



WILSON SHEEHAN  
LAB FOR ECONOMIC  
OPPORTUNITIES

# The Labor Market Return to Reversing High School Dropout

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# DROPPING OUT OF HIGH SCHOOL

## THE PROBLEM

There are  
**18.5M** adults  
without a high school credential.

Those with HS diploma earn  
**77% more**  
than people without  
a diploma or GED.

Only  
**53%** have jobs  
and their average annual wage is  
**\$16,000.**

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## THE COMMON POLICY RESPONSE

Fund  
**GED test prep**  
programs.

Evidence of  
**little to no impact**  
on earnings.

22 states offer  
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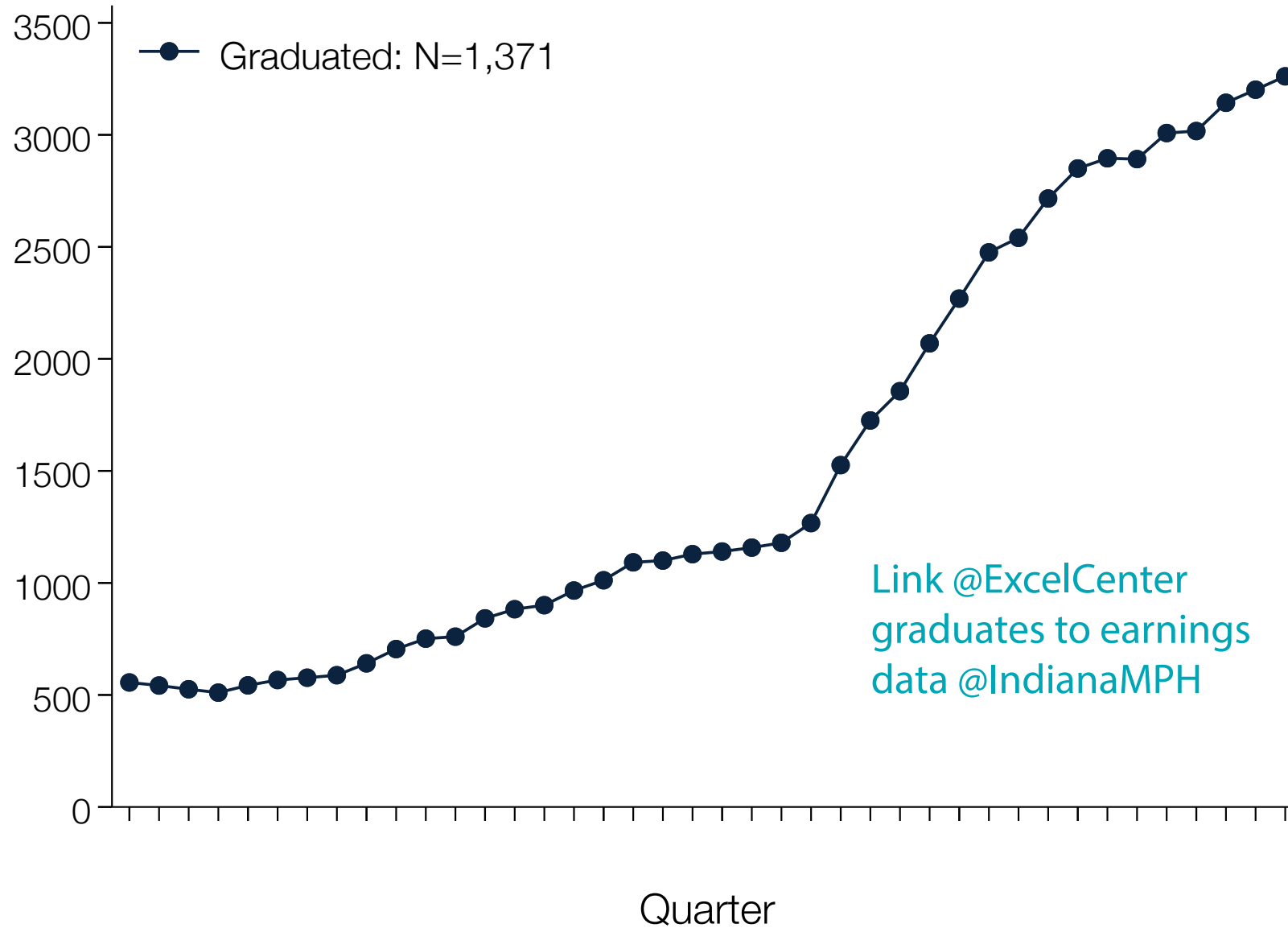
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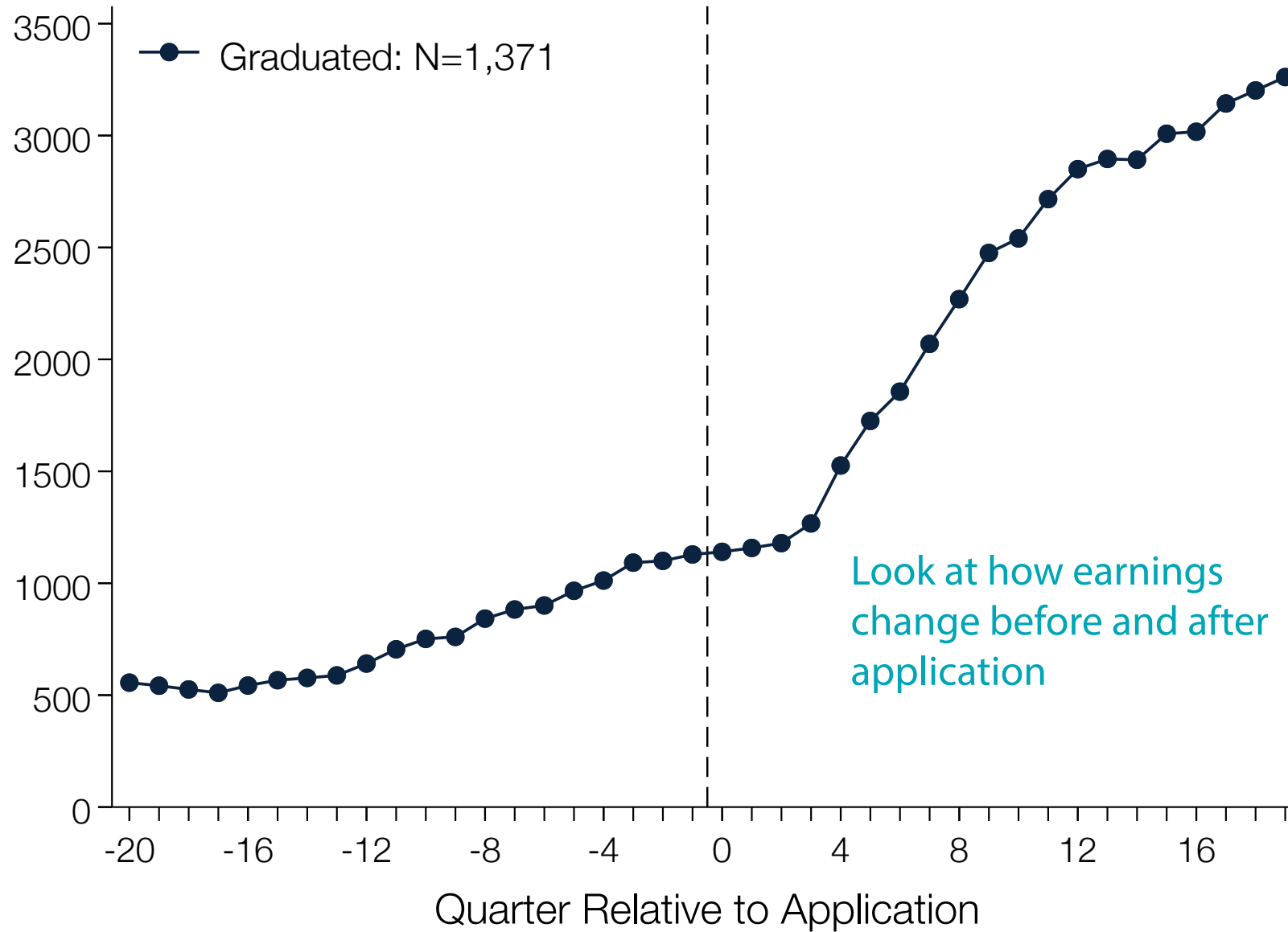
An adult high school where  
graduates earn a  
**traditional high  
school diploma.**

