more easily understood steps. People with psychosocial disabilities might need to take more frequent breaks if their concentration is impaired.

The specific circumstances of disabilities also vary and can therefore affect individuals' development as potential workers and their ability to be productive. For example, disabilities can be present from birth or be acquired later in life. In the latter case, the individual might have had relatively fewer problems in accessing skills development opportunities and might already be established in the workforce; but in the

[5] For example, the Australian Institute of Health and Welfare (2006), has estimated that, on average, men from that country can expect to live nearly 19 years of their lives with a disability (and more than five years with a "severe or profound" disability) while women, living longer, can expect to experience nearly 21 years of disability and over eight years of severe or profound disability.

former case, the individual might have faced a far more challenging pathway and been denied training and work opportunities.

Similarly, the different cultural and societal circumstances of people with disabilities can greatly influence their skills development and ability to engage in productive economic activity. In some countries, people with disabilities do not generally attend school – either because they are cloistered away by their families or because educational institutions refuse to accept them – and are therefore denied the opportunity to develop important employability skills such as basic literacy and numeracy (ILO, 2007b). Attitudes towards women also have an effect. In some countries, where women are generally denied the opportunity to develop vocational skills, disabled women face additional barriers. Similarly, other factors – such as the disabled person's race, ethnicity or age – can create additional barriers in different societies.

Because of the diverse nature and circumstances of people with disabilities, they have similarly diverse employment capabilities. Having a disability does not in itself provide a measure of a person's potential as a worker. People with the same disability are as likely as anyone else to have differing skills, abilities and productive potential.

Despite the diversity and prevalence of disability, stereotyping of people with disabilities continues to inhibit both their job search and their career progression. The US National Council on Disability (2007) cites Colella and Varma (1999) to highlight the effect and persistence of such stereotyping:

> *People do hold clear stereotypes about what types of disabilities lead to poor performance on a given job, and ... these stereotypes are relied upon for certain personnel decisions, even in the light of performance evidence that suggests that these stereotypes are invalid.*

When considering the issues associated with productivity and disabled people, it is critical to avoid stereotyping and homogenization and to acknowledge the diverse nature of disabilities and their differing impact on individuals. The basic message is captured succinctly in the title of a publication of the Australian Human Rights and Equal Opportunity Commission (2003) that marked the 10-year anniversary of the country's Disability Discrimination Act: "*Don't judge what I can do by what you think I can't.*""

Data availability

In assessing the impact of skills development strategies on the employment and productivity of disabled persons, data limitations need to be recognized. First, the data that are available on *disability in general* make international comparisons difficult. Inconsistency in the definitions of disability adopted by different countries and differences in data collection methods have led to a wide variance in estimates of disability prevalence making it very difficult to make meaningful international comparisons (Yeo, 2001). This is despite the establishment in 1990 by the United Nations Statistics Division (UNSD) of the Disabilities Statistics Database (DISTAT) and, in 2001, the formation by the UN Statistical Commission of the Washington Group to develop disability measures suitable for censuses and national surveys. In a working paper on disability statistics methodologies, the ILO (2004) points out that "useful data on the employment situation of this population group is rarely available at the required level of detail and periodicity." Metts (2000) has suggested that "published estimates of national, regional and global disabled populations are little more than speculation and educated guesswork".

Second, high quality global *data on the skills and employment status* of people with disabilities are even scarcer. The ILO (2004) notes that "useful data on the employment situation of this population group is rarely available at the required level of detail and periodicity; in a number of countries there are currently no data at all on employment status in conjunction with disability." Scott Campbell-Brown (2000) points out that the data collected tend to reflect a social welfare orientation, while neglecting socio-economic indicators of the situation of disabled persons such as their generation of income. Similarly, Yeo and Moore (2003) note the lack of internationally comparable statistical data on the incidence, trends and distribution of impairment and disability and point out that the "medicalization" of disability issues in many countries means that the data that are available are oriented towards health rather than employment and economic development. In the developing world, data on skills development and employment among the poor in general are lacking. As Bennell (1999) points out:

> *There is an extraordinary lack of good quality, comprehensive data about the provision of training to the poor and the outputs and impacts of this training effort which, in itself, amounts to an information crisis. Not surprisingly, therefore, most attempts to review the global experience of training for the poor are characterised by sweeping, unsubstantiated observations, generalisations and recommendations and chronic anecdotalism, with most reports recycling the same examples of successful and unsuccessful interventions.*

Although a clear and statistically detailed international picture of the skills, employment and productivity of disabled people continues to remain elusive, it is possible to use the data that are available to at least sketch an outline. The economic and skill development opportunities available to disabled people vary enormously between the developed and developing world, but many of the policy and programme design questions being considered – such as mainstreaming versus specializing or open versus sheltered employment settings – resonate globally. In this context, the quantitative and qualitative data that we do have still need to be closely considered. It should be noted, however, that many of the reports and studies that have been published are based on research that is now quite old – a fact that highlights the need for a fresh look at many of the issues outlined below.

Disabled people in the labour market – A snapshot

While disabled people experience a high degree of labour market disadvantage in both developed and developing countries, the nature of this disadvantage is different. Using Organisation for Economic Co-operation and Development (OECD), United States (Cornell University, 2005) and Australian (Australian Bureau of Statistics, 2006) data, a number of general conclusions can be drawn about disabled people in the labour markets of developed countries compared with non-disabled people.

Disabled people:

- often end up in passive assistance programmes such as disability benefits or pensions (even if they initially receive some form of vocational skills training). Those that do receive such benefits have very bleak employment prospects; as Berglind Ásgeirsdóttir, Deputy Secretary General of the OECD, put it in 2003: "Starting to receive disability benefit generally means that you will never work again. We found this to be the case even in those countries that make big efforts to reintegrate persons with disabilities."

- have much lower labour force participation rates – for instance, in Europe 47.8 per cent of all people with a disability participate in the labour force compared with 71.8 per cent of people without a disability.
- (women with disabilities) have a participation rate that is significantly lower than that of men – 40.7 per cent versus 55.7 (in Europe).
- with "severe core activity limitations"[6] have very low participation rates – 33.7 per cent for men and 26.8 per cent for women (in Australia).
- are less likely to be employed full time – considering all working age people, there was a 40.3 percentage point gap in the employment rate in the United States and a 28 point gap in Australia.
- are over-represented among the long-term unemployed (more than one year) - 32 per cent of all disabled jobseekers are in this category compared with 23 per cent of jobseekers without a disability (in Australia).
- earn less when they *are* employed full time – in 2005, in the United States, there was a US$6,000 gap in the median labour earnings of people with and without disabilities who worked full-time; in Australia, the median gross personal income per week of people of working age with a disability was AUD 255, compared to AUD 501 for those without a disability.
- are more likely to be living in poverty – in the United States in 2005, there was a 15.3 percentage point gap in the poverty rate between working age people with and without disabilities;
- are employed across all job and industry types at similar percentage rates as the non-disabled population (in Australia, see table 1).
- achieve poorer employment and income level outcomes than non-disabled after they participate in vocational education and training (VET) in Australia (National Centre for Vocational Education Research, 2000).

The situation of disabled people in developing countries is of course very different – they do not have the same level of income security as those in developed countries and are therefore far more likely to be living in poverty. Using World Bank and Indian (Mitra and Sambarmoorthi, 2006) data on the employment and economic status of disabled people in developing countries, one can generally conclude the following:

- Most disabled people live in developing countries - of the estimated 650 million people with disabilities in the world, 80 per cent live in developing countries (World Bank, 2005).
- Using India as an example, the labour market participation rate of working age disabled persons is much lower than that of non-disabled persons – 38.8 per cent compared with 64 per cent.
- The participation rate of disabled women is significantly lower than that of disabled men – 16.6 per cent compared with 52.6 per cent.
- Disabled people are among the very poorest in the developing world - 82 per cent of disabled people in developing countries live below the poverty line (Hope, 2003); 20 per cent of all people living on less than a dollar a day are disabled (World Bank, 2005).

[6] Core activities comprise self care, communication and mobility.

