

Vocational Education and Socioeconomic Attainment in Brazil

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Marseilles, September 2006

Research Problem – 1

- Vocational Education in Brazil
 - Elementary school level (The National System of Industry-SENAI, The National System of Commerce-SENAC, etc)
 - High school level
 - College level (from the late 1990s)

Research Problem – 2

- Vocational Education in Brazil
 - Relatively high quality
 - Attained by youth from working class and middle class families
 - Most are offered by public schools (i.e, they do not charge any tuitions)

Research Question

- Does Vocational Education Affect the Socioeconomic Attainment Process in Brazil?
- If yes, how?

Possible Hypotheses

- Given that youth with middle class background attend vocational education in Brazil, it has no effect on the socioeconomic attainment process in the country.
- Although youth with middle class background attend vocational education in Brazil, it affects the socioeconomic attainment process by lowering ones' opportunities.
- Given that vocational education in Brazil has a relatively high quality, it improves one's opportunities.

Methodology

- Data

The 1996-97 Brazilian National Household Survey of Standard of Life.

- Statistical Models

- Logistic Regression

- OLS Regression

Results – 1

- Vocational Education and College Attainment (Logistic Model)
 - Dependent variable: attained college = 1.
 - Independent variables:
 - Sex (male = 1);
 - Race (white = 1);
 - Mother's education (years);
 - Vocational education (attained = 1).

Variable	M1	M2	M3	M4
Sex	-4.80%	-8.20%		
Race	54.3%*	47.6%*	54.2%*	47.3%*
Mother's Education	1.1%		1.0%	
Vocational Education	38.5%**	40.2%**	38.5%**	40.2%**
Constant	1.591	1.708	1.571	1.670
N	3164	3164	3164	3164
χ^2	18.201	17.669	18.028	17.055

Obs₁: *p < 0.001; **p < 0.05.

Obs₂: sample includes only those individuals with high school or higher education.

Comments – 1

- Those who attended vocational education have a probability of attending college at least 38.5 percent higher than those who never attended vocational education.
- This confirms the hypothesis that in Brazil vocational education does not diminish one's chance of achieving higher schooling. It might actually improve it.

Results – 2

- Vocational Education and Earnings Determination
 - Dependent variable: The natural log (\ln) of earnings.
 - Independent variables:
 - Sex (male = 1);
 - Race (white = 1);
 - Father's schooling (years);
 - Vocational education (attained = 1).

Results – 2.1

- Schooling (years).
- Experience (years).
- Experience squared.
- Interaction term between vocational education and schooling.

Results – 2.2

Variable	M1	M2	M3	M4
Sex	65.6%	66.1%	65.7%	66.2%
Race	24.5%	19.8%	24.4%	19.7%
Schooling	15.6%	14.7%	15.8%	14.9%
Experience	2.2%	2.1%	2.2%	2.1%
Experience ²	-0.8%	-0.9%	-0.8%	-0.9%
Father's schooling		3.3%		3.3%
Vocational Education	5.3%*	5.1%*	11.8%**	12.8%**

Results – 2.3

Variable	M1	M2	M3	M4
Schooling X Voc. Ed.			-2.0%**	-2.1%**
Constant	5.46	5.38	5.46	5.37
N	6073	3731	6073	3731
R ²	0.402	0.416	0.402	0.417
Adjusted R ²	0.401	0.415	0.401	0.416

Obs: *p > 0.05; **p < 0.05; all other coefficients have p < 0.001.

Comments – 2

- Attaining vocational education does not have any direct effect on one's earnings (see Models 1 and 2).
- However, the earnings return to each additional year of schooling is about 2 percent lower for those who have attended vocational education than for those who have not (see Models 3 and 4).

Final Comments

- Thus, we can conclude that, even though vocational education improves one's chances of going to college, the final economic output of schooling for those with vocational training is lower.
- This takes us to the conclusion that probably the type of college (in terms of quality or major chosen) attained by those individuals with vocational training produces lower earnings returns in average.