

Can You Recognize an Effective Adjunct Faculty When You Recruit One?

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Motivation

- The proportion of tenure-line faculty in the academic labor force has been in significant decline for decades.
 - Every two out of three faculty in U.S. postsecondary institution are not currently eligible for tenure
 - Little is known about non-tenure line faculty's recruitment practice
- The dramatic growth of adjunct or contingent faculty in American higher education since the 1970s mirrors the trend of general labor markets in the United States.
 - However, there are some major distinctions between adjunct faculty and contingent works in other industries.
 - Contingent workers are typically younger, belong to an ethnic minority, have no high school degree, and come from low-income family;
 - Adjunct faculty, on the other hand, are typically in their mid-40s and hold post-graduate degrees
 - Little is known about non-tenure line faculty's motivations for teaching as an adjunct

Research Questions

- 1. What are the labor market experiences of adjunct instructors before and during their employment with a college?
- 2. Can adjunct instructors' characteristics observable at the time of recruitment predict adjunct faculty quality?

Research Context and Data

- Administrative data from a state college system:
 - ~ 10 million unemployment insurance data records for each quarter-employer-employee combination in the state from 2001 to 2012
 - ~ 600,000 student transcript records linked with instructor profiles from the state college systems for all public two-year and four-year colleges from academic year 2005 to 2012
- Characteristics of the state college system:
 - A mix of large and small colleges, as well as institutions located in rural, suburban, and urban settings
 - Smaller/more instruction focused/lower graduation rates/higher proportion of African American students/more students in need of financial aid.