Accelerated curriculum  
Flexible schedules  
Free childcare  
Transportation assistance  
Life coaches  
Dual credits and certificates

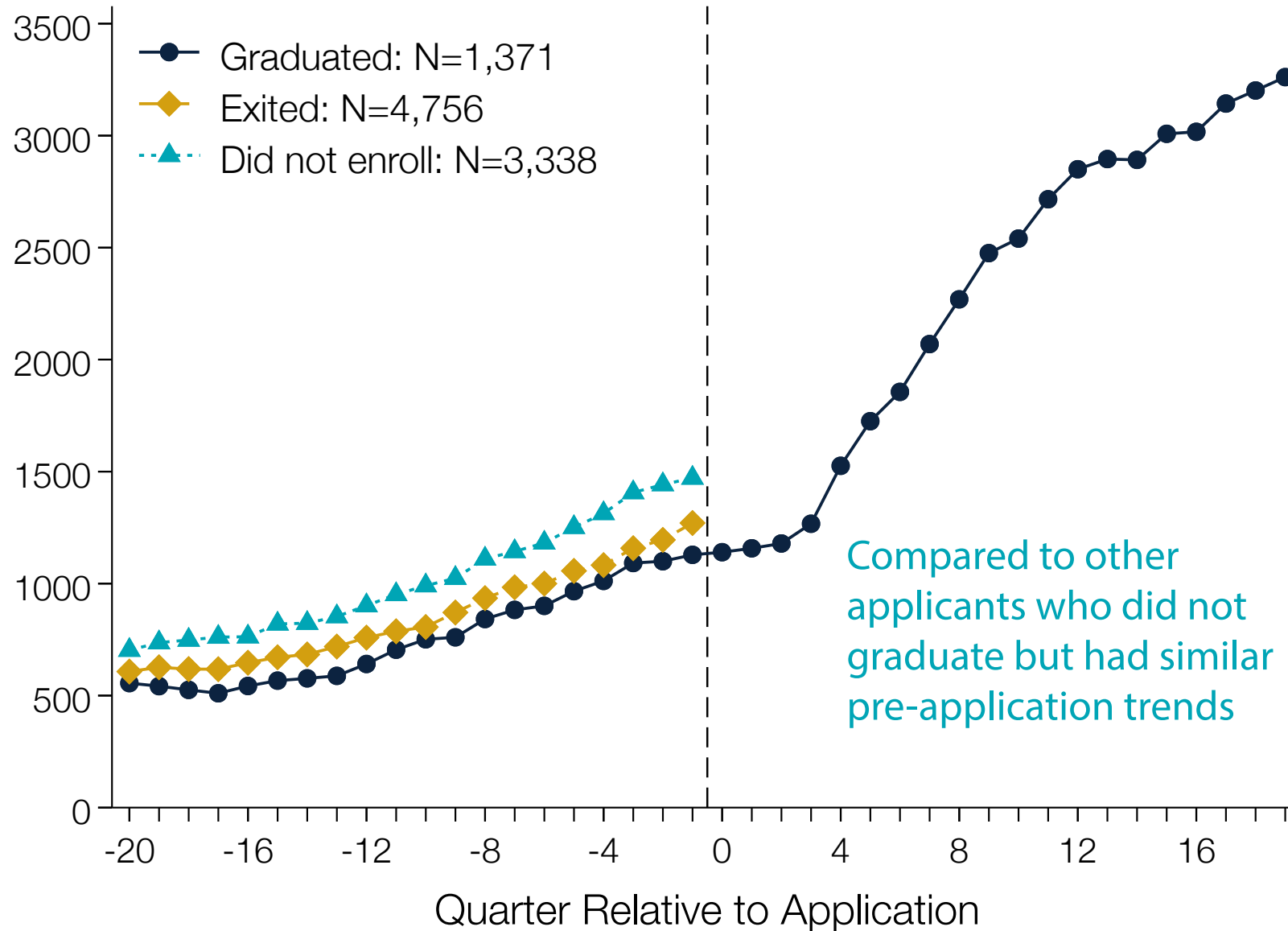
# WHAT IS THE RETURN TO A DIPLOMA FOR ADULT LEARNERS?



