Investment in disability toward achieving quality inclusive education: some cases from developing countries

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Why Investment in Education?

- Fundamental human right

- It gives economic and several other social returns

Disability and education

- An estimated one-third of out of school children are children with disabilities (UNESCO, 2009)

- Majority of them are still out of school (Mizunoya and et al, 2016)

- Globally, 15 percent of the worldwide population have disability (WHO, 2011)

- Without quality education, disabled people will not be able to develop their full educational and employment potential.

Global comparison of Returns to Education
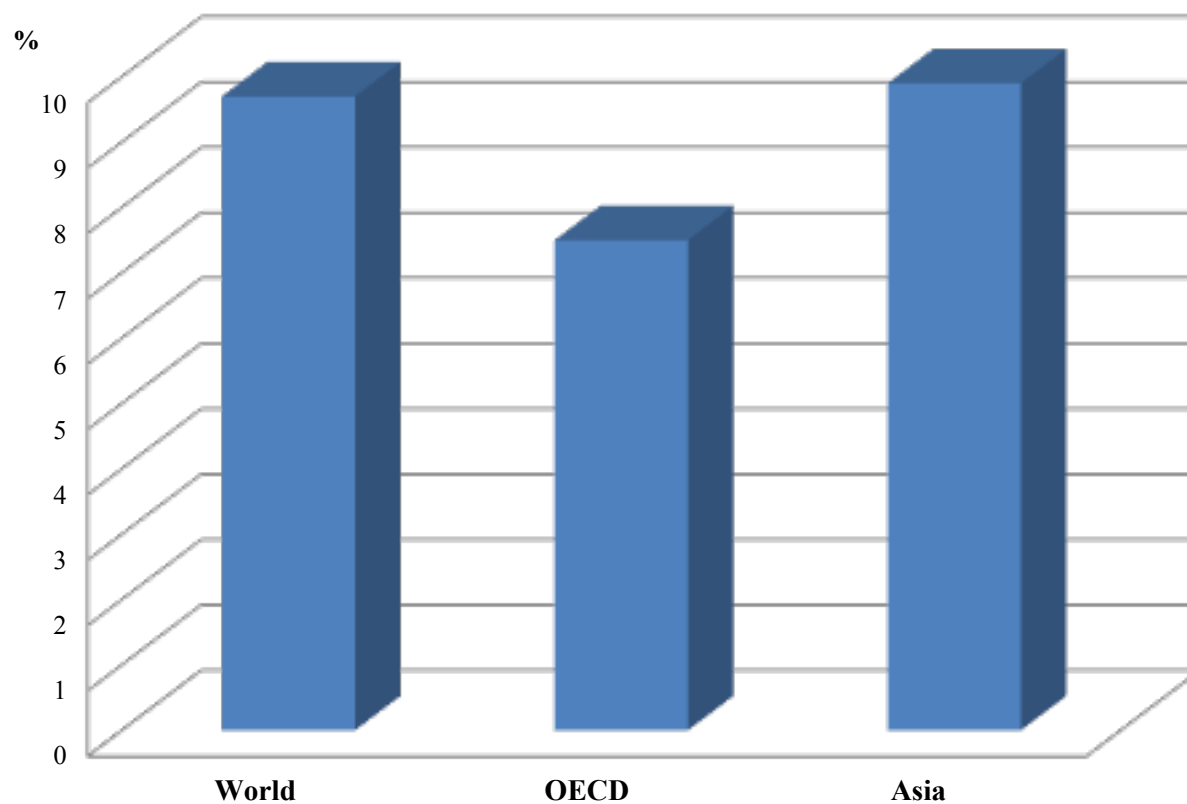
Disability and Returns to Education (Nepal)

Estimation results of earnings regression (dependent variable: log hourly wage) Source: Lamichhane and Sawada (2013)