Table 1. Occupation type of people with disabilities, Australia, 2003, per cent

Occupation	With Disability	Without Disability
Managers and administrators	8.4	8.1
Professionals	18.4	19.2
Associate professionals	9.6	13.4
Tradespersons and related workers	11.9	12.8
Advanced clerical and service workers	4.4	4.0
Intermediate clerical, sales and service workers	16.3	17.1
Intermediate production and transport workers	10.6	7.7
Elementary clerical, sales and service workers	9.5	9.8
Labourers and related workers	10.9	7.9
Total	100	100

Industry	With Disability	Without Disability
Agriculture, forestry and fishing	5.3	3.6
Mining	1.4	0.9
Manufacturing	11.4	11.3
Electricity, gas and water supply	0.6	0.8
Construction	9.0	8.4
Wholesale trade	4.2	4.7
Retail trade	12.0	14.6
Accommodation, cafes and restaurants	3.8	5.3
Transport and storage	5.1	4.1
Communication services	1.4	1.9
Finance and insurance	2.3	3.9
Property and business services	10.4	12.1
Government, administration and defence	5.8	5.1
Education	8.7	7.1
Health and community services	10.7	9.6
Cultural and recreational services	2.3	2.4
Personal and other services	5.3	4.0
Total	100	100

Source: Australian Bureau of Statistics (ABS), 2004, 4430.0, p. 27.

- The productivity of family members who care for disabled persons can also be affected, through the time spent on care-giving and subsequent lost employment and income opportunities (see for example Meyers et al., 1998). Particularly in developing economies, this lost productivity makes families more vulnerable to poverty, but, in developed countries, such as the United Kingdom, the issue has also been recognized – for example, the Work and Families Act 2006 establishes the right for carers to request flexible working arrangements (Employers' Forum on Disability, 2008).

- Employment in the formal economy is rare - for each disabled person employed in the formal sector in developing countries, at least four are generating income in the informal sector in their own enterprises (Harris, 1994). In India, 21 per cent of disabled people are self-employed while only 4.8 per cent are salaried-waged employees.
- The situation is worse for disabled women - in many developing countries they face even greater barriers as socio-cultural attitudes impose restrictions on access to services and individual aspirations.
- Disabled people are less likely to be engaged in economic activity than the rest of the population – frequently they are cloistered away or resort to begging, street trading or performing arts to make a contribution to family income (Licona, 2001).
- Like other poor people, disabled people have very limited access to mainstream, public vocational training institutions (Bennell, 1999).

Disabled people, productivity and employment

The productivity of disabled people is an important consideration in both developed and developing economies. In OECD countries there has been considerable attention paid to the human and fiscal consequences of the exclusion of disabled people from the labour market. The costs of disability benefits and support programmes as a percentage of GDP have continued to rise and the OECD (2003) estimates that, "measured as a percentage of public social expenditure, the costs of disability benefit programmes fluctuate around 11 per cent, and are almost 20 per cent in the high-spending countries". According to Metts (2000), the "global GDP lost annually due to disability is estimated to be between US$1.37 and 1.94 trillion".

If productivity in general measures how efficiently resources are used, then there is a need to ensure that optimal use is made of disabled people as a labour market resource. As was pointed out by the OECD in "Transforming disability into ability", its 2003 review of work and income security policies for disabled people:

> *Low employment rates of disabled people are also increasingly becoming an issue for reasons of macro-economic efficiency, which is concerned with making progress in using grossly under-utilised human resources.*

The ageing of the workforce in many developed countries also means that an increasing proportion of workforce will have age-related disabilities and the effective recruitment and retention of disabled people will therefore increasingly affect national productivity. This is particularly the case in economies experiencing skills and labour shortages such as Australia, where the unemployment rate as of June 2007 was at a 32-year low of 4.3 per cent. As Suzanne Colbert, CEO of the Australian Employers Network on Disability put it (Hopkins, 2007): "About one-third of people over the age of 55 have acquired some kind of disability throughout their working life, so we need to get smarter for two reasons - one is attracting people from the entire talent pool, and the other is to retain our ageing workforce." In this respect, the tendency in some developed countries to allow their disability benefits systems to function as de facto early retirement programmes ("providing a route for quasi-permanent exit from the labour market" – OECD, 2003) is both unsustainable and inefficient.

Increasing the employment levels of disabled people also has an overall positive impact on both the amount of goods and services the economy can produce and the demand for these goods and services. The Australian Productivity Commission's (2004) review of the Disability Discrimination Act referred to a number of submissions that supported this view; for example: "The enhancement of the economic and social

participation of people with disabilities contributes to both the supply and the demand side of the economy. Greater participation of people with disabilities in training, education and employment directly affects the productive capacity of the nation" (Submission 172).

In developing countries, where disability benefit systems are largely absent, the emphasis is understandably placed on assisting disabled people to climb out of poverty. The World Employment Report (ILO, 2005a) highlights the need to address productivity improvement in conjunction with employment creation and poverty reduction:

> *The fundamental reason for addressing the three issues together is based on the simple observation that a substantial share of poor people in the world is already at work: it is not the absence of economic activity that is the source of their poverty, but the less productive nature of that activity.*

What applies to the poor in general in developing countries, also applies to disabled people. Disabled people are now acknowledged to be among the poorest of the poor. Former World Bank President James Wolfensohn (2002) put this in the context of the UN's Millennium Development Goals when he pointed out that "more than 1.3 billion people worldwide struggle to exist on less than US$1 a day, and the disabled in their countries live at the bottom of the pile" and that "unless disabled people are brought into the development mainstream, it will be impossible to cut poverty in half by 2015" (as required by Millennium Development Goal 1).

While disabled people in developing countries face many of the same barriers as those in more developed countries – such as lack of access to transport, education, training, and essential services, low self-esteem and low expectations arising from their marginalized position and social condition – formal sector jobs in developing countries are often more scarce and subject to intense competition. Employer preconceptions about lower productivity levels of disabled persons – frequently mistaken - are also a barrier.

Many disabled people in the developing world work not in the formal economy, but in the informal economy where they use whatever resources are available to them to derive an income. In this context, the World Employment Report (ILO, 2005a) highlights the inadequacy of gauging labour market conditions in developing countries in terms simply of "unemployment" and "employment" and points out that the best indicator is "whether men and women earn enough from their work to lift themselves and their families out of poverty". Productivity – and, by implication, skills development – are the key: "it is through productivity that a material link exists between employment of any sort and decent work".

The frequently causal link between poverty and disability needs also to be mentioned. As Yeo (2005) points out, "living in poverty increases the likelihood of injury and impairment; the exclusion [from participation in the economy] of disability leads to greater rates of poverty". This vicious circle of poverty and disability is reflected in a corresponding downward spiral in the productive capacity of individuals and economies.

Although skills represent just one component of productivity, in both developed and developing countries there is a clear link between enhancing the skills of disabled people and their ability to either secure formal sector jobs (where they exist) or increase their income-generating capacity in the informal sector. In the formal job market, low productivity – or, at least, employer preconceptions of low productivity – makes it difficult for disabled people to successfully compete for jobs. Having a disability is frequently viewed by employers as an immediate signal of lower productivity (Licona,

2001) – an example of what Phelps (1972) called "statistical discrimination".[7] In an open labour market, acquiring and demonstrating skills to potential employers is necessary if disabled people are to send an effective "counter-signal" and to successfully compete for and succeed in jobs. As Sianesi and Van Reenan (2002) put it, "there is compelling evidence that human capital increases productivity, suggesting that education [including vocational education] really is productivity-enhancing rather than just a device that individuals use to signal their level of ability to the employer." Of course, the skills and productivity of disabled jobseekers also need to be effectively promoted to employers in order to overcome ignorance or prejudice.

The data suggest that in the developing world, the task of competing for formal sector jobs is all the more difficult. In all countries, skill deficits are a major barrier even when quota systems are in place to increase formal sector job opportunities for disabled people. In Thailand, for example, between 1996 and 1998 over 9,000 designated disabled job vacancies per year could not be filled by the Public Employment Service because qualified disabled applicants could not be found (ILO, 2003b). Anecdotal evidence exists on the lack of relevant skills among jobseekers with disabilities in other countries but this has not been systematically documented.