Research Context and Data

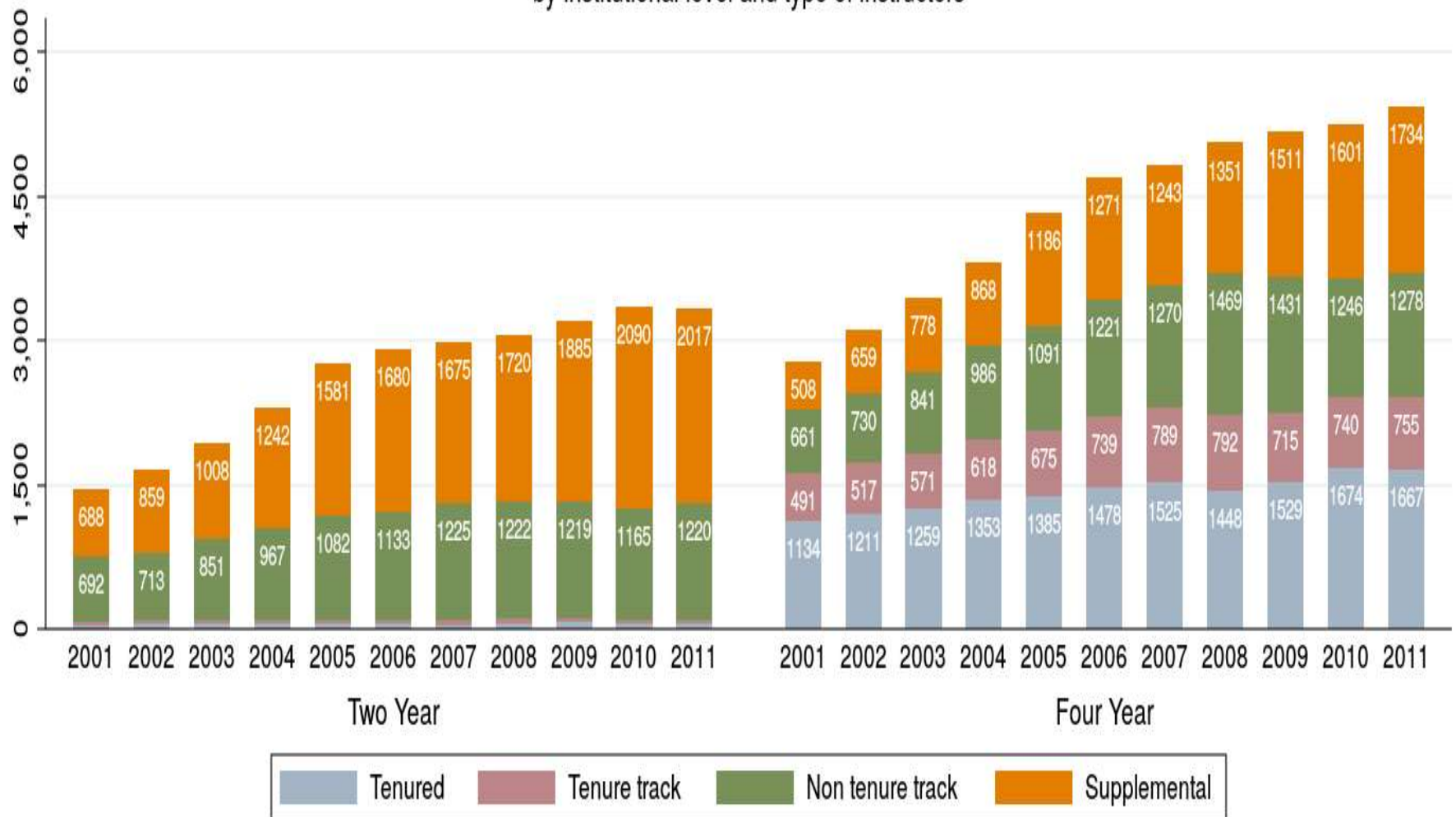
	National Sample		ASCS	
	Public 4-Year	Public 2-Year	Public 4-Year	Public 2-Year
Enrollment				
Full-time enrollment	8,141	2,352	5,377	1,011
Graduation rate, total cohort	44.2%	25.5%	35.8%	19.2%
Student Demographics & SES				
White, non-Hispanic	66.9%	66.4%	69.6%	77.4%
Black, non-Hispanic	12.9%	13.7%	22.9%	18.1%
Hispanic	7.0%	9.4%	1.5%	2.2%
Other	4.5%	3.7%	1.4%	0.9%
Gender: Female	57.1%	59.4%	59.3%	63.6%
Financial aid: Receiving any FA	77.9%	65.9%	79.4%	84.0%
Institution Finance				
Tuition and fees, 2005-06	5,240	2,129	4,405	1,732
Expenses per FTE: Instruction	8,946	4,045	11,306	3,667
Expenses per FTE: Research	7,322	14	4,685	0
N	613	1055	11	22

Part I

A Descriptive Analysis:

The Labor Market Experience of Adjunct Faculty
Before and During Teaching as Adjuncts