	(1) OLS	(2) OLS	(3) Tobit	(4) Tobit	(5) IV-Tobit	(6) IV-Tobit
Years of schooling[a]	0.059	0.065	0.213	0.193	0.256	0.248
	(0.027)*	(0.030)*	(0.062)***	(0.067)**	(0.103)*	(0.091)**
Dummy = 1 if the follow up survey Information missing	−0.704	−0.493	−3.935	−3.166	−2.084	−2.079
	(1.419)	(1.385)	(4.067)	(4.004)	(2.297)	(2.233)
Severity of impairments	−0.226	−0.155	−0.538	−0.205	−0.017	−0.025
	(0.657)	(0.643)	(1.894)	(1.865)	(1.065)	(1.035)
School Leaving Certificate (SLC) score	0.011	0.008	0.019	−0.014	−0.01	−0.01
	(0.02)	(0.021)	(0.044)	(0.044)	(0.025)	(0.024)
Score of tests given during the survey	−0.389	−0.327	−0.941	−0.527	−0.543	−0.535
	(0.433)	(0.429)	(0.975)	(0.964)	(0.565)	(0.548)
Years of work experience	−0.014	−0.011	0.09	0.124	0.082	0.081
	(0.06)	(0.059)	(0.126)	(0.124)	(0.065)	(0.063)
Years of work experience squared	0.000	0.000	0.000	0.000	0.000	0.000
	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)
Dummy = 1 if female	−0.374	−0.314	−0.471	−0.38	−0.198	−0.202
	(0.265)	(0.25)	(0.557)	(0.566)	(0.322)	(0.313)
Age	−0.021	−0.015	0.357	0.373	0.12	0.123
	(0.144)	(0.146)	(0.239)	(0.236)	(0.119)	(0.114)
Age squared	0.001	0.000	−0.005	−0.006	−0.002	−0.002
	(0.002)	(0.002)	(0.004)	(0.004)	(0.002)	(0.002)
Dummy = 1 if full-time worker	0.062	−0.026	7.645	7.488	4.42	4.442
	(0.273)	(0.275)	(0.587)***	(0.609)***	(0.407)***	(0.382)***
Dummy = 1 if hearing impaired		−0.086		−1.98	−0.993	−1.021
		(0.276)		(0.719)**	(0.513)	(0.480)*
Dummy = 1 if physically impaired		−0.479		−2.083	−1.763	−1.75
		(0.388)		(0.728)**	(0.441)***	(0.424)***
Constant	3.693	3.514	−11.678	−11.013	−4.877	−4.839
	(2.725)	(2.68)	(5.620)*	(5.540)*	(3.01)	(2.922)
R-Squared	0.073	0.086				
Number of observations	222	222	398	398	373	373

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Women with Disabilities and Returns to Education (Philippines)

Estimation Results of Earnings Regression with Continuous Education. To estimate the effect of double disadvantages (i.e., gender and disability) . Dependent Variable: Log Income. Source: Lamichhane and Watanabe (2015)

Variable names	(1) OLS	(2) Tobit	(3) IV-OLS	(4) IV-Tobit
Years of schooling	0.249***	0.301***	0.337*	0.384*
	(0.0500)	(0.0630)	(0.178)	(0.211)
Age	0.297**	0.361**	0.228*	0.282*
	(0.116)	(0.144)	(0.132)	(0.162)
Age squared	-0.00346**	-0.00421**	-0.00262	-0.00326
	(0.00149)	(0.00184)	(0.00171)	(0.00208)
Dummy = 1 if physically impaired*female	-3.059***	-3.709***	-2.604***	-3.031***
	(0.914)	(1.151)	(0.925)	(1.128)
Dummy = 1 if hearing impaired*female	-2.113***	-2.415***	-2.778***	-3.214***
	(0.661)	(0.814)	(0.783)	(0.963)
Dummy = 1 if visually impaired*female	-0.446	-0.482	-1.125	-1.250
	(0.650)	(0.755)	(0.709)	(0.823)
Dummy = 1 if physically impaired*male	-1.795***	-2.042***	-2.188***	-2.462***
	(0.585)	(0.690)	(0.581)	(0.688)
Dummy = 1 if hearing impaired*male	-0.864	-0.911	-1.329**	-1.416*
	(0.668)	(0.797)	(0.650)	(0.769)
Dummy = 1 if Makati area	-2.111***	-2.477***	-2.293***	-2.616***
	(0.595)	(0.711)	(0.654)	(0.771)
Dummy = 1 if Quezon area	-1.294**	-1.451**	-1.643***	-1.841***
	(0.561)	(0.655)	(0.584)	(0.680)
Dummy = 1 if Valenzuela area	-1.794***	-2.055**	-2.025***	-2.293***
	(0.682)	(0.818)	(0.717)	(0.854)
Years of schooling (Mother)				
Years of schooling (Father)				
Constant	3.389	1.699	4.514*	3.163
	(2.227)	(2.806)	(2.352)	(2.938)
Observations	366	366	300	300

Importance of jobs

- Economic independence

- Social inclusion

- Discovering new ability (66.8%)

- Increased living standard (65.5%)

Importance of jobs (contd.)

- Gaining respect from people (62.5%)

- Spending time efficiently (60.7%)

- Making new friends (54.2%)

- Increased confidence to face challenges (51.5%)

Required skills for jobs

- Skills refers as cognitive and non-cognitive skills

- Cognitive skills referred as academic achievements:
  - Reading, writing and math

- Non-cognitive skills:
  - a range of abilities such as conscientiousness, perseverance, and teamwork

- Related to students' behavior and attitudes

Skill development

- They can be developed through schooling opportunities

- These skills predict wages and other outcomes later in life (Heckman, Stixrud, & Urzua, 2006; Kautz, Heckman, Diris, Weel, & Borghans, 2014).

Concluding remarks

- Persons with disabilities face challenges to jobs in part resulting from barriers:
  - Discriminatory behavior by employers
  - Inaccessible infrastructures
  - Lower level of education
  - Lower level of cognitive and non-cognitive skills

- Investment in education should be increased and barriers should be eliminated