Disability and Labor Markets in Developing Countries

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Background (1)

- The value of work to individuals
- Crucial social functions of employment include financial independence and integration into community
- "Employment improves social status, provides social support, enables workers to make a contribution, and increases self-worth" (O'Day and Killeen, 2002).

Background (2)

- People with disabilities continue to be under-represented in the workforce due to various barriers
- Primarily employed in part-time and/or jobs that are accorded low status in that particular society

Disability and Developing Countries

- Approximately 15% of the world's population have some form of disability. (WHO & WB, 2011)
- Nearly 80% of them live in developing countries, and they make up 15-20% of the poor in developing countries.

  (UN Factsheet on Persons with Disabilities; Elwan, 1999)
- This makes the worldwide population with disabilities one of the poorest and most marginalized segments of society.

  (Department for International Development, 2000)
- Poor and unequal access to education or employment are major factors of their poverty.

Global Employment Situation

OECD (2010)

- Working-age people with disabilities experienced significant labor market disadvantage and worse labor market outcomes than their working-age non-disabled counterparts
- Average employment rate is found to be at 44%, which is over half than that of their non-disabled counterparts (75%)
- Inactivity rate among non-disabled people was about 49%, 2.5 times higher than those without disabilities
- Marginalization of people with disabilities is even more serious in the developing world.

Table 1:

Employment ratio of people with disabilities to overall population

by country's income level

Source: World Bank data

Country	Year	GNI* (USD)	Employment rate of overall population%**	Employment rate of PWDs (%)**	Employment ratio**
Low Income Countries* **					
Malawi	2003	190	46.2	42.3	0.92
Lao PDR****	2003	330	80.7	72.0	0.89
Bangladesh****	2003	400	51.1	35.0	0.68
India	2002	470	62.5	37.6	0.61
Zambia	2005	490	56.5	45.5	0.81
Pakistan****	2003	540	50.7	30.0	0.59
Philippines****	2003	1,030	54.4	48.0	0.88
Lower Middle Income Countries* **					
Peru	2003	2,160	64.1	23.8	0.37
Upper Middle Income Countries* **					
Poland	2003	5,480	63.9	20.8	0.33
South Africa	2006	5,480	41.1	12.4	0.30
Mexico	2003	6,140	60.1	47.2	0.79
High Income Countries* **					
Spain	2003	17,570	50.5	22.1	0.44
Australia	2003	21,170	72.1	41.9	0.58
Canada	2003	24,640	74.9	56.3	0.75
Germany	2003	25,400	64.8	46.1	0.71
Austria	2003	27,020	68.1	43.4	0.64
Netherlands	2003	28,800	61.9	39.9	0.64
United Kingdom	2003	29,170	68.6	38.9	0.57
Japan	2003	34,010	59.4	22.7	0.38
Switzerland	2003	43,480	76.6	62.2	0.81
Norway	2003	44,010	81.4	61.7	0.76
USA	2005	44,670	73.2	38.1	0.52

Barriers to Entry into the Labor Market

- Perceived low productivity
- Employers's misconceptions on ability and disability
- Perverse disincentive to work
- Wage disparity

Purpose of Study

- The question remains:
  "What is the effect of education for the employability and occupational choice differential among people with disabilities?"
- Research on the nexus between disability, education employment in developing countries more generally, is scarce.

Dataset from Nepal (1)

- Two rounds of the survey were conducted in Nepal's Kathmandu Valley in 2008.
- Participants: persons with hearing, physical and visual impairments
- Face-to-face interviews using carefully-structured questionnaires was conducted
- Participants aged between 16 and 65 were included for the survey

Dataset from Nepal (2)

- Out of a total of 993 potential participants registered in the disability related organizations in Kathmandu, Bhaktapur and Lalitpur Districts, 423 respondents were randomly selected using proportionate stratified random sampling.
- Socioeconomic aspects covered:
  - Information on impairment
  - demographic characteristics
  - education background
  - employment status

Techniques for Data Analysis (1)

- Two econometric models used for labor market analysis:

  - Logit model
    Analyze employment or labor market participation

  - Multinomial logit model
    Analyze occupational distinctions,
    e.g. between white/blue collar or fulltime/part time jobs

Techniques for Data Analysis (2)

Dependent Variables

- Self –reported status of employment (Logit model analysis)
  - Employed
  - Unemployed
- Participation in employment (Multinomial logit model analysis)
  - white/blue-collar job or self-employment
  - full/part-time job

Descriptive Statistics, Nepal

Table 2.