While it is still desirable to equip all disabled people with the employability skills and technical skills they need to compete for these jobs, in developing countries more can potentially benefit from skills development aimed at increasing productivity and earning power in small enterprises in the informal economy. The informal economy employs a significant proportion of the non-agricultural labour force in developing countries and appropriate training can improve the work and incomes of those earning their livelihoods in it. Disabled people working in the informal economy often have a low level of education and have received little or no training. As the ILO World Employment Report (2005a) stated:

> *The problem is not the absence of work, but of work that is sufficiently productive to yield a decent income. A focus on improving the productivity of the informal economy ought to be a priority policy concern.*

How best to develop these productivity-enhancing skills will be discussed in Section 2. But it is first necessary to briefly consider some of the important forces that are re-shaping the world of work and how these might help or hinder the task of unlocking the productive capacity of disabled people in both developed and developing economies.

Changing patterns in the world of work

The 2006 ILO Report, "Changing patterns in the world of work", outlines the key forces shaping labour markets in the twenty-first century. Each of these forces also has implications for disabled people (ILO, 2006b).

The *development imperative*, stemming from the urgent need to reduce poverty and inequality within and among nations, also drives (or should drive) action to support the productive participation of disabled people in economic activity. As disabled people are

[7] "The theory of statistical discrimination argues that where it is difficult or expensive to gather full information about an individual's productivity, it is in the employer's interests to identify 'cheap' indicators of productivity that may be used when choosing new employees." (Australian Productivity Commission, 2004.)

among the poorest of the world's poor, progress in reducing the incidence of extreme poverty cannot be satisfactorily made without attending to their developmental needs.

Technological transformation, imparted by the diffusion of new means of information processing and communications, is a two-edged sword for disabled people. As Barnes (1999) points out: "While new technology, deregulation and more flexible production techniques may prove enabling to some, to others they will almost certainly mean worsening social isolation, and new and enhanced forms of exclusion." Some people with learning difficulties, for example, may struggle to cope with the accelerating pace of technological change.

Intensified global competition creates pressures to adapt workplaces and match the efficiency and quality of market leaders. As a result, the labour force has become more fluid, workers often have more duties, job stress is increasing and organizations are frequently destabilized by mergers, downsizing, re-engineering and outsourcing (Szymanski, 2003). In this environment, it is increasingly necessary to argue "the business case" for employing people with disabilities. At the same time, in order to succeed in this environment, many disabled people will need good support strategies in place where, as Hall and Mirvis (1996, quoted in Szymanski, 2003) put it: "The company's commitment to the employee extends only to the current need for that person's skills and performance".

Politics and policies, including greater reliance on markets and a reduced role for the State, also affect the situation of disabled people. While anti-discrimination legislation and employment quotas can have a positive effect on the employment of disabled people, the overall trend is towards reducing labour market regulation. At the same time, there is a trend towards the "activation" of disabled people in the labour market, including the introduction of "welfare to work" initiatives (OECD, 2003). The impact of disability on government social welfare budgets in developed countries is very high - on average, OECD countries spend at least twice as much on disability-related programmes as they spend on unemployment programmes.

Conversely, in some developing countries that have more recently moved to market economies, inappropriate disability legislation is still in place that is a relic of earlier political and economic circumstances and attitudes to disability. For example, Viet Nam still places mandatory restrictions on the number of hours per day (seven) that can be worked by disabled people – a policy that makes their employment in many jobs problematic for employers.

2. Developing the skills and productivity of disabled people

As mentioned earlier, the unavailability of data makes it very difficult to draw reliable conclusions about the effectiveness of skill development strategies in elevating the productivity of disabled people. In fact, even for non-disabled people, there is a surprising lack of such data on the broad economic impact of vocational education and training in developing countries. As Middleton et al. (1993) pointed out in a study for the World Bank, "no growth accounting studies have successfully identified the contribution of skills training" in developing countries and "attempts to examine VET's contribution to economic growth have been unsuccessful". This is not because there is no contribution – unlike general education, where outcomes can be analyzed for reasonably homogeneous groups, vocational education encompasses such a diversity of population

groups, economic and labour market circumstances and delivery modes as to make such global impact assessments and comparisons extremely difficult.

Bennell (1999), while noting that "…(VET) in its wide variety of forms is largely absent" in developing countries, acknowledges that "it is widely accepted that training is an essential instrument of public policy, especially for the most vulnerable groups in society." In terms of individual employment outcomes from skills development initiatives, there is more evidence – with numerous studies in developing countries suggesting that "rates of return on all forms of training can be substantial" (Middleton et al., 1993).

The lessons from such studies are also helpful when one considers the question of what approaches to skills development for disabled people work best. The mode of training does not in its own right guarantee optimal employment or income-generation outcomes for those undergoing training. No doubt there are effective and ineffective examples of skill development across the full range of interventions. Context is also crucial. Training in the absence of relevant economic opportunity will not produce results – even the best training is of little use if these opportunities do not exist or are inaccessible[8] - and employers need to be involved in the development of curriculum for skills development programmes. As Middleton et al. (1993) point out, form is not as important as function:

> *Overall, any mode of training for industrial and commercial occupations can be cost-effective when the institution is well linked to employers, adequately financed, efficiently organized, and sufficiently autonomous to adjust the size and content of courses to meet the quantitative and qualitative dimensions of employment demand.*

With these general lessons in mind, we will now look at the different approaches to developing the skills of disabled people and review the evidence for their effectiveness.

Approaches to skills development – What works, where, and why?

Developing skills in training centres

The development of the vocational skills of disabled people has its origins in the United States where arrangements were initially put in place for veterans from World War I and later for employees injured in the workplace – a development that "advanced the conceptual framework of disability policy beyond disability prevention and custodial care, to include consideration of the quality of the lives of people with disabilities" (Metts, 2000). Early vocational rehabilitation models emphasized separate, dedicated training facilities for disabled people and these continue to operate in both the developed and developing world. Increasingly, however, particularly in developed countries, there has been a trend towards integrating disabled people in the mainstream in the full range of services.

[8] Harriss-White (1996), in examining the training of disabled people in India, describes situations where "the rehabilitated individual is too skilled for the available employment opportunities in the village".

The nature of training provided in both mainstream and specialist training centres varies greatly. In developed countries, where sophisticated accreditation and qualification frameworks are often in place, vocational education centres are often actively encouraged to meet the needs of disabled students in vocational certificate, diploma and advanced diploma courses. In developing countries, the range and quality of vocational education opportunities are often questionable for non-disabled students – disabled students are frequently excluded either because they cannot afford the training, because they do not have the prerequisite level of educational attainment or because facilities are inaccessible. Bennell (1999) suggests that the capacity of these countries to meet the needs of the poor (including disabled people) is limited – in fact, he indicates that "the capacity of the state to support appropriate training appears to be declining in many developing countries". As a result, if disabled people in developing countries receive any skills development at all in a training institution, it is usually through small-scale, local projects, such as those run by Non-Governmental Organizations (NGOs).[9] However, these, as Bennell points out, "remain at the margins of the training system and lack the resources to make a large-scale, sustained contribution".

How effective is institutional training for disabled people?

The trend in many parts of the world appears to be away from programmes in specialized institutions and towards integration with mainstream programmes delivered to both disabled and non-disabled people – "Inclusive Vocational Training". As O'Reilly (2007) points out, the trend is more advanced in some countries – while there are still countries where training for disabled people still takes place in specialized segregated institutions, there are others where "the majority of adults with disabilities receive their training in mainstream programmes".

While separate specialized programmes can play a vital role for some people, such as disabled people with high support requirements, they are not suitable for many other people with disabilities. It is argued that these programmes:

- segregate people with disabilities from the rest of society, perpetuating isolation and low community awareness;
- do not help people with disabilities integrate into mainstream society;
- tend to "track" people with disabilities into stereotyped training activities and employment; and
- often do not provide necessary vocational skill certification or employability skills for participation in the labour market.

These last points are particularly important as they directly affect the participation of disabled people in mainstream jobs where their full productivity potential is more likely to be realized. As O'Reilly (2007) points out:

[9] There are some developing countries that have re-oriented their training systems to service the needs of the informal economy. Zambia has set up two types of service: Centres for Informal Sector Employment Promotion to provide information on business opportunities and to train in business management skills and marketing; and Entrepreneurship Development Centres to link informal enterprises with mainstream training institutions.