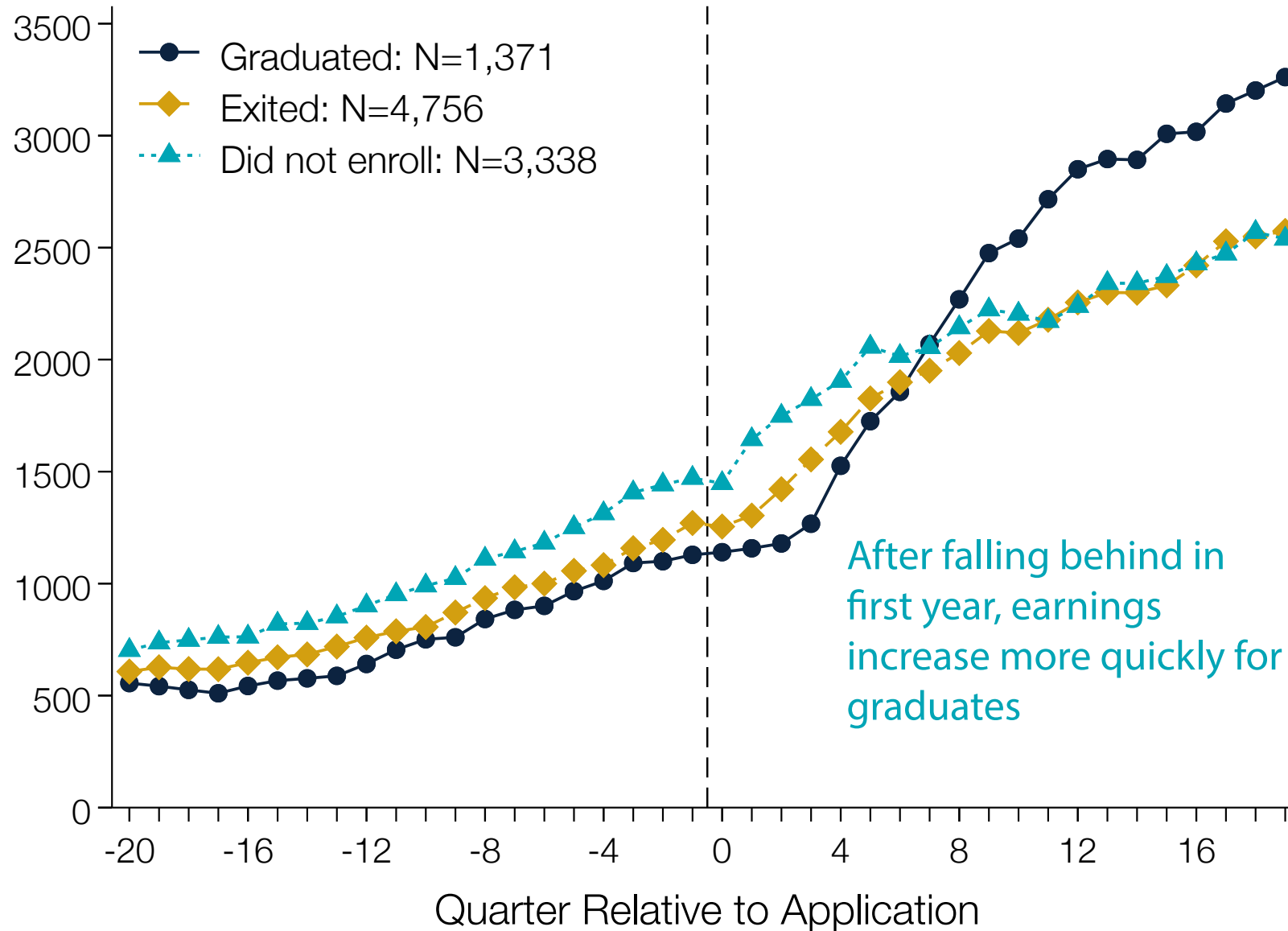
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# DATA