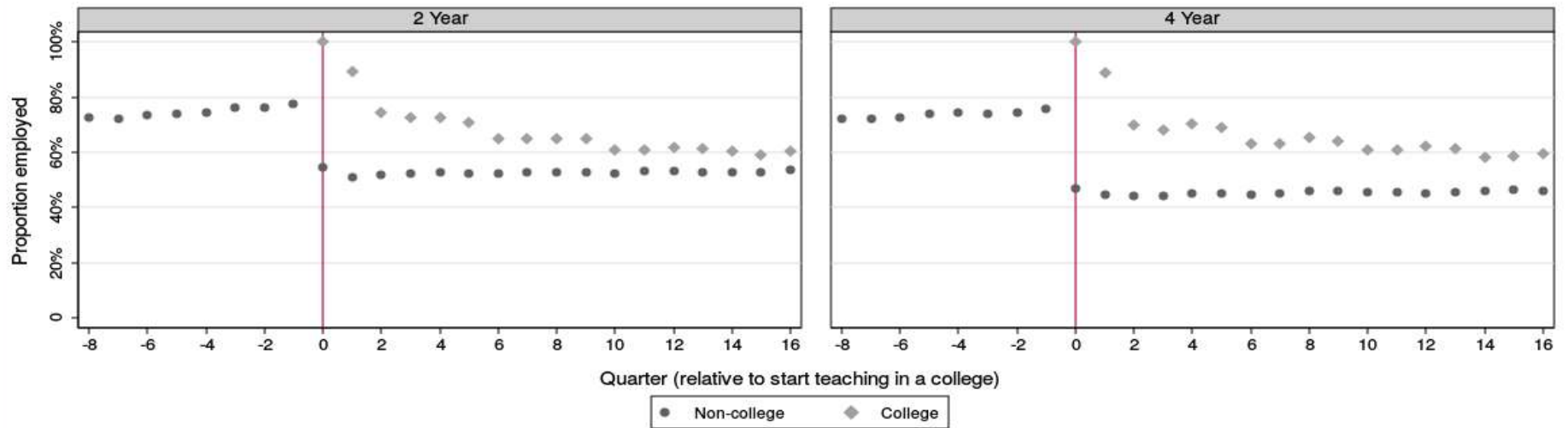
Trend of instructional staff employed
by institutional level and type of instructors



Main Industry of Employment before Teaching in College

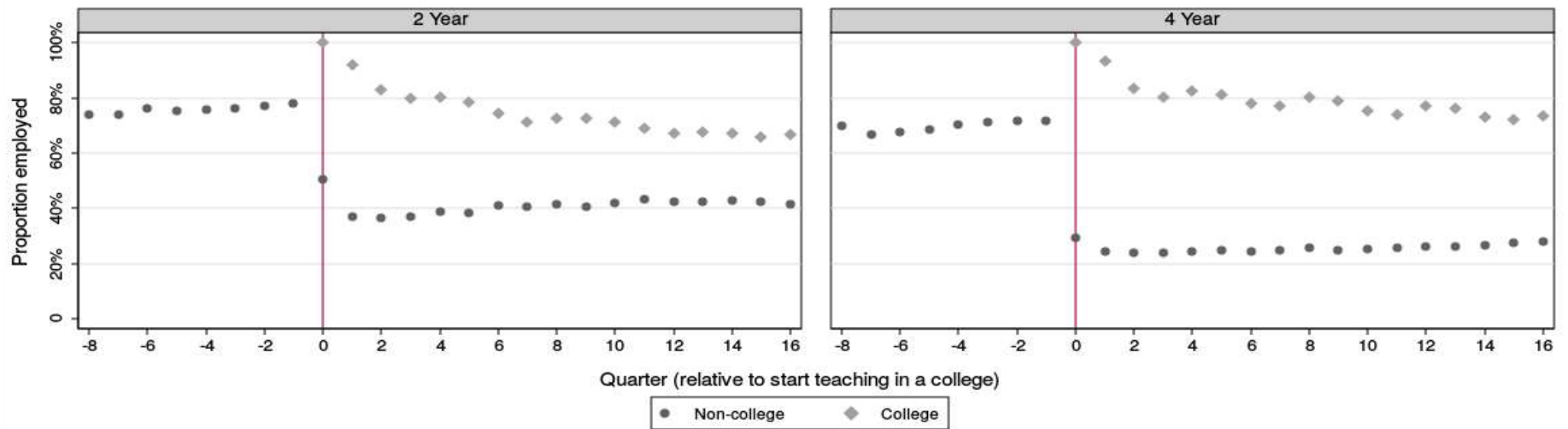
	Two-year Colleges		Four-year Colleges		
	%	Supplemental	Non tenure track	Supplemental	Non tenure track
K-12	33.12	24.97	29.58	24.67	
Health care and social assistance	19.94	31.64	24.83	25.69	
Retail trade	7.85	5.61	8.32	8.85	
Public administration	6.84	6.14	6.16	2.18	
Manufacturing	5.18	6.54	4.24	5.08	
Professional, Scientific, and Technology	5.04	4.14	6.9	10.16	
Other	22.03	20.96	19.97	23.37	