Variable name	# of Obs	Mean	Std. dev.	Min	Max
Dummy = 1 if male	409	0.577			
Age	406	31.03	8.118	16	65
Years of schooling	396	8.803	4.776	0	17
Type of impairment					
Visual (default category)	405	0.319			
Hearing		0.370			
Physical		0.311			
Age when a person became disabled					
Congenital disability	406	0.45			
Between 0 and 6		0.284			
Between 6 and 11		0.151			
Between 11 and 16		0.043			
Above 16		0.073			
Dummy = 1 if employed	401	0.58			
Years of schooling for employed	229	9.91	4.645	0	17
Type of contract					
Full-time job	401	0.701			
Part-time job		0.139			
Self-employed		0.16			
Level of family encouragement to work					
Dummy = 5 if very high	384	0.39	2.27	1	5
Dummy = 4 if high		0.21			
Dummy = 3 if moderate		0.23			
Dummy = 2 if low		0.96			
Dummy = 1 if very low		0.81			

Disability & Employment in Nepal

Table 3. Job Status and Education al Level

Educational attainment	White-collar	Blue-collar	Unemployed
Illiterate	4.4	28.9	66.7
<10 years of education	10.7	40.1	49.2
10–11 years of education	26.8	30.4	42.8
12–14 years of education	49.1	37.3	43.6
15–16 years of education	77.2	5.3	17.5
>17 years of education	72.2	16.7	11.1
Total	30.5	27.0	42.5

Disability & Employment in Nepal

Table 4. Results of Maximum Likelihood Estimation of Multinomial Logit Model (Nepal)

		[1]	[2]		[3]	
		Employment	Job tenure		Job type	
Dependent variable		Employed	Part-time	Full-time	Blue-collar	White-collar
Years of schooling		0.033***	-0.002	0.036***	-0.008	0.041***
		[0.005]	[0.004]	[0.006]	[0.005]	[0.005]
Female		-0.065	-0.05	-0.015	-0.036	-0.022
		[0.047]	[0.048]	[0.052]	[0.048]	[0.043]
Age		0.009***	0.003	0.006*	0.005	0.005
		[0.004]	[0.003]	[0.004]	[0.003]	[0.003]
Type of impairment	Hearing	-0.012	-0.175***	0.157***	0.151***	-0.158***
(with visual impairment as base)		[0.063]	[0.054]	[0.058]	[0.053]	[0.050]
	Physical	-0.264***	-0.001	-0.261***	-0.127*	-0.129**
		[0.060]	[0.051]	[0.058]	[0.069]	[0.051]
Level of encouragement	High	0.052	-0.011	0.059	0.128**	-0.063
(with very high as base)		[0.067]	[0.054]	[0.066]	[0.053]	[0.060]
	Moderate	-0.101	-0.058	-0.047	-0.016	-0.065
		[0.062]	[0.056]	[0.068]	[0.059]	[0.055]
	Low	-0.139*	-0.017	-0.13	-0.006	-0.104
		[0.084]	[0.076]	[0.086]	[0.074]	[0.083]
	Very low	-0.094	-0.011	-0.085	-0.128	0.061
		[0.083]	[0.079]	[0.096]	[0.092]	[0.072]
Observations		371	371	371	360	360
Standard errors in parentheses						

Disability & Employment in Bangladesh (1)

Table 5. Maximum Likelihood Estimation of Multinomial Logit Model (Bangladesh Total population)

		[1]		[2]		
		Base Outcome: Not Working		Base Outcome: Day Labor		
Dependent Variable		Working		Self-employed	Employer	Employee
Dummy=1 if female		-0.396***		-0.048***	0.005***	0.113***
		[0.003]		[0.009]	[0.001]	[0.007]
Age		0.004***		0.004***	0	0.001***
		[0.000]		[0.000]	[0.000]	[0.000]
Married		-0.029***		0.150***	0.007*	-0.125***
		[0.005]		[0.015]	[0.003]	[0.010]
Years of schooling		0.001***		0.007***	0.000***	0.029***
		[0.000]		[0.001]	[0.000]	[0.001]
Type of Impairment	Visual	-0.007		0.046***	-0.005	-0.001
		[0.007]		[0.015]	[0.003]	[0.012]
	Hearing	-0.036**		-0.069*	-0.002	-0.007
		[0.016]		[0.036]	[0.006]	[0.030]
	Physical	-0.047***		0.047	-0.093	0.005
		[0.018]		[3.916]	[8.641]	[2.579]
	Cognitive	-0.181***		0.142	-0.094	-0.045
		[0.032]		[10.376]	[22.895]	[6.833]
	Self-Care	-0.094		0.24	-0.092	-0.126
		[0.063]		[17.670]	[38.989]	[11.636]
	Communication	-0.167***		-0.045	-0.096	0.122
		[0.042]		[16.054]	[35.423]	[10.571]
	Dual Impairment	-0.079***		0.001	-0.094	-0.006
		[0.014]		[3.266]	[7.207]	[2.151]
	Multiple Impairment	-0.197***		-0.079	0.002	-0.007
		[0.019]		[0.051]	[0.007]	[0.040]
Log Non-labor Income		-0.001***		0.006***	0.000**	-0.002**
		[0.000]		[0.001]	[0.000]	[0.001]
Log Remittance		-0.006***		0.007***	0.000***	-0.001*
		[0.000]		[0.001]	[0.000]	[0.001]
Dependency Ratio		0.119***		0.053**	-0.010**	-0.035*
		[0.011]		[0.027]	[0.005]	[0.021]
# of Obs		29690		15467	15467	15467
Standard errors in parentheses						
***** p<0.01, ** p<0.05, * p<0.1**						