All Excel Center applicants (2013-2016)

TEC Analysis sample

- Graduates: N = 1,371
- Exited: N = 4,756
- Did not enroll: N = 3,338

All GED/HSE takers in IN during the period

MANAGEMENT  
PERFORMANCEHUB



**GOODWILL OF CENTRAL  
& SOUTHERN INDIANA**



INDIANA  
DEPARTMENT OF  
**WORKFORCE**  
DEVELOPMENT



INDIANA COMMISSION *for*  
HIGHER EDUCATION

# IDENTIFICATION STRATEGY

## TWO APPROACHES TO ADDRESS SELECTION CONCERNS

**Main approach:** difference-in-differences

Compare changes in earnings of graduates and non-graduating applicants, before and after application

1) Bounding with **positively selected** non-graduates

Leave Excel Center because they got a job

2) Placement in remedial coursework as instrument

Determined at enrollment, not related to subsequent shocks

Non-remedial ~15pp more likely to graduate



# TIMING OF TEC ENROLLMENT

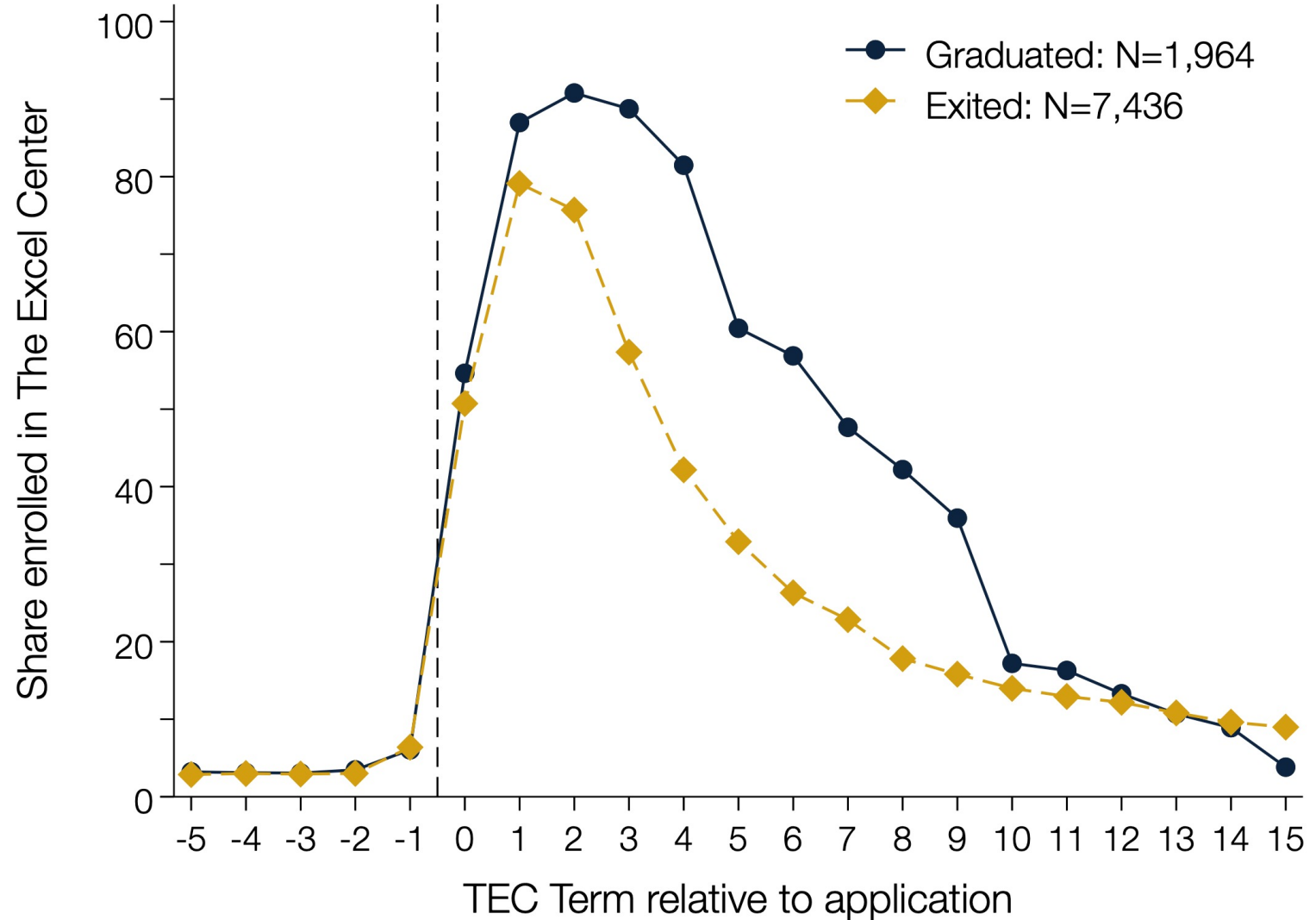
## SHARE ENROLLED IN TEC

Nearly 60 percent enroll in TEC during the first term after application

Drop in enrollment for graduates after 5 terms (1 school year)

