

# Does the Internet Accessibility Improve Student's Ability?

Pol De Santaló & Yumi Komai

December 2, 2016

# Outline

- ① Introduction
- ② Research Question
- ③ Data
- ④ Methodology
- ⑤ Analysis
- ⑥ Result

## Methodology(Dependent Variables)

Dependent Variable	Variable Name	Description
DV	math	Mathmatics mean score(2012)
DV	reading	Readind mean score(2012)
DV	ps	Prolem Solving mean score(2012)

## Methodology(Independent Variables)

Indivendent		
Variable	Variable Name	Description
IV	GDPperc	GDP per Capita (current US\$)
IV	expend	Government expenditure on education, total (% of GDP)
IV	pop	Population, total
IV	popd	Population density (people per sq. km of land area)
IV	rteacher	Primary school pupil-teacher ratio
IV	eyear	Number of years that children are legally obliged to attend school
IV	internet	internet users (per 100

## Methodology(Descriptive Statistics)

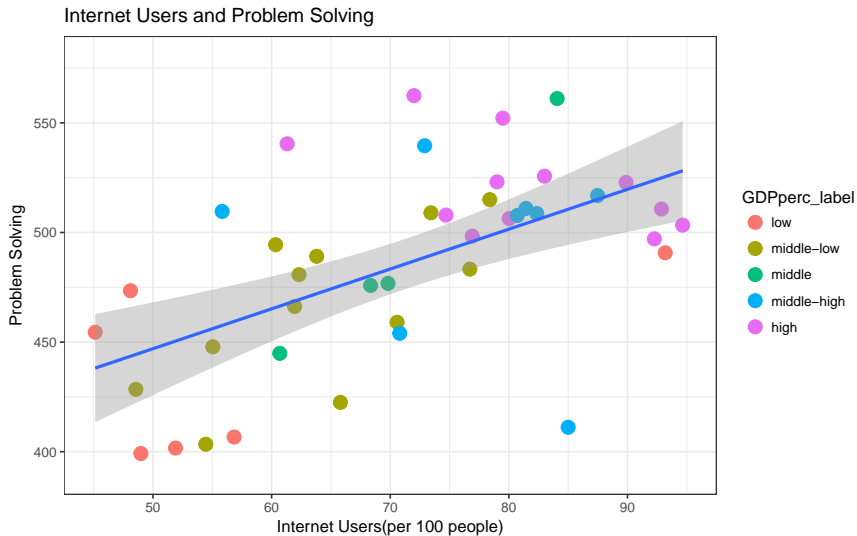
Table 3: Table: Summary statistics of the variables

Statistic	N	Mean	St. Dev.	Min	Max
math	63	469.743	52.225	368.103	573.4
reading	63	471.675	45.780	384.151	544.6
ps	42	485.544	44.181	399.166	562.4
GDPperc	63	31,350.570	28,867.050	1,754.548	149,160
pop	63	36,014,700.000	60,090,250.000	36,791	314,102
popd	63	635.244	2,625.005	2.959	18,654
rteacher	51	15.061	4.335	7.444	28.0
eyear	62	10.226	1.750	6	14
expend	39	4.897	1.270	2.922	7.65
internet	63	66.580	18.362	14.520	96.2
mobile	63	128.770	33.182	79.568	289.7

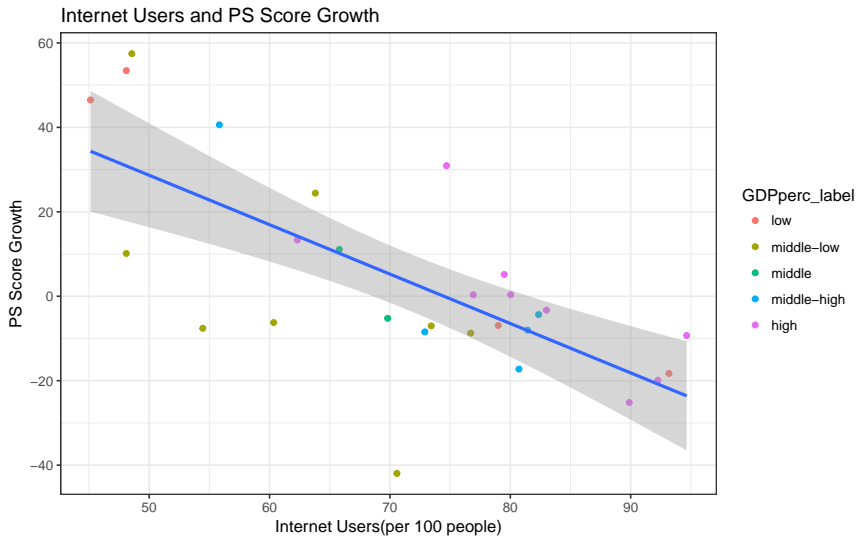
Table 4: Table: Determinants of Student's Ability

	math			
	(1)	(2)	(3)	(4)
log(GDPperc)	29.666*** (5.794)	22.703** (9.524)	-4.178 (8.301)	27.480*** (5.174)
log(pop)	1.642 (3.249)	7.587 (6.643)	7.139** (3.515)	3.107 (2.901)
popd	0.004* (0.002)	0.005 (0.003)	0.006* (0.003)	0.002 (0.002)
rteacher		-4.035 (2.616)	-2.576 (1.550)	
eyear		-8.544 (5.699)	-2.063 (3.316)	
expend		11.785 (7.097)		
internet			1.946*** (0.430)	
mobile			0.069 (0.227)	
(intercept)	145.762 (87.914)	216.904 (156.559)	315.630*** (97.887)	146.816* (78.509)
Observations	63	34	50	63
R <sup>2</sup>	0.388	0.451	0.605	0.365
Adjusted R <sup>2</sup>	0.357	0.328	0.530	0.332

# Analysis of Problem Solving

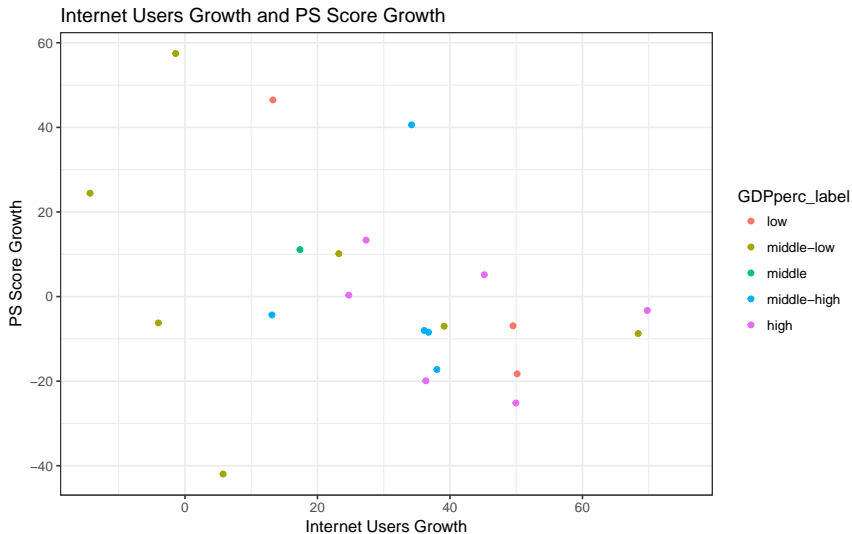


# Analysis of Score Growth





# Analysis of Score Growth



# Finding and Limitation

## Finding

- Internet accessibility could have a strong impact on student's ability.
- However, the impact could be weaker on problem solving ability than academic ability.

## Limitation

- small sample size
- Data limitation