

# Benefits and Costs of Dual and Informal Apprenticeship in Bénin\*

true

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## Abstract

This paper evaluates the costs and benefits of apprenticeship training in the informal sector in Benin using unique matched apprentice-firm survey data. Costs and benefits for the training firm and the trainee are investigated separately. Special attention is paid to the net benefits of the *Certificat de Qualification Professionnelle*, program, a national dual training program. Two cost and benefit models of differing complexity are used: in the simplest, fees comprise all benefits for the firm, while apprentice wages and benefits represent total costs. In a second, more complex model, estimates of current and future productivity, apprentice retainment by the firm, and training costs are also considered. We find that...

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\*Thanks to Dario for the Markdown template.

Table 1: Firm-level regressions

	Size (excluding apprentices)			Annual profits (USD)		
	<i>OLS</i>	<i>panel</i>		<i>OLS</i>	<i>panel</i>	
	(1)	(2)	(3)	(4)	(5)	(6)
Apprentices	0.59*** (0.08)	0.37*** (0.09)	0.57*** (0.01)	30.00 (95.00)	−52.00 (80.00)	90.00*** (0.01)
CQP participants	−5.20 (4.80)		0.11*** (0.02)	−1,497.00 (4,591.00)		97.00*** (0.04)
Employees				180.00 (115.00)	331.00*** (84.00)	−64.00*** (0.02)
Wave	−0.09 (0.48)	−0.58 (0.53)		160.00 (440.00)	−11.00 (420.00)	
Constant	0.33 (2.80)		−0.44*** (0.09)	3,643.00 (3,285.00)		1,344.00*** (0.09)
Observations	321	346	321	277	297	277
R <sup>2</sup>	0.83	0.12	0.51	0.66	0.13	0.02
F Statistic	3.50***	9.80***	4,536.00***	1.20	5.40***	67,397,330.00***

*Note:*

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01  
Omitted wave: Baseline  
Excluding apprentices.

Table 2: Experience score regressions

	<i>OLS</i>		<i>random effects</i>			
	(1)	(2)	(3)	(4)	(5)	(6)
CQP participant	−0.01 (0.02)	−0.03 (0.03)	0.002 (0.16)	0.002 (0.16)	−0.01 (0.19)	0.004 (0.28)
CQP non-applicant	−0.12*** (0.02)	−0.15*** (0.02)	−0.10 (0.14)	−0.10 (0.14)	−0.10 (0.17)	
Endline	0.17*** (0.02)	0.17*** (0.02)				
Apprentice experience			0.07 (0.06)	0.07 (0.06)	0.08 (0.07)	0.06 (0.15)
Employees				−0.001 (0.01)	0.002 (0.02)	−0.001 (0.02)
Apprentices				−0.001 (0.02)	−0.004 (0.02)	−0.01 (0.03)
Total instructors					0.01 (0.10)	0.03 (0.14)
Days trained per week					−0.05 (0.13)	0.03 (0.26)
Duration, last training					0.01 (0.07)	−0.004 (0.09)
Constant	0.79*** (0.02)	0.84*** (0.11)	0.83 (0.76)	0.83 (0.76)	0.86 (1.10)	0.95 (1.10)
Individual FE	NO	NO	YES	YES	YES	YES
Firm FE	NO	YES	YES	YES	YES	YES
Observations	596	596	576	574	422	268
R <sup>2</sup>	0.18	0.62	0.57	0.58	0.65	0.74
F Statistic	44.00***	3.30***	19.00	19.00	19.00	9.20

*Note:*

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Omitted CQP category: applied but did not participate.

Excluding apprentices.

Table 3: Apprentice regressions

	Experience			Competence			Knowledge	
	<i>OLS</i>	<i>RE</i>	<i>RE</i>	<i>OLS</i>	<i>RE</i>	<i>RE</i>	<i>OLS</i>	<i>RE</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CQP participant	−0.01 (0.02)	−0.02 (0.15)	−0.02 (0.15)	−0.02 (0.02)	−0.02 (0.15)	−0.02 (0.15)	−0.04** (0.02)	−0.04 (0.19)
CQP non-applicant	−0.12*** (0.02)	−0.13 (0.15)		−0.14*** (0.02)	−0.14 (0.15)			
Endline	0.17*** (0.02)			0.14*** (0.02)			0.05** (0.02)	
Constant	0.79*** (0.02)	0.87* (0.50)	0.87* (0.50)	0.83*** (0.02)	0.89** (0.42)	0.89* (0.47)	0.79*** (0.02)	0.80*** (0.23)
Individual FE	NO	YES	YES	NO	YES	YES	NO	YES
Observations	596	596	376	596	596	376	390	390
R <sup>2</sup>	0.18	0.07	0.001	0.17	0.10	0.002	0.02	0.01
F Statistic	44.00***	1.00	0.01	41.00***	1.30	0.01	4.60**	0.03

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Omitted CQP category: applied but did not participate.