Uneven Returns to Non-Degree Work Credentials for Older Workers

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Motivation

Two widely acknowledged characteristics of the American labor market

- the workforce is getting older
  - labor force participation rates of workers aged 55-64 and 65+ in 2021 were 64.7% and 19.3%, respectively (Cooper, Foote, Luengo-Prado, & Olivei, 2021)
  - number of workers aged 75 and above is projected to increase by 96.5%, 2020-2030 (BLS, 2021)
  - age discrimination in hiring and employment remains common (e.g., Francioli & North , 2021; Johnson & Neumark, 1997; Marchiondo, 2022; Neumark, Burn, & Button, 2017; Roscigno, Mong, Byron, & Tester, 2007; Zaniboni, 2015)

- investments in human capital – especially those resulting in a non-degree work credential – are associated with better career outcomes
  - one in four employed Americans holds an occupational license, compared to 5 percent four decades ago (Cunningham, 2019; Furman & Giuliano, 2016; Kleiner & Kruger, 2013)
  - licenses and certifications are associated with positive wage premiums and better benefits (e.g., Gittleman & Kleiner, 2016; Gittleman et al., 2018; Kleiner & Krueger, 2013; Weeden, 2002)
  - occupational licensing results in more level earning profiles for disadvantaged groups, such as women (Chung, 2020), racial minorities (Chung, 2020; Drange & Helland, 2019; Redbird, 2017), and immigrants (Brücker, Glitz, Lerche, & Romiti, 2021; Cassidy & Dacass, 2021; Gomez, Gunderson, Huang, & Zhang, 2015)

Research Questions

- Do workers of different ages benefit to the same extent by obtaining a work credential?
- Are workers credentialed at different ages experience similar labor market returns?

Data

- US Adult Training and Education Survey (ATES), 2016
- Nationally represented data
- 43,613 obs
- Best public-available dataset up to date to examine focal research question
  - license vs certification attainment
  - age the individual was in when he/she earned his/her most important non-degree work credential

Methods

1. multinomial logistic model to examine whether the age at which a work credential was earned was associated with specific status of labor force participation

$$\Pr(Y_i = j) = \alpha_0 + AgeEarnedCred_i'\alpha_1 + \alpha_2 * I(multiple\ Cred)_i + X_i'\eta + \varepsilon_i, \quad (1)$$

2. logit/OLS models to examine the differential labor market impacts of work credentials acquired at different ages for the labor force participants

$$Y_i = \alpha_0 + AgeEarnedCred_i'\alpha_1 + \alpha_2 * I(multiple\ Cred)_i + X_i'\eta + W_i'\mu + \varepsilon_i, \quad (2)$$

3. OLS models to examine whether perceived usefulness of work credentials differed based on the age when they were acquired

$$Y_i = \alpha_0 + AgeEarnedCred_i'\alpha_1 + \alpha_2 * I(multiple\ Cred)_i + X_i'\eta + W_i'\mu + \varepsilon_i, \quad (3)$$

Results

- Prevalence of Holding an Important Work Credential by Age

	Any work credential			License only	Certification only	I(multiple credential)
Age group (control=26-35)						
16-25	-0.046***	-0.039***	-0.019**	-0.016**	-0.010	-0.003
	[0.008]	[0.009]	[0.008]	[0.007]	[0.009]	[0.005]
36-45	0.036***	0.034***	0.028***	0.022***	0.028***	0.007**
	[0.006]	[0.006]	[0.006]	[0.005]	[0.006]	[0.003]
46-55	0.030***	0.027***	0.025***	0.024***	0.034***	0.000
	[0.006]	[0.006]	[0.006]	[0.005]	[0.006]	[0.003]
56-65	0.006	0.023***	0.015***	0.020***	0.034***	-0.005
	[0.006]	[0.006]	[0.006]	[0.005]	[0.007]	[0.003]

Data source: Adult Training and Education Survey (ATES), 2016. Uncontrolled and Controlled model.
Note: Number of observations==41,442; log likelihood=-36720.30; Pseudo R^2=0.092
***, **, *, and + represent statistical significance at the 0.1%, 1%, 5%, and 10% levels, respectively. Standard errors in brackets.