Employment by Industry, supplemental



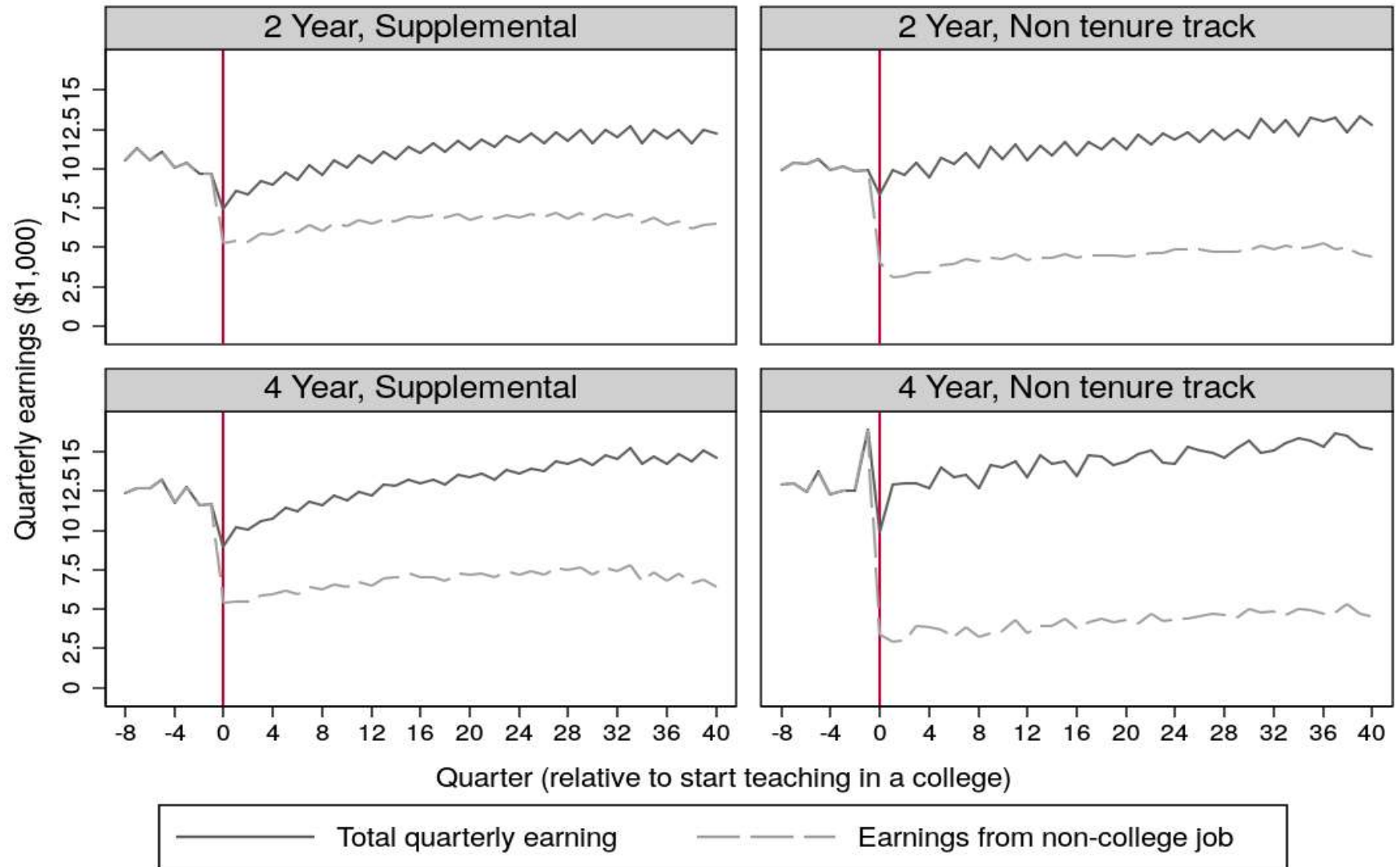
Graphs by Instr: Institution level

Employment by Industry, non tenure track

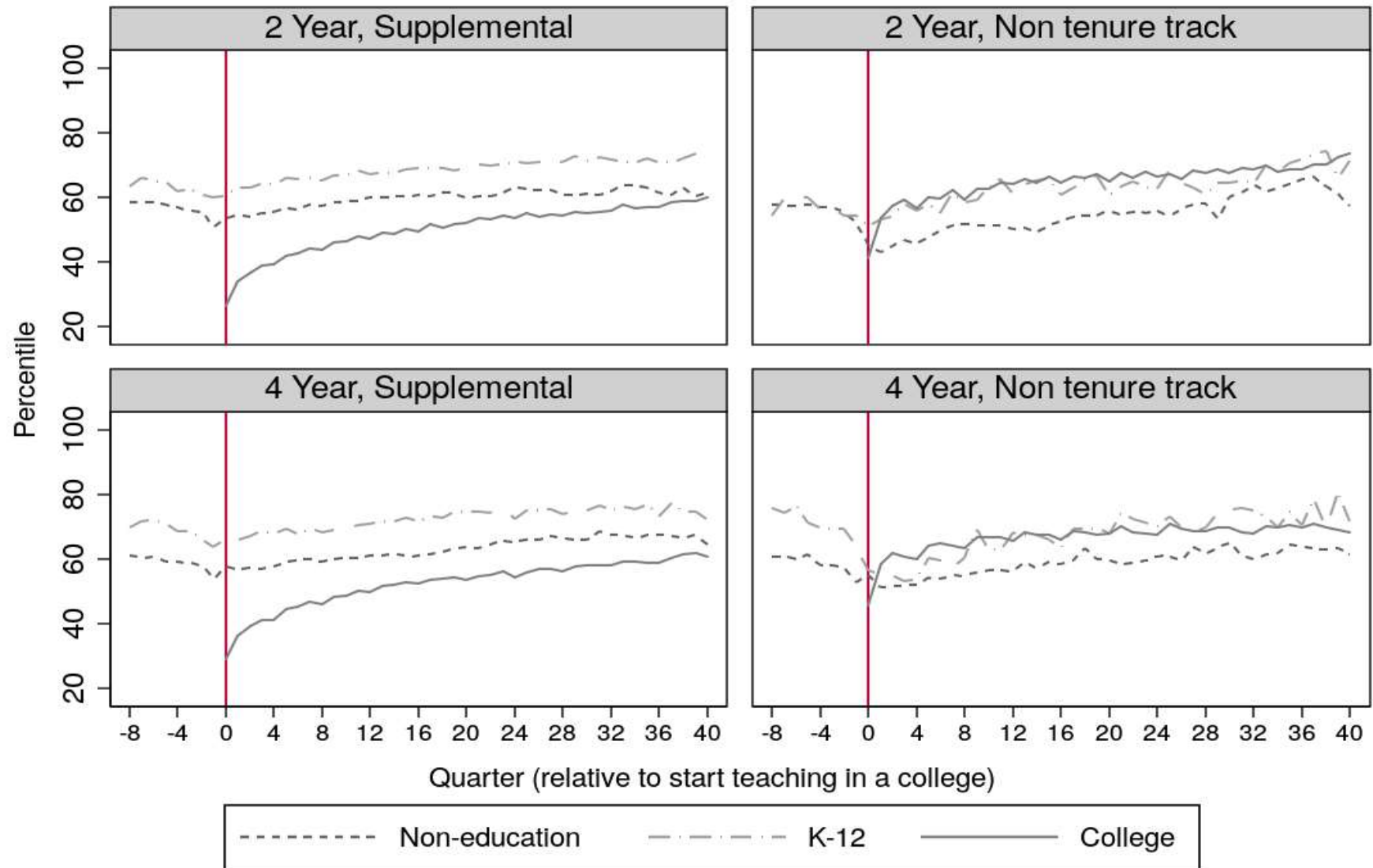


Graphs by Instr: Institution level

Quarterly earnings



Percentile in industry earning distribution



Part II

Can characteristics observable at the time of recruitment predict instructor quality?