In many of these specialized providers, both public and private, curricula tend to relate to jobs traditionally thought appropriate for disabled persons. This mismatch between training and the skill requirements of the labour market hinders job placement possibilities and may well contribute to negative perceptions by employers of the ability potential of many disabled persons.

An inclusive vocational training approach, through which people with disabilities are integrated into general, "mainstream" vocational skills training programmes and institutions, may be more effective and sustainable and may better integrate people with disabilities into their communities.

Given the range of providers and economic contexts in which it is applied, general conclusions about the effectiveness of institution-based skills development cannot be confidently made. Different approaches include both success stories and failures. Below are a number of case studies of training systems and projects that highlight a range of positive and negative outcomes and some of the key issues and questions that arise.

Case study 1 - Australia: Australian Vocational Education and Training (VET) System

Background: The Australian VET system is sophisticated, competency-based, well resourced, driven by industry and supported by a range of generous financial incentives for employers willing to employ its disabled graduates.

Approach: Enrolment in mainstream vocational certificate, diploma and advanced diploma courses under the national qualification framework.

Data availability: Good – National Centre for Vocational Education Research (NCVER) undertook a comprehensive study of all VET students reporting a disability in the sample year (2000).

Details: The number of VET students reporting a disability in Australia increased from 47,300 in 1996 to 62,100 in 2000. As a proportion of the total VET population, the percentage of students reporting a disability decreased from 5.1 per cent in 1996 to 4.5 per cent in 2000.

Effectiveness:

- Graduating from VET courses in 2000 did not appear to have much effect on employment outcomes for those who reported a disability. 57.4 per cent of disabled students were unemployed before the training, and 56.6 per cent were unemployed 6 months after the training. By comparison, in the case of non-disabled students, these figures were 31.9 per cent and 24 per cent.
- Graduates reporting a disability, who did manage to secure employment, did not achieve the same level of income as other graduates.

Discussion: The system's apparent ineffectiveness as a means of unlocking the unused productivity of disabled people was both surprising and disheartening. Part of the problem is probably due to employer discrimination highlighting the need for an increased level of employer education, promotion and workplace support. Better linkages between skills development and high quality, specialized job placement services are also needed. Training people is not in itself a guarantee of employment and enhanced productivity.

Action taken: The Bridging Pathways National Action Plan 2000–05 was introduced with the aim of addressing the weaknesses identified. Specifically, the plan of action aimed to increase access for persons with disabilities to vocational education and training; to improve their successful participation and achievement in all fields of study and levels; and to achieve outcomes in employment and lifelong learning that also increase their contribution to the economic and social life of the community. Following recognition that people with a disability in vocational education and training were continuing to experience lower levels of employment before and after training, compared to the general result, a revised Bridging Pathways Blueprint was introduced in 2004. This Blueprint pointed to progress being achieved but said "…despite pockets of achievement, we are still struggling to see substantial employment outcomes". Data from the State of New South Wales illustrated a positive impact of the Blueprint, with an increase in the percentage of persons with disabilities getting a job on completion of training from 45 to 51 per cent, compared to 77 per cent of non-disabled graduates.

Source: Australian Productivity Commission, 2004; Australian National Training Authority, 2005, p. 19; ILO, 2006d.

Case study 2 - India: Animators for Rural Multipurpose Development Society (ARMDS), near Villupuram
Background: ARMDS was founded in 1985 by a group of students working as volunteers in villages near Villupuram in southern India. A small NGO that operates with limited funds, ARMDS focuses on the needs of socially-disadvantaged people, including those at the bottom of India's highly-stratified social system.
Approach: Training in a variety of local skills in demand in a community-based skills centre. Courses are government-approved and lead to recognized certificates and are open to both disabled and non-disabled people. Mainstream technical training institutions assist with course content design.
Data availability: Supplied by the project.
Details: Courses are offered in: computer applications (over 6 months); tailoring including stitching, cutting and embroidery (6 months); and typing (6 months for typing in Tamil and 12 for typing in Tamil and English). The courses are all government approved and lead to recognized certificates. Teachers are all appropriately qualified, with Technical Training Certificates (TTCs) or higher qualifications.
Effectiveness:
▪ Since the training programmes began in 2004, 83 disabled people have received training. Of these, males and females are equally represented. Seventy-seven had physical disabilities, while the remainder had hearing and visual disabilities.
▪ ARMDS reports that approximately 40 per cent of graduates get jobs, 15 per cent start their own businesses, 5 per cent start work in the family enterprise or farm, and 2 per cent advance to further education and training.
Discussion: A small NGO targeting socially-disadvantaged people including those at the bottom of India's highly-stratified social system (the dalits or "untouchables"), ARMDS is an example of a small-scale skills development initiative that targets local employment needs and other economic opportunities. Importantly, training is only part of the service, with job placement and regular follow-up also included.
Source: ILO, 2007b.

Case study 3 - Singapore: BizLink
Background: BizLink was established in Singapore in 1986 to provide training, employment, job placement and other job-related services to people with disabilities.
Approach: Job placement in the open employment market combined with training and employment in its production workshop, which competes for contracts with mainstream businesses.
Data availability: Supplied by the project.
Details: BizLink's Business Development Division runs a production workshop that provides paid work for disabled people who are not ready for open employment. A workshop instructor trains workers in new tasks and assists in upgrading skills. In addition, the Business Development Division runs a number of service-oriented businesses, such as a cleaning and housekeeping service for which people receive training and on-the-job supervision.
BizLink's placement services target both disabled people and employers. Staff consult with employers and employees about job performance, the need for any workplace modifications and aids, logistical concerns such as transport and any other issues affecting the placement. Job coaches are also supplied to ensure that new employees have the skills and knowledge to succeed in the job.
Effectiveness:
Results for the year 2007:
▪ Placements into open employment: 310 in 2007, compared to 190 in 2002;
▪ Employed in the Business Development Division: 105 in 2007, compared to 80 in 2002.
Discussion: BizLink demonstrates an innovative approach to harnessing the productivity of disabled workers. Its production workshop and business services provide specialist support to the organization's disabled workforce, but they operate in the mainstream economy and the training reflects this.
Source: BizLink, 2000; recent figures supplied by BizLink.

Developing and using skills in the enterprise – Sheltered or open?

There has been a long history of developing and utilizing the skills and productivity of disabled people in enterprise-based settings. For many years, the emphasis was on "sheltered" employment – that is, segregating disabled people in an enterprise or workshop that offered a protected environment specifically for them; a place where they could acquire and apply skills without the normal pressures of mainstream employment. This form of employment imposed many constraints and limits on individual disabled workers, including their productive capacity,[10] but this was considered to be in their best interest. As Rosen (1993) put it, "it was assumed that the workshop represented the limit of the potential for the individual client so that constraints imposed by the programme itself were not assumed to be detrimental".

[10] Greenleigh Associates (1975), for example, pointed out that sheltered workshops focus on low challenge assembly work and often lack the modern tools and equipment needed for productivity in open employment.

Increasingly, and particularly in developed countries, sheltered workshops have fallen out of favour. As the OECD (1992) points out, the integration of disabled people into mainstream education has increased the momentum for integration in other areas, including training and employment:

> *Young people with disabilities are increasingly integrated in the same classes and structures as their peers without disabilities. It would be a singularly short-sighted view to educate all young people together and then to tolerate their separation in the labour market.*

In this changing policy context, sheltered workshops are increasingly viewed as an old fashioned, segregationist approach. Moreover, critics argue that they generally offer poor (and sometimes exploitative) pay and very limited scope for learning new skills that might enhance their productivity and income (Taylor, 2001). O'Reilly (2007) points out that, in many cases, sheltered workshop employees are paid "less than the minimum wage" sometimes receiving "'pocket money' in addition to their normal disability benefit".

Instead, developed countries are looking to strategies that support the integration of disabled people in open employment where, it is generally believed, there is a far greater potential for them to earn a decent income in a real and sustainable job with a chance of advancement, to build confidence and self-esteem and to generally realize their economic and social potential. More importantly, disabled people themselves want employment in the mainstream.