Results

- Labor Force Status Patterns

	Employment		Underemployment		Unemployed but remain in the labor force		Not in the labor force	
Age earned most important occupational credential (control= never earned a work credential)								
16-24	0.133***	[0.010]	-0.016***	[0.005]	-0.021***	[0.005]	-0.097***	[0.010]
25-34	0.144***	[0.011]	-0.011*	[0.005]	-0.023***	[0.005]	-0.110***	[0.010]
35-44	0.159***	[0.013]	0.004	[0.006]	-0.010+	[0.006]	-0.153***	[0.012]
45-54	0.140***	[0.015]	0.030***	[0.006]	0.007	[0.006]	-0.176***	[0.015]
55-65	0.050+	[0.027]	0.031*	[0.013]	0.030**	[0.010]	-0.111***	[0.024]
Age group (control=26-35)								
16-25	-0.114***	[0.013]	0.033***	[0.004]	0.014***	[0.004]	0.067***	[0.014]
36-45	-0.046***	[0.011]	-0.020***	[0.004]	-0.004	[0.003]	0.070***	[0.011]
46-55	-0.088***	[0.009]	-0.034***	[0.004]	-0.012***	[0.003]	0.134***	[0.009]
56-65	-0.254***	[0.009]	-0.047***	[0.003]	-0.026***	[0.003]	0.327***	[0.008]
Holding multiple occupational credentials	0.019	[0.011]	0.014**	[0.005]	0.005	[0.005]	-0.037***	[0.011]

Data source: Adult Training and Education Survey (ATES), 2016. Controlled model.

Note: Number of observations==41,442; log likelihood=-36720.30; Pseudo R^2=0.092

***, **, *, and + represent statistical significance at the 0.1%, 1%, 5%, and 10% levels, respectively. Standard errors in brackets.

Results

- Returns of a Work Credential by Age Earned

	Temporary employment		Parttime employment		Log weekly hours		Weekly hours	
Age earned most important occupational credential (control= never earned a work credential)								
16-24	-0.030***	[0.005]	-0.051***	[0.009]	0.040***	[0.008]	1.366***	[0.236]
25-34	-0.033***	[0.006]	-0.054***	[0.009]	0.043***	[0.008]	1.548***	[0.238]
35-44	-0.013+	[0.007]	-0.034***	[0.011]	0.021*	[0.010]	0.608*	[0.285]
45-54	0.003	[0.007]	0.005	[0.012]	0.021+	[0.012]	0.342	[0.354]
55-65	0.022+	[0.013]	0.051*	[0.022]	-0.040	[0.025]	-1.685*	[0.714]
Age group (control=26-35)								
16-25	0.040***	[0.005]	0.091***	[0.009]	-0.075***	[0.010]	-2.648***	[0.280]
36-45	-0.011*	[0.005]	0.012	[0.008]	-0.016*	[0.007]	-0.250	[0.214]
46-55	-0.018***	[0.004]	0.008	[0.007]	-0.025***	[0.007]	-0.570**	[0.195]
56-65	0.002	[0.004]	0.062***	[0.007]	-0.077***	[0.007]	-1.942***	[0.188]
Holding multiple occupational credentials	0.010+	[0.005]	-0.014	[0.009]	0.037***	[0.008]	1.458***	[0.228]

Data source: Adult Training and Education Survey (ATES), 2016. Controlled model.

***, **, *, and + represent statistical significance at the 0.1%, 1%, 5%, and 10% levels, respectively. Standard errors in brackets.

Results

- Perceived Credential Usefulness

	Get a job		Keep a job		Keep marketable to employers or clients		Improve work skills	
Age earned most important occupational credential (control= never earned a work credential)								
16-24	0.068**	[0.025]	0.050*	[0.024]	0.007	[0.024]	0.024	[0.026]
25-34	-0.180***	[0.029]	-0.127***	[0.028]	-0.094***	[0.028]	0.001	[0.031]
35-44	-0.391***	[0.035]	-0.241***	[0.034]	-0.210***	[0.035]	0.018	[0.037]
45-54	-0.765***	[0.064]	-0.664***	[0.063]	-0.349***	[0.064]	-0.036	[0.069]
Age group (control=26-35)								
16-25	-0.061	[0.053]	-0.059	[0.051]	-0.021	[0.052]	0.016	[0.056]
36-45	0.126***	[0.033]	0.122***	[0.033]	0.121***	[0.033]	0.025	[0.036]
46-55	0.271***	[0.031]	0.215***	[0.031]	0.176***	[0.031]	0.115***	[0.033]
56-65	0.411***	[0.030]	0.305***	[0.030]	0.241***	[0.030]	0.195***	[0.032]
Holding multiple occupational credentials	0.074***	[0.020]	0.097***	[0.019]	0.127***	[0.020]	0.158***	[0.021]

Data source: Adult Training and Education Survey (ATES), 2016. Controlled model.

***, **, *, and + represent statistical significance at the 0.1%, 1%, 5%, and 10% levels, respectively. Standard errors in brackets.

Conclusions

Acquiring a work credential could improve workers' labor market outcomes…

But does this assumption hold in reality for older workers? Should older workers pursue a credential?

- gaining a work credential is helpful, but this will not help older workers get out of a disadvantaged position in the workplace

- Workers are fully aware of the issue

Policy Questions

- Reskill and upskill policies
- Support vulnerable group

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