Empirical Framework:

Step one – estimate instructor value added

$$Y_{itkjc} = \alpha + \gamma X_{itkc} + \theta_j + \pi_t + \sigma_c + \rho_k + \mu_{itkj}$$

where Y_{itkjs} is the outcome of student i with instructor j in term t and course c in institution k .

- The model controls for
 - Student demographic, academic characteristics X_{itkc}
 - Fixed effects for the semester of enrollment in the courses (π_t)
 - Fixed effects for the campus of attendance (ρ_k)
 - Fixed effects for the course portfolio (σ_c)
 - **Fixed effects for the instructor θ_j -- the estimation we will get for step two**
- Measurements of student outcomes
 - Enrollment persistence into the 2nd academic year
 - Credential completion
 - Earnings

Empirical Framework:

Step two – regress instructor valued added on observable characteristics

- $\hat{\theta}_j = \alpha + \gamma X_j + \beta Exp_j + u_j$
 - where $\hat{\theta}_j$ is the valued-added of instructor j estimated from the first step.
 - X_j are the instructor observable characteristics at the time of recruitment, including
 - Degree attainment
 - Whether the instructor had non-education industry working experience
 - The earnings from previous non-education industry job
 - The median industry annual earning of previous job
 - Exp_j is the instructor teaching experience

Results

	Two-year Colleges			Four-year Colleges		
	Persistence	Completion	Earning	Persistence	Completion	Earning
Bachelor's Degree (Reference: Doctor Degree)	-0.0638 (0.0499)	-0.0750 (0.0505)	0.0228 (0.0455)	0.2939*** (0.0665)	0.1714** (0.0667)	-0.0164 (0.0624)
Master Degree (Reference: Doctor Degree)	-0.0041 (0.0443)	-0.0437 (0.0449)	0.0625 (0.0405)	0.2124*** (0.0423)	0.0849** (0.0424)	0.0654 (0.0399)
Had other industry experience previously	-0.0127 (0.0355)	0.0093 (0.0359)	0.0002 (0.0326)	0.1256*** (0.0421)	-0.0405 (0.0422)	0.1311*** (0.0397)
Quarterly earning from other industry job (\$10,000)	0.0071 (0.0071)	0.0001 (0.0072)	0.0230*** (0.0065)	0.0140* (0.0085)	0.0231*** (0.0085)	-0.0068 (0.0079)
Median industry quarterly earning from previous job (\$10,000)	-0.1727 (0.1805)	0.2814 (0.1827)	0.2194 (0.1625)	0.1451 (0.2291)	0.3230 (0.2297)	-0.0105 (0.2172)
Experience: The nth term the instructor has been teaching the course	0.0005 (0.0017)	0.0001 (0.0017)	0.0077*** (0.0016)	-0.0020 (0.0022)	-0.0061*** (0.0022)	0.0015 (0.0021)
Observations		5,745			4,215	

Conclusions

- Temporary economic hardship could be the major reason for adjunct faculty switching from other industries to higher education.
 - They experience declines of up to 25%, in total quarterly earnings before starting teaching.
 - The decrease in earnings is more severe for supplemental adjunct faculty, who are on non-recurring temporary contracts with a college.
- In four-year colleges, adjunct instructors who were drawn from industries with higher average earnings and who were on the higher end of the industry earning distribution before teaching are significantly more effective.



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