The open employment of disabled people is facilitated through a range of strategies including employer awareness raising and disability employment promotional campaigns, government subsidies, and assistance to make workplace modifications. "Supported Employment", in which disabled workers receive a range of supports (such as coaching and individual training and the provision of equipment, assistive devices and personal assistance allowances) in mainstream jobs, is increasingly being advocated for disabled workers who need it. The term "Supported Employment" embraces a number of job placement strategies including enclaves (where a group of individuals work in a special group within a host company), mobile work crews (which provide supervised labour teams that offer contract services to a range of customers) and individual placements where one-to-one support is offered to the individual in the workplace (O'Reilly, 2007).

On-the-Job (OTJ) training strategies for disabled people of various types are also used effectively in many enterprises. OTJ provides training for disabled people while they are working. Often trainees are paid a reduced training wage. Training can be provided by an external organization or by the employing company.

Enterprise-based training programmes can also help to provide training geared to the needs of employers. For example, the Brazilian economic and financial analysis and information firm Serasa runs an in-house, classroom-based, employability programme which aims to provide disabled people with the opportunity to enhance their labour market competitiveness through a six-month traineeship. Provided the person shows potential and develops their skills, Serasa can itself provide on-going employment to graduates of the programme. Programme graduates all receive a recognized qualification (see Case study 6).

How effective is enterprise-based training for disabled people?

It can be argued that sheltered employment provides disabled people with at least some opportunity to be productive and to earn an income. For some disabled people in some labour markets, sheltered employment might be the best chance they have of being economically active. But the general picture of the effectiveness of sheltered employment as a means of realizing the productive potential of disabled people is not positive. Remploy (2007a), the disability employment service in the United Kingdom that is currently closing many of its sheltered workshops, argues that "even the most severely disabled people should be supported in a mainstream setting, any form or amount of segregation will undermine a mainstreaming approach." Kregel and Dean (2002) quote Murphy and Rogan (1995) who concluded that "the long term impact of sheltered employment on the productivity and community integration of individuals with disabilities is very small". Bellamy et al. (1986) point out that "sheltered employment settings fail to provide individuals with meaningful outcomes" and that "earnings are low or inconsequential." Referring to a number of studies conducted in the 1990s - Thornton and Lunt (1997), Samoy and Waterplas (1992, 1997), Council of Europe (1993) - O'Reilly (2007) points out that although "improving transition to the regular labour market is a stated policy goal of sheltered employment" the reality is that "transition rates range from under 1 per cent to about 5 per cent, with most countries near the lower end of the scale."

A number of studies (for example, Metts, 2000; Rosen, 1993) point out the dilemmas faced by workshop managers in balancing the productivity requirements of the enterprise and the developmental requirements of the individual disabled worker. The most skilled and productive disabled workers in sheltered employment have the best potential for open employment and the higher wages and better prospects that it offers; but these same traits make them important to the commercial viability of the workshop – they depend in part on their commercial income and can ill afford to lose their more productive workers. This creates a disincentive to place them in open employment where their productivity might reach its full potential.

Cost effectiveness is another consideration. Remploy, a well-established provider of disability services in the United Kingdom, has recently decided to undertake a major rationalization of its sheltered workshops/factories, closing 43 (see Case study 4). Instead, Remploy plan to quadruple the number of people they place in open employment each year from 5,000 to 20,000. As well as improving access to higher quality and more productive jobs that are in keeping with their disabled clients' aspirations, Remploy (2007a) has calculated that:

> *For the average cost of employing one disabled person in a Remploy factory for one year, Remploy can currently successfully help four people gain jobs with mainstream employers.*

There are a number of studies that indicate high productivity levels of disabled people in open mainstream employment. This evidence has been mounting for many years and is now frequently cited to support the "business case" for employing people with disabilities (for example, Zadek and Scott-Parker, 2001). It includes: the Du Pont Surveys (1973, 1981, 1990 – for example, in performance of duties, 92 per cent were average or above; employees with disabilities are not absent any more than employees without disabilities; workers with disabilities performed significantly higher than their non-disabled counterparts in the area of safety); the Rehabilitation Institute of Chicago (1976 – for example, "job performance was the same or better than other workers"); the National Organization on Disability (NOD) Harris Surveys (1995 – for example, 76 per

cent of managers described the performance of disabled workers as “pretty good” or “excellent”).

Graffam et al. (2002), surveying the experience of Australian employers of disabled workers, found that employees with disability were rated lower than average employees on productivity factors (speed and accuracy), better than average employees on reliability factors (attendance and sick leave) and employee maintenance factors (recruitment, safety, insurance costs). The overall outcome for an employer is generally a reasonably productive, reliable employee who costs marginally less to maintain in the job.

In terms of the evidence for supported employment, there is also a good bank of evidence. The American Association of Intellectual and Developmental Disabilities found that “individuals with disabilities participating in supported employment increased their annual earnings 490 per cent” and “on average, hourly earnings increased from US$0.84 to 4.13”. The same study estimates public expenditure efficiencies – the cost of placing a disabled person in supported employment is US$4,200 compared to the US$7,400 cost of keeping that person in a day programme; the tax base is also increased with some US$100 million in federal, state and local taxes paid annually by supported employment participants.

Hempleman (1996) tracked the employment outcomes, job retention, and average wages of 576 individuals in Washington State with mental health disabilities or developmental disabilities two years after they had received supported employment services and entered into competitive employment. It found that 70 percent were still employed after the first and second years. Becker (2006) reviewed 13 randomized control trials and found that, in all 13, “Supported Employment had significantly better competitive employment outcomes than controls” with the mean across the studies being 60 per cent for supported employment compared with 22 per cent for controls.

Case study 4 - United Kingdom: Supported Employment: Remploy
Background: Remploy is a provider of specialist employment services for people with complex disabilities or health conditions. It supports disabled people by placing them into mainstream employment and providing jobs for them in its own factories. In operation for over 60 years, Remploy has gradually shifted the emphasis of its services from sheltered employment to open employment. In response to both demand from disabled people for mainstream work and changes in the market and in government policy, Remploy has decided to accelerate this shift towards open employment.
Approach: Restructuring of a major provider of disability employment services involving a movement away from sheltered employment provided in the organization's own factories to placement of disabled people in open employment including in its own subsidiary businesses.
Data availability: Supplied by the organization.
Details: The restructure involves:
▪ opening up more specialist recruitment and support facilities around the United Kingdom;
▪ closing 43 existing workshops;
▪ running its own sustainable businesses, where there is a demand for their products and services (these include recycling, furniture, healthcare, office services, packaging, textiles, toiletries and automotive businesses) and improve their productivity;
Effectiveness:
▪ In 2006/07, Remploy helped over 5,000 disabled people achieve sustainable employment with mainstream employers, an increase of 25 per cent over the previous year.
▪ The planned restructure aims to quadruple these placements to 20,000 per year by 2013.
Discussion: Strong labour markets and employer labour demand in many developed nations make it increasingly difficult to justify the segregation of disabled people in sheltered environments. Remploy's decision recognizes both the cost efficiency of supporting its clients in the open market and the client's own preference for these "normal" jobs.
Source: PricewaterhouseCoopers, 2006; Remploy, 2007b.

Case study 5 - Cambodia and Laos: Digital Divide Data (DDD)
Background: DDD was started in 2001 in Phnom Penh, Cambodia, with the central aim of creating a stepping stone to well-paid employment for marginalized people, including disabled people, orphans, and women who have been victims of trafficking. It is a company with a social intent that is contracted by organizations mainly in the United States (academic archives, library archives and company indexes) to digitalize their data.
Approach: A social enterprise established to create jobs and educational opportunities in Cambodia and Laos by providing outsourced data services to local and international business and public sector customers.
Data availability: Supplied by the project.
Details: Staff work on data entry and digitization projects for a half-day, then participate in a subsidized education programme of their choice for the balance of the work day. DDD provides health care, eye care and scholarships. Employees are paid in the range of US$65-75 per month - this is below market levels in the Information Technology (IT) field; because the firm wants to encourage them to move into other, higher-paid employment as soon as they feel ready. Staff can earn performance related bonuses.
Effectiveness: The programme aims to prepare participants for employment in other organizations. Twelve of its 100 staff have found other employment with another ten programme participants having been promoted internally in what is a viable and competitive business in its own right. Quite a number have moved to jobs as IT instructors, translators, administrators, etc. in Cambodia at salaries of US$120-300 per month (the minimum wage in Cambodia in 2007 was set at US$50 per month (Notification No. 745, Ministry of Labour and Vocational Training, effective from 1 Jan. 2007).
Discussion: A “social enterprise” established by a group of North American volunteers, DDD is an example of an enterprise-based training approach that injects new skills into local labour markets and links the productive capacity of disabled people to new global markets. The combination of paid work experience, health services and further education prepares participants for higher-paying skilled work opportunities. The fact that the enterprise is based on advanced technology sets it apart from traditional sheltered workshops that can focus on very low skill assembly and packaging work.
Source: ILO, 2007b.