Non-graduates are about 20 pp less likely to be enrolled during first 2 years after application

Most graduates finish within 2 years



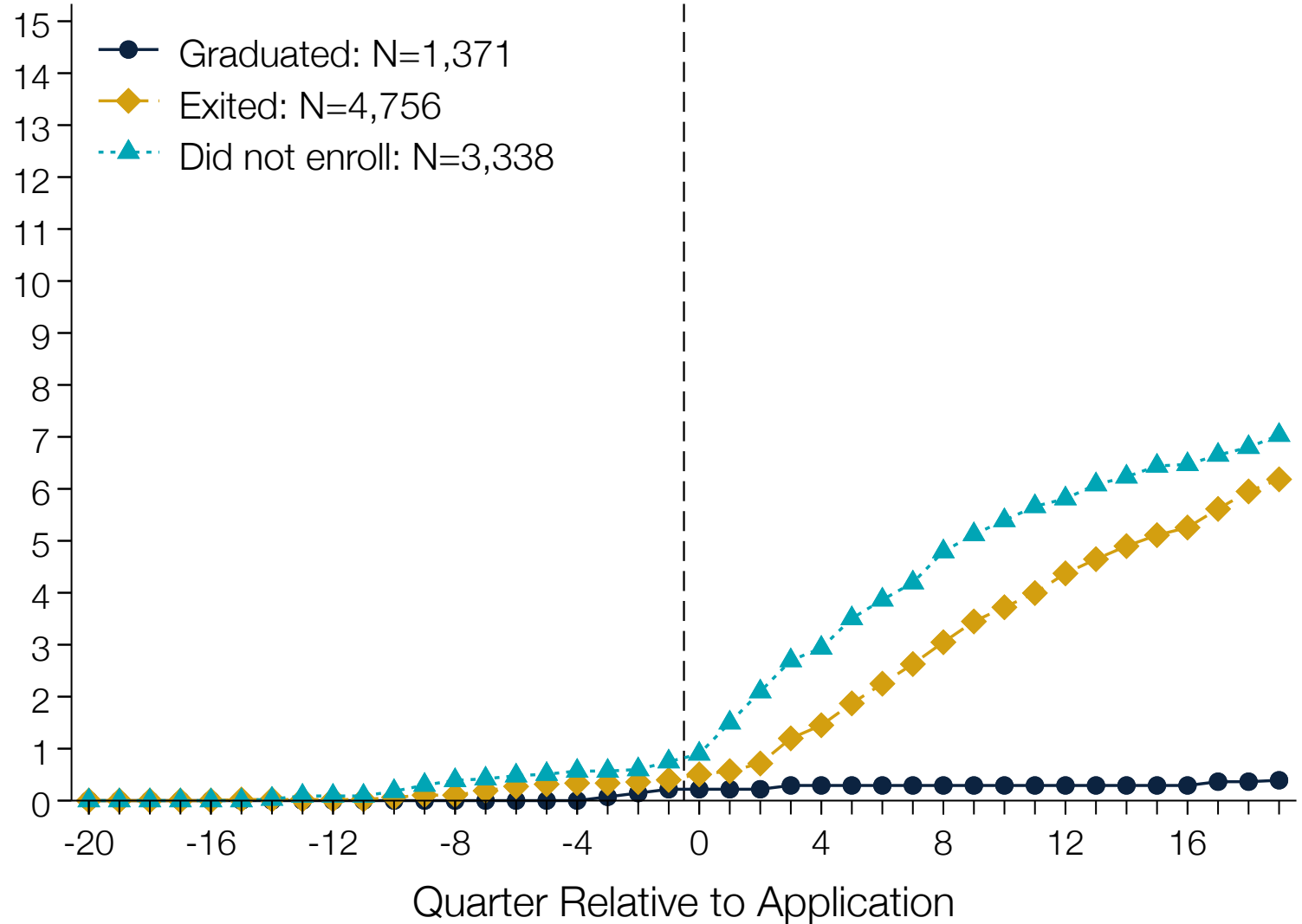
# SUBSTITUTION IN EDUCATIONAL CREDENTIAL

## SHARE PASSING THE GED

Uncommon for TEC applicants to receive full high school diploma from other sources (only 2 in IN)

Some applicants do pursue the GED (or High School Equivalency test)