Disability & Employment in Bangladesh (2)

Table 6. Maximum Likelihood Estimation of Multinomial Logit Model (Total Disabilities)

	[1]		[2]		
	Base Outcome: Not Working		Base: Day Labor		
Dependent Variable	Working		Self-employed	Employer	Employee
Dummy=1 if female	-0.436***		-0.093***	0	0.117***
	[0.007]		[0.025]	[0.003]	[0.020]
Age	0.001**		0.005***	0	0
	[0.001]		[0.001]	[0.000]	[0.001]
Married	-0.032*		0.216	0.04	-0.15
	[0.017]		[1.119]	[2.060]	[0.538]
Years of schooling	0.006***		0.007**	0	0.029***
	[0.001]		[0.003]	[0.000]	[0.002]
Degree of Impairment	-0.127***		-0.124	-0.04	0.09
	[0.020]		[1.362]	[2.508]	[0.655]
Log Non-labor Income	-0.002*		0.003	0	0.001
	[0.001]		[0.003]	[0.000]	[0.002]
Log Remittance	-0.005***		0.013***	0.001*	-0.002
	[0.001]		[0.003]	[0.000]	[0.002]
Dependency Ratio	0.091**		-0.013	0.004	-0.046
	[0.038]		[0.077]	[0.009]	[0.061]
# of Obs	2966		1840	1840	1840
Standard errors in parentheses					
***** p<0.01, ** p<0.05, * p<0.1**					

Disability & Employment in Bangladesh (4)

Table 7. Maximum Likelihood Estimation of Multinomial Logit Model (Disability, Male)