Case study 6 - Brazil: On-the-job employability training provided by large private sector company – Serasa
Background: Serasa is a leading Brazilian economic and financial analysis and information company. With a presence in 115 strategic locations throughout Brazil, Serasa employs 2,400 staff. The company claims to have a very strong commitment to social responsibility.
Approach: As part of an overall commitment to providing employment opportunities for disabled people, Serasa runs a 6-month, in-house traineeship programme for people with physical, hearing, visual and intellectual disabilities.
Data availability: Supplied by the organization.
Details:
▪ It is a programme of preparation and professional qualification for people with a variety of disabilities provided at the company's premises.
▪ The programme leads to a recognized qualification.
▪ It is a permanent and continuous company programme.
▪ It has its own budget which has increased by between 30 and 75 per cent every year since 2002.
Effectiveness:
▪ Of Serasa's 2,400 staff, 113 people have disabilities and all are graduates of the programme. Programme graduates who are not employed with Serasa re-enter the job market with a qualification and enhanced employability skills.
▪ In partnership with UN Volunteers, efforts are now being made to replicate the Serasa model in other Brazilian companies.
▪ Serasa's programme, and its emulation by other Brazilian businesses, has led to the establishment of the Forum of Employability, a group of people from several companies who meet quarterly to share their experience in the development of employment programmes for people with disabilities.
Discussion: Serasa is an excellent example of an in-house, enterprise-based programme developed and delivered by a large enterprise in line with industry skill needs.
Source: Serasa, unpublished report, 2007.

Developing skills for self-employment

As already mentioned, for the great majority of disabled people in the developing world securing a job in the formal economy is unlikely. Work in the informal sector requires people to use whatever resources that are available to them – including their knowledge, skills, and savings – to scrape together an income for themselves and their families. Even in industrialized nations, the nature of production and employment in the global economy is leading to increased use of informal employment arrangements in formal enterprises, making use of workers under employment arrangements that are not governed by labour contracts (Haan, unpublished ILO paper).[11]

[11] Bennell (1999) also notes that the "process of 'informalization of the formal sector' is likely to become more pervasive as the benefits of non-regulation exceed those from regulation."

In the context of the informal economy, productivity improvements for disabled people will almost certainly result in increases in personal income. While much attention has been given to strategies that improve the access of the poor in developing countries to capital (such as the highly-successful Grameen Bank in Bangladesh), skills development can also play an important role in enhancing the productivity of enterprises. Those who work in the informal economy, including significant numbers of disabled people, often have a low level of education and have received little or no training. They have usually acquired their skills on their own or through on-the-job training, such as through informal apprenticeships. They typically need both technical skills, to improve the quality and efficiency of their production, and entrepreneurial and business management skills to perceive and take advantage of business opportunities. This includes, as Haan (unpublished ILO paper) points out:

> *Assessing self-employment opportunities, finding information on technologies and equipment (including suppliers), accessing and managing credit, negotiating with traders and government officials, building up relations with customers, forming and running self-help groups and producers' associations (including conflict resolution), and lobbying and advocacy.*

A variety of models have been used to develop these skills, ranging from targeted short course training programmes to approaches that build on traditional informal apprenticeship programmes.

Many disabled people in developed countries also aspire to self-employment and a number of services have been introduced to assist them – for example, in the United States, The Abilities Fund (http://www.abilitiesfund.org) assists individuals with disabilities who are interested in business ownership as well as disability service organizations.

How effective is training for self-employment?

Bennell (1999) reviewed much of the evidence then available of the effectiveness of developing countries' formal training systems in enhancing the skills and productivity of informal enterprises, and painted a fairly negative picture (for example, he quotes Sanyal, 1996: "Training for the informal sector has not had any significant effects on the overall productivity of enterprises"). In terms of training delivered by private training providers and NGOs, he was unable to unearth any data.

Bennell also identifies low levels of demand for skills development among informal businesses. He categorizes informal businesses as being either "survival businesses", where skill requirements are very low and for which it is "difficult to see how conventional training services could significantly increase productivity and/or incomes"; and "enterprises with growth potential", for which appropriate skills training could enhance productivity, but whose proprietors are often sceptical about the benefits of training and are reluctant to engage in it.

Nevertheless, there are a number of individual success stories that illustrate, at least in general terms, the productivity benefits of skills development for disabled people earning a livelihood in the informal economy:

- The Alleviating Poverty through Peer Training (APPT) project in Cambodia (see Case study 7) connects disabled people wishing to start their own informal sector enterprise with similar established businesses. From October 2002 to August 2007, 958 clients received peer training or other types of training, business start-up and enhancement services and financial assistance in the form of training fees, special allowances used to

cover training expenses, grants and loans. Of these, 51 per cent were women with disabilities or affected by disability in the family.

- The Developing Entrepreneurship among Women with Disabilities (DEWD) project in Ethiopia (see Case study 8) developed a strategy to support women with disabilities and women with disabled dependents to improve their standard of living through training in micro-enterprise skills, vocational skills training and accessing credit and business development services. From 2001 to 2007, some 443 women with disabilities, including mothers of intellectually-disabled children and wives of disabled war veterans, have received training.
- On a smaller scale, the "Improving business development services with disabled people in Northern Uganda" project aimed to improve access to appropriate training and support services that can enable disabled people to enter mainstream employment, or to start and grow their own small businesses. Like APPT and DEWD, this project provided training in existing enterprises. From 2001 to 2004, 103 disabled people commenced training, 60 completed, 22 found employment with established enterprises and 16 started their own enterprises.

Case study 7 - Cambodia: Alleviating Poverty through Peer Training (APPT) project

Background: Disabled people in rural Cambodia face multiple barriers to developing vocational skills. Local training centres are scarce and many disabled people have limited or no access to transport or do not have the necessary basic education to succeed in the formal vocational training sector. Building on a successful methodology called "Success Case Replication" (SCR), the ILO initiated a simple, but effective strategy that used successful micro-business operators or entrepreneurs as peer trainers to train and mentor disabled people in the technical and management skills required to run similar micro-businesses.

Approach: Peer training of disabled people by village-based entrepreneurs with existing micro-businesses with the objective of establishing their own businesses (where sufficient market potential exists).

Data availability: Good – ILO monitoring and evaluation.

Details: Peer trainers (who have existing local businesses) agree to teach the business and technical aspects of the skill or business in question and to share "trade secrets". Trainer, trainee and project field worker agree on the training and the associated fee, if any (some of the peer trainers agreed to provide the training for free).

Field workers support the trainer and the trainee during the training period, address problems and determine if the trainee is acquiring the skills needed for a successful business start-up.

Many trainers make themselves available for continued support and assistance. For example, one woman takes her former trainee's knitted items to a local market to sell to vendors.

Disabled people who graduate from the project themselves often train other disabled people.

The project offers grants and loans to trainees unable to secure credit through other channels. Grants cover minimal funding needs while loans, offered for 12 months at 5 per cent interest, usually assist those who need 200,000 riel (US$50) or more. A business plan is required.

Effectiveness:

- 750 clients (people with disabilities or those affected by disability in the family of which 52 per cent were women) received peer training and 82 clients (of which 37 per cent were women) received other types of training.
- A total of 609 (of which 60 per cent were women) started their own micro-businesses after having received training services. Another 126 clients (of which 35 per cent were women) enhanced their existing businesses by participating in the project.
- Around 70 per cent of participants had a disability that affected their mobility while 15 per cent had a visual disability.