Roughly 10 percent of comparison group receive GED within 5 years



# LARGE INCREASE IN EARNINGS AMONG GRADUATES

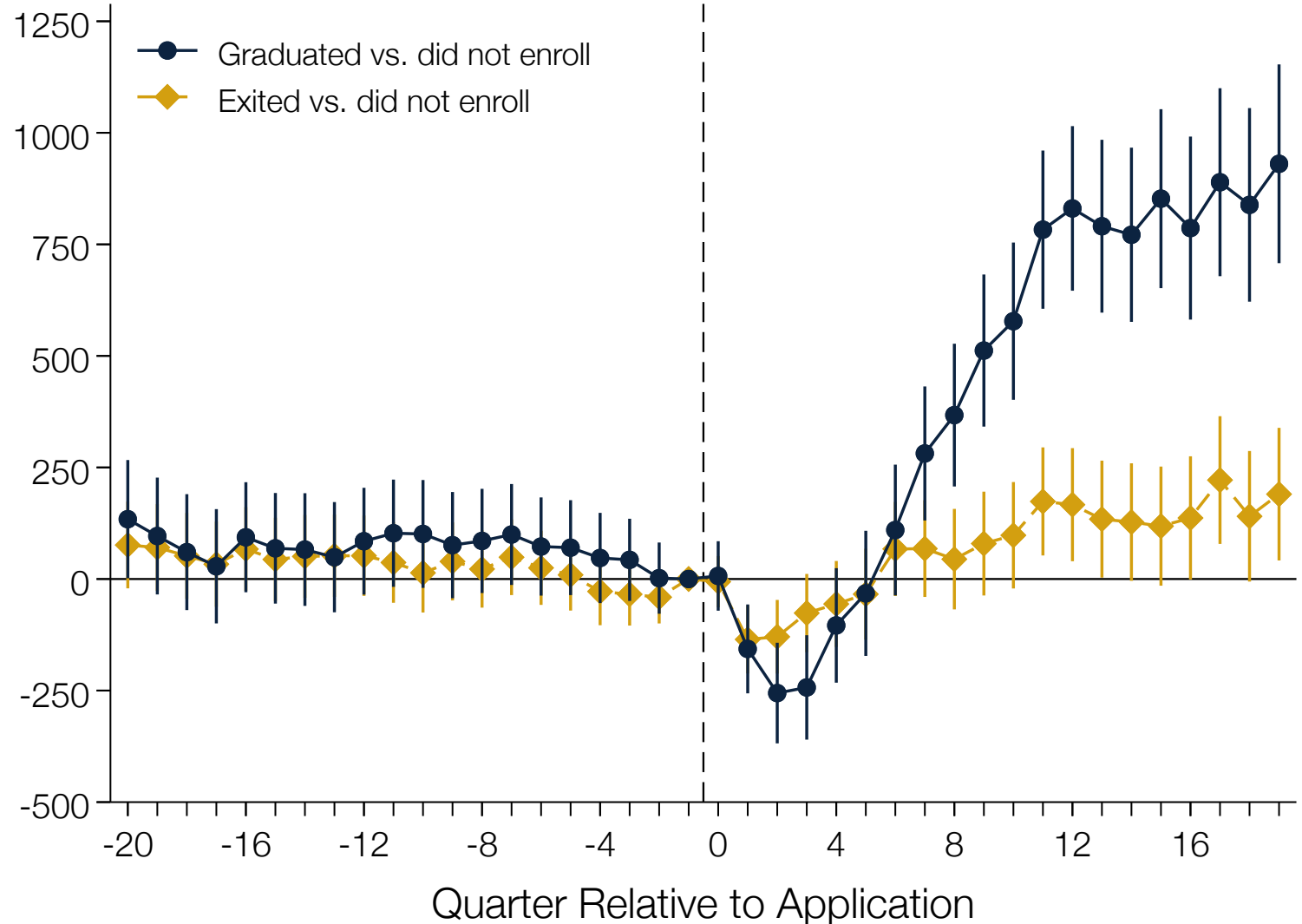
## EVENT STUDY FIGURE

Similar pre-trends between graduates and non-graduates

Decline in earnings while enrolled in school

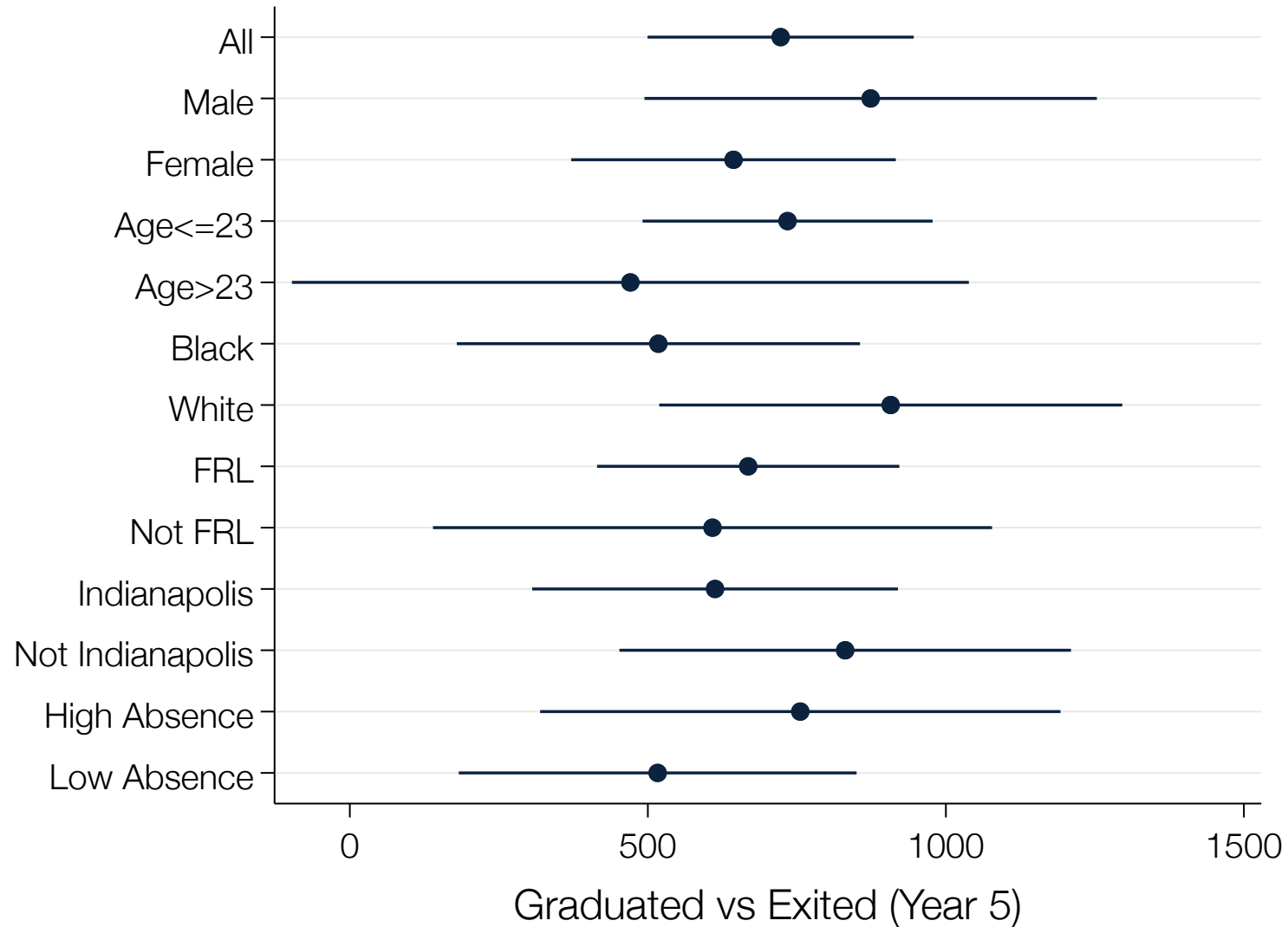
Earnings of graduates increased more than \$900 relative to applicants who did not enroll in 5<sup>th</sup> year after application: **a 39% increase**