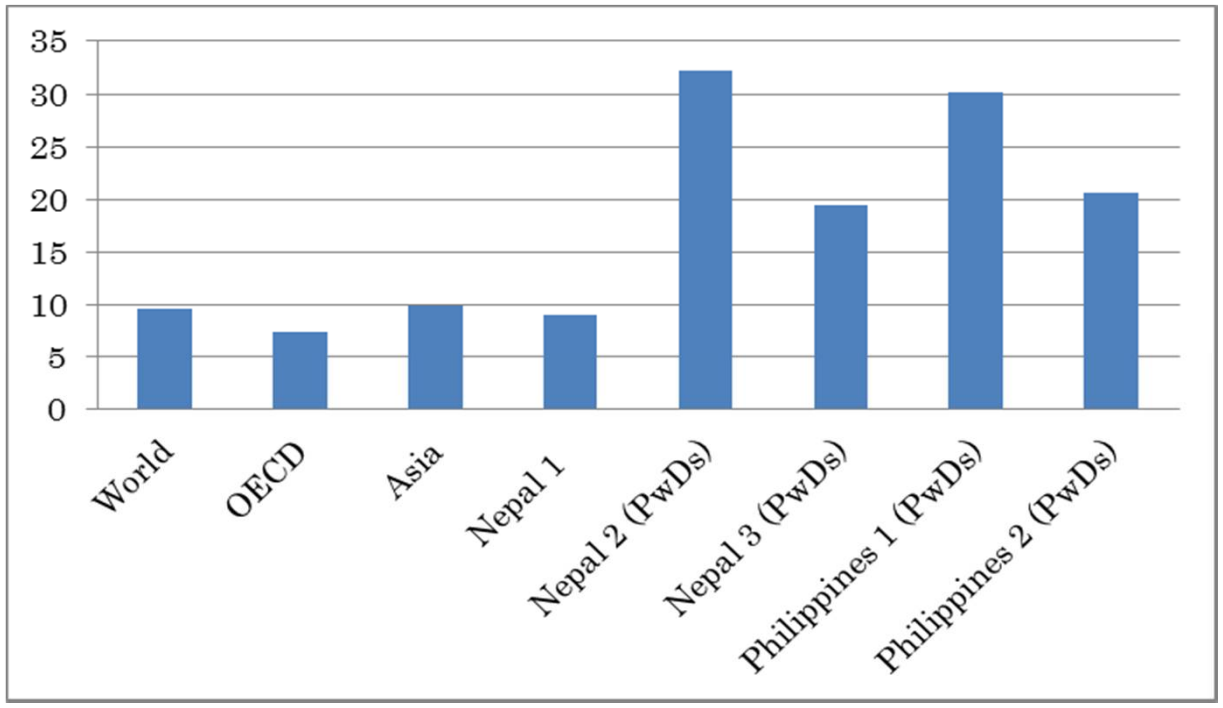
	[1]		[2]	
	Base: Not Working		Base: Day Labor	
Dependent Variable	Working	Self-employed	Employer	Employee
Age	0	0.007***	0	-0.001
	[0.001]	[0.002]	[0.000]	[0.001]
Married	0.207***	0.087	0.024	-0.239
	[0.027]	[1.404]	[2.277]	[0.544]
Years of schooling	0.005**	0.007**	0	0.027***
	[0.002]	[0.003]	[0.000]	[0.002]
Degree of Impairment	-0.119***	-0.099	-0.031	0.064
	[0.020]	[1.764]	[2.868]	[0.682]
Log Non-labor Income	-0.003*	0.001	0.001	0
	[0.002]	[0.003]	[0.001]	[0.002]
Log Remittance	-0.007***	0.014***	0	-0.002
	[0.002]	[0.004]	[0.000]	[0.003]
Dependency Ratio	0.026	0.017	0.012	-0.091
	[0.060]	[0.111]	[0.014]	[0.087]
# of Obs	1257	1050	1050	1050
Standard errors in parentheses				
***** p<0.01, ** p<0.05, * p<0.1**				

Disability & Employment in Bangladesh (3)

Table 8. Maximum Likelihood Estimation of Multinomial Logit Model (Disability, Female)

	[1]		[2]		
	Base: Not Working		Base: Day Labor		
Dependent Variable	Working		Self-employed	Employer	Employee
Age	-0.002***		0.004**	0	0.002
	[0.001]		[0.002]	[0.000]	[0.002]
Married	-0.148***		0.234	0.037	-0.119
	[0.017]		[1.550]	[3.224]	[0.800]
Years of schooling	0.008***		0.007	0	0.027***
	[0.002]		[0.005]	[0.000]	[0.004]
Degree of Impairment	-0.05		-0.216	-0.033	0.156
	[0.035]		[0.790]	[1.630]	[0.409]
Log Non-labor Income	-0.001		0.006	0	0.002
	[0.002]		[0.004]	[0.000]	[0.003]
Log Remittance	-0.003*		0.012***	0.001	-0.003
	[0.002]		[0.004]	[0.001]	[0.004]
Dependency Ratio	0.181***		-0.037	-0.004	-0.029
	[0.043]		[0.108]	[0.014]	[0.092]
# of Obs	1709		790	790	790
Standard errors in parentheses					
***** p<0.01, ** p<0.05, * p<0.1**					

Comparison of Returns to Education



Note:
* Figures for the world, OECD, Asia, are adapted from Psacaropoulos and Patrinos (2004).
* Numbers for Nepal is adapted from Lamichhane and Sawada (2013).
* Data for the Philippines was adapted from Yap, Reyes, Albert and Tabuga (2009).

Summary of Findings

- I discussed the range of occupational opportunities for, and the current situation of, people with disabilities.
- People with disabilities can benefit greatly from working, if the right person is put to the right job.
- If individuals with disabilities are treated based on the principle of what they can do rather than what they can not – a strength-based approach – they can not only take care of their own livelihoods, but also contribute significantly to social progress.
- This requires employment opportunities, and the elimination of prejudice and discrimination.

Concluding Remarks

- Develop policies toward increasing and promoting employment opportunities for individuals with disabilities.
- Provide educational opportunities beyond the primary level
- Increase educational investment in people with disabilities
- Incorporate strategies such as scholarship provisions, conditional cash transfers, and increasing of schools that can accommodate students with disabilities
- Remove disabling barriers in workplace

Main References

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