Discussion: The SCR methodology adopted by the APPT project is a simple concept that addresses the particular skills development needs of disabled people in rural localities in a developing country. It capitalizes on the human resources found at the village level and cuts through barriers of accessibility, attitudes and lack of services. Learning-by-doing is an approach that suits people with certain types of disabilities and those with limited education. The project replicates the skills and practices of businesses known to be succeeding in markets, although careful planning is required to ensure that markets are not flooded by too many businesses offering similar products or services.

Source: ILO, 2007b; APPT Project Final Evaluation, 2008.

Case study 8 - Africa: Developing Entrepreneurship among Women with Disabilities (DEWD) project

Background: In Africa, the equal rights of women and their equal participation in the social, cultural, economic and political life have remained elusive. Women are still the main victims of poverty, social prejudice, lack of access to health services and education. The Irish Aid/ILO DEWD project aims to facilitate the access of women entrepreneurs with disabilities (WEWDs) to mainstream women's entrepreneurship development (WED) activities in five sub-Saharan African countries – Ethiopia, Kenya, Tanzania, Uganda and Zambia.

Approach: Supporting women with disabilities and women with disabled dependents in improving their standard of living through training in micro-enterprise skills, vocational skills training as well as access to credit and business development services. A key element of the strategy is the involvement of the disabled persons' organizations (DPOs) in carrying out project activities.

Disabled women entrepreneurs took part in the training programmes run for non-disabled women funded through another project – Women's Entrepreneurship Development and Gender Equality (WEDGE). This included training on improving their entrepreneurial skills, product design, and marketing and gaining access to markets through Trade Fairs and export business as well as training of Business Development Service (BDS) providers. Women with disabilities also benefited from the BDS provided under WEDGE.

Data availability: Good – ILO monitoring and evaluation.

Details: The strategy represents an innovative and flexible approach to technical cooperation by the ILO in the field of disability. The approach is based on partnerships with local DPOs and designed and implemented in close consultation with DPOs, training providers, micro-finance institutions, and national and local government authorities.

Effectiveness:

- 443 women with disabilities – including mothers of intellectually-disabled children and wives of disabled war veterans – have received training;
- 396 received training in basic business skills and 47 in "Improve Your Business" skills;
- Over 200 women with disabilities and women with disabled dependents received loans to implement their business plans through the Gasha Micro Finance Institution (MFI) in Addis Ababa and the Start-Up Capital Loan Scheme in Tigray Region.

Discussion: The project aims both to strengthen existing enterprises of women with disabilities and to encourage potential entrepreneurs to start up new businesses. Capacity building for DPOs is also an important element including improving their skills in identifying and referring potential participants, diversifying their funding sources and harnessing in-country experts.

Even though the integration of women with disabilities into programmes such as WEDGE is an encouraging development, an ILO review of this approach (2008) has highlighted the fact that people with certain disability types can continue to be excluded:

To date, the poor accessibility of buildings and materials has limited the range of women entrepreneurs with disabilities who have participated in integrated WEDGE activities. This, together with prevailing attitudes about certain types of disability, has resulted in a clear bias towards those, such as ambulant women with mobility impairments, who need the least or most easily provided reasonable accommodations, whereas those who may have greater support needs, such as women with mental health difficulties, have largely not been included to date.

Source: Gilbert, 2007.

Case study 9 - South Africa: Medunsa Organization for Disabled Entrepreneurs (MODE)
Background: Small communities can support only a limited number of people in skilled trades. Providing vocational and entrepreneurial training in skills and business types that are surplus to local demand is a common mistake. The MODE entrepreneurial training recognizes this and the importance of entrepreneurial skills over technical manual skills. It accepts people onto its courses based not simply on technical skills, but on whether they have the will and aptitude to become successful entrepreneurs.
Approach: Entrepreneurial training courses for disabled people living in Soweto.
Data availability: Good – Survey and participant tracking.
Details: In order to qualify for the MODE enterprise development, applicants are tested in literacy, numeracy, business knowledge, and business insight. They also have to commit themselves to starting a business on completion of the 10-week course. Only 55 per cent of applicants pass this test. Attendance on the course is backed by sponsorship (obtained by MODE). The course is designed to build on existing knowledge among the participants, and to share this knowledge between them.
Key components and hallmarks of the course are target setting, identification of support networks, critical thinking, openness to other views, recognition that people have different ideas of what constitutes success, problem solving, and creativity.
Effectiveness:
▪ Surveys have shown an outstanding survival rate for businesses established by MODE graduates.
▪ The majority of businesses started after MODE training generate about R1500 (US$245) a month, which is twice the disability benefit in South Africa.
▪ Some grow to earn R3000 (US$490), with the potential for further expansion.
Discussion: The success of the MODE training can be ascribed to: commitment by trainees to setting up a business; aptitude screening; the course focusing on life skills as well as business skills; incremental learning built on existing knowledge and skills; close examination of each trainee's business idea throughout the course; thorough research by MODE among disabled persons to understand their levels of skill and education; the opportunity for greatly enhanced self-respect among disabled people; a holistic and empowering approach which builds on people's strengths.
Source: ILO, 2007b.

How else can the skills and productivity of disabled people be increased?

Sometimes it is not a lack of skills that stops disabled people from being productive, but physical and organizational barriers to using their skills in the workplace. The willingness of employers to make relatively minor adjustments to job design, work station set-up or production processes, or to allow workers to use adaptive tools and technology can significantly enhance productivity.

Workplace accessibility and flexible working hours

Some countries have included in their disability employment legislation a requirement for employers, training providers and other service providers to make

"reasonable accommodations" for disabled workers. The Americans with Disabilities Act (1990) defined this as "any modification or adjustment to a job, an employment practice, or the work environment that makes it possible for a qualified individual with a disability to enjoy equal employment opportunities". Examples include: adjusting work schedules through job sharing, part-time work or flexible hours; providing assistive devices, such as teletype writers or telephone amplifiers, tactile markings on equipment, or special computer equipment; or modifying the worksite to enable a person with a disability to perform their job duties more effectively, such as rearranged office furniture and equipment or more accessible routes. Many accommodations are inexpensive and cannot be argued to impose significant cost burdens on businesses – for example, the UK Employers' Forum on Disability quotes research by the firm Marks and Spencer which found that two-thirds of accommodations cost nothing.[12]

Transport

Some disabled people face an even more fundamental barrier to realizing their productive potential – lack of transport can prevent them simply getting to and from work or vocational training institutions. For example, in some countries, public transport systems are not well equipped to meet the needs, say, of people with mobility impairments. Governments need to pursue the progressive improvement of these systems to meet the diverse needs of people with different disabilities.

Communication and information technology

The growth of the global knowledge economy and developments in communication and information technology also open new opportunities for harnessing the productivity of disabled people (the DDD project mentioned earlier is an example). The physical place of production in the global economy has become less important, a fact that opens up "teleworking" opportunities for disabled people with mobility restrictions or other circumstances that make a more individualized working environment desirable. Teleworking, also known as telecommuting, allows disabled people to work from home for part or all of their working week. Not all disabled people need or want to work in this way, but the option is increasingly being recognized as a "reasonable accommodation" in some circumstances (US Equal Opportunity Commission, 2005).

Service integration

In terms of service delivery strategies, there is also an increasing emphasis being placed on service integration to improve the employability and productivity of disabled jobseekers. Various types of assistance are usually needed, some related to a specific job, some related to practical issues such as transport or workplace accommodations and some related to personal development, such as building confidence and self-esteem, or working as part of a team. Access to a single point of contact, such as a job coach or mentor, can provide an effective means of coordinating such services (British-Irish Council, 2006).

Union involvement

As well as employers, government agencies and DPOs, labour unions can also play a role in promoting the employment of people with disabilities and in facilitating the

[12] http://www.employers-forum.co.uk/www/guests/info/csr/disability-online/employ/employ7.htm [30 Apr. 2008].

development of their skills. In Brazil, for example, a collective agreement has been negotiated between the industrial parties in the pharmaceutical industry which assists in the implementation and monitoring of that country's quota system and which ensures that employers run training courses for people with disabilities. In Japan, the Kanagawa Regional Council of the Japanese Electrical, Electronic and Information Union (JEIU) has established its own "Supported Employment Centres" for people with intellectual disabilities. JEIU recognized that sheltered workshops often did not provide high-level employment opportunities and that the skills taught at special schools and vocational rehabilitation centres were frequently outdated. Services delivered at these centres include vocational assessment, guidance and counselling, skills training, supported employment and job placement and follow-up.

How effective are these measures?

Verkerke (2002) argues strongly that the provision of reasonable accommodations increases productivity and efficiency in the labour market: "Mandated accommodation avoids scarring of the employee and the risk of chronic unemployment of persons who could be employed productively." The Australian Department of Employment and Workplace Relations (2007) reviewed the evidence of the costs and benefits of providing accommodations for disabled people. It cites the findings of Cantor (1996) who reported that for every dollar spent on cost, there were US$29 of benefits in employing and accommodating a person with disability; that almost 40 per cent of companies reported a saving of US$1 to 5,000, a third reported a saving of US$5,000 to 20,000 and another 25 per cent reported a saving of US$20,000 to 200,000. The review also cites statistics from the US Job Accommodation Network (JAN; 1999) which suggests that the benefit to cost ratio for making workplace adjustments may be as high as 40:1. According to JAN, employers reported productivity-related benefits of providing workplace accommodation included enabling retention or hiring of a qualified employee (56 per cent), eliminating the cost of training a new employee (31 per cent), saving workers' compensation and other insurance costs (38 per cent) and increasing the individual worker's productivity (54 per cent).

Measuring the productivity gains from workplace accommodations for disabled people also needs to consider the costs of these changes. DeLeire (2000) indicates that 51 per cent of accommodations made by employers in the United States cost nothing, while the median cost per accommodation was US$500. 12 per cent of accommodations cost more than US$2,000, 4 per cent cost more than US$5,000 and 2 per cent cost more than US$20,000. In Australia, the average cost of workplace modifications funded through the Australian Government's Workplace Modifications Scheme between 1998 and 2002 was AUD 2,200. The net economic impact, considering productivity gains in the workplace and savings in recurrent government benefit payments is therefore very likely to be positive.

The US State of South Carolina Office of Human Resources (OHR) quotes a number of studies that have assessed the productivity benefits of teleworking. Telecommuters typically work more efficiently without office-related distractions and interruptions. OHR indicates that companies find employees who telework are 10 to 30 per cent more productive. It cites: an AT&T sponsored survey of Fortune 100 telemanagers in which 58 per cent reported increased worker productivity; a pilot programme run by the State of California which measured productivity increases of 10 to 30 per cent; and an American Express survey which measured a 20 per cent productivity gain for its off-site call centre employees. (These studies refer to teleworking in general but they could equally be applied to disabled teleworkers).

The experience of the company CJ Telenix in the Republic of Korea provides a more specific example of the productivity benefits of teleworking in the employment of people with disabilities. In 2003, the company initiated a "work-at-home" system for its customer service operators as a means of increasing operational and corporate efficiency and decided to include employees with disabilities in this new approach. The CJ Telenix work-at-home stations introduced were identical to those in its main call centre, with the same desk, partition, computer, LCD monitors, high-speed Internet and telephones. Although the cost associated with setting up these home offices was 20 per cent higher than work stations in the centralized call centre, company executives believe that the return-on-investment is significant in terms of improved productivity and customer and employee satisfaction. The home workers visit the main call centre twice a month to maintain a relationship with co-workers and employers. According to the company's human resources manager, Sung Joo Kim, "We have thrown away the stereotype that disabled people are less productive; our case proves it" (ILO, 2007c).

"Joined up" service delivery strategies are being advocated in some countries because they are considered to be more effective in improving the employability of disabled jobseekers. The British-Irish Council (2006) points out that "small administrations may be more flexible and agile in their response to disabled people's individual needs, through 'one-stop' approaches" and that the "challenge for larger administrations is to make it easier for disabled people to navigate the spectrum of different services required to improve employability". The rationale for such "joined up" approaches seems sound, but to date there does not yet appear to be any empirical evidence to demonstrate their effectiveness.

Case study 10 - Developed Country: Fundación ONCE – Use of new technology in the employment of people with disabilities in Spain
Background: Recognizing that technological change was simultaneously eliminating and creating jobs, Fundación ONCE was established in 1988 with the aim of supporting the self-employment of disabled people in new industries.
Approach: Training of disabled people in information and communication technologies (ICT), promotion of these people into ICT-based jobs and promotion of accessibility. Fundación ONCE holds total or partial equity interests in a number of companies (the Fundosa Group) - this gives it substantial scope to ensure the employment of disabled people.
Data availability: Independent peer review as part of a European Employment Strategy (de Cabo, 2003).
Details: The strategy has three key elements:
▪ training in new technologies and in the necessary interpersonal dimensions of running a business;
▪ promotion of the employment of people with disabilities in positions relating to the use of the new technologies;
▪ promotion of accessibility by means of social awareness, the elimination of barriers that affect certain disabilities and overcoming technological access problems.
Effectiveness:
▪ From 1997 to 1999, 933 people with disabilities were trained and 742 were employed by companies in the Fundosa Group. Another 773 were employed between 2000 and 2002.
▪ Employment included work in emergency telephone services, call centres, telephone survey implementation, e-commerce, on-line health management, electronic subscriptions and real-time telephone interpreting for people who are deaf.
Discussion: The employment outcomes from the organization's training activities are good – its equity stake in the businesses allows it to closely link training content with operational needs. Continuous technological change presents a challenge - "for people with disabilities, as for us all, life-long learning is necessary."
Source: de Cabo, 2003.

3. Conclusion

In summary, the key policy messages to emerge from this background paper are as follows:

- **Undertake more research on workforce skills and productivity issues associated with people with disabilities.** Much of the data used in this paper is now quite old – some dates back to the early 1990s – and requires updating in the light of changing labour markets, human resource management practices and technological developments.
- **Include measures in poverty alleviation strategies to unlock the productivity potential of disabled people by encouraging their development of employability, vocational and entrepreneurship skills and their participation in economic activity.** As the ILO puts it: "An estimated 470 million of the world's working age people are disabled. These people have the potential to make a valuable contribution in the workforce, as employees, entrepreneurs or employers of others."[13] In the words of the World Bank: "With disabled people invisible in development initiatives, hundreds of thousands of people who see themselves as potential and willing contributors to family and national economic activities are instead relegated to the margins of society where they are perceived as being a burden. The result can be devastating, both to the individual and to the economy."[14]
- **Integrate productivity-enhancing skills development into development strategies.** Despite the difficulties involved in positioning state training systems in developing countries to better service the skill development needs of disabled people and the poor in general, developing the skills of disabled people enhances their productivity and their ability to earn a decent income. But, as Bennell (1999) put it: "Training on its own cannot solve the fundamental underlying problem of the lack of productive employment opportunities... it must be linked to broader processes of economic and social change."
- **Consider the significant economic cost of not having disabled people productively engaged in the economy.** In both developed and developing countries, under-utilization of disabled people in the workforce has a significant negative effect on the productivity of national economies. The costs in developed countries of providing passive welfare support are escalating as populations age and age-related disabilities rise.
- **Encourage the mainstreaming of disabled people into training programmes and open employment.** Segregating people in sheltered work environments is expensive, does not adequately develop skills for open employment and is increasingly at odds with the aspirations of disabled people themselves and the commitment of countries to full inclusion with equality.
- **Adopt approaches to skills training that reflect this movement towards the mainstream** – such as training on-the-job in open employment, establishing supported employment initiatives, and encouraging more disability-friendly, mainstream training centres.

[13] http://www.ilo.org/public/english/employment/skills/disability/diswork.htm

[14] World Bank Disability in Africa webpage: http://www.ilo.org/dyn/declaris/DECLARATIONWEB.DOWNLOAD_BLOB?Var_DocumentID=6812 [30 Apr. 2008].

- **Promote workplace accommodations and flexibility for disabled workers.** These can significantly enhance the productivity of disabled workers and employers should be actively encouraged to introduce such policies. Similarly, technological innovations can open new work opportunities for some disabled people (for example, teleworking) and successful models need to be promoted and emulated.
- **Identify and remove the remaining regulatory barriers that restrict the open employment and participation of disabled people in the economy.** This is particularly the case in some developing countries.
- **Undertake further research to overcome the continuing lack of quality data on the economic situation of disabled people**.

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