Small increase for enrolled, but not graduating students



# HETEROGENEITY

## NO LARGE DIFFERENCES ACROSS SUBGROUPS



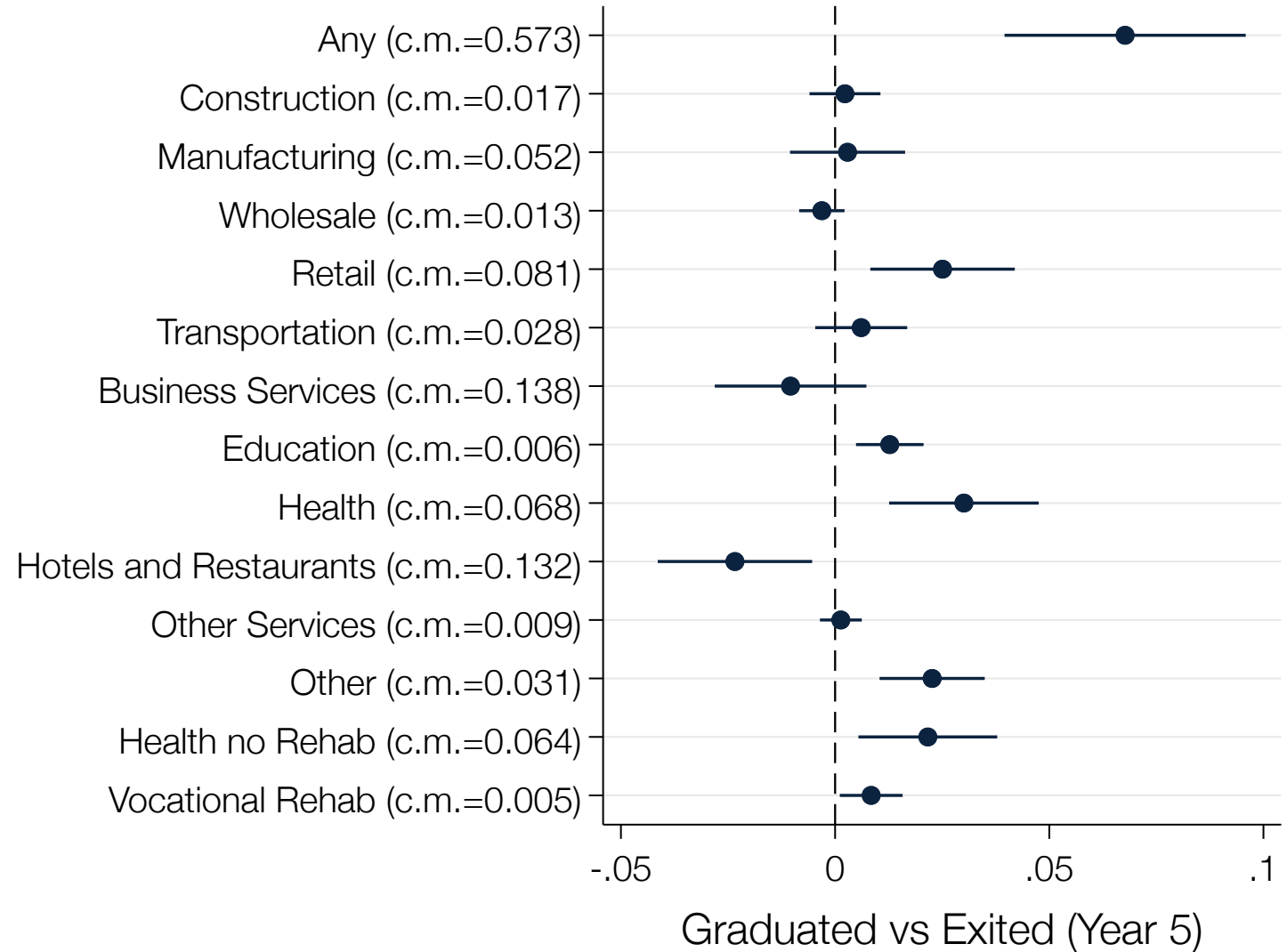
# SHIFT IN INDUSTRY OF EMPLOYMENT

## EMPLOYMENT BY INDUSTRY, YEAR 5

Increase in quarterly employment rates  
5 years after application (6.8 pp)

Driven by shift toward Retail Trade,  
Education, Healthcare employment

Decline in work at Hotels and  
Restaurants



# LARGE INCREASE IN OBTAINING CERTIFICATES

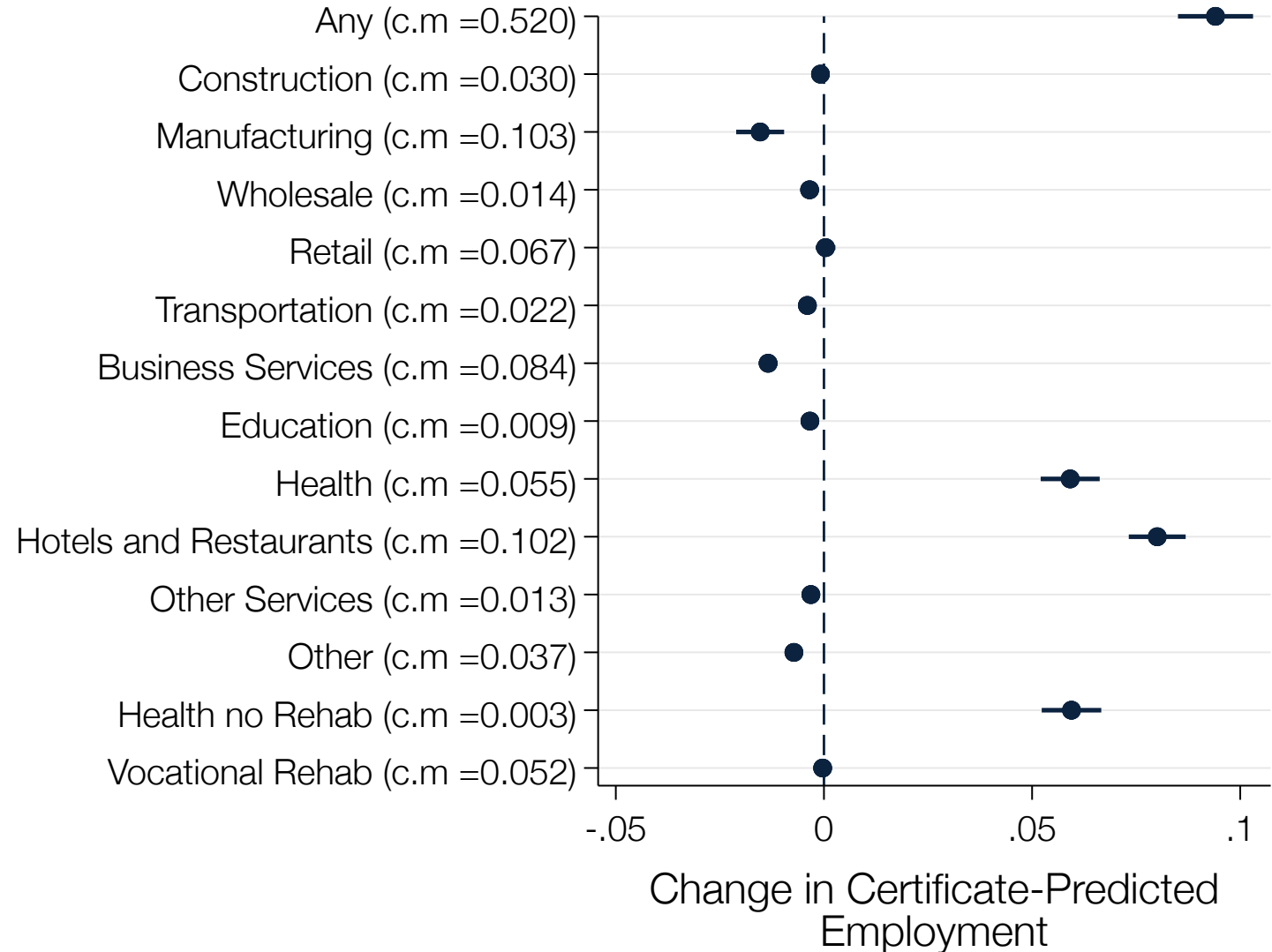
## SHIFT TOWARD HEALTHCARE

Observe a large increase in obtaining postsecondary certificates and certifications

Data on all GED-takers in IN

Estimate industry distribution of workers with different certificates

Graduates experience an increase in certificate-predicted employment in health industry





# IMPROVING LIVES OF ADULT HIGH SCHOOL LEARNERS

## OUR CONTRIBUTION

### Labor Market Returns to HS Diploma

- Adult learners
- Traditional students (Angrist and Krueger, 1991; Oreopoulos, 2006, Clark and Martorell, 2014)
- Estimate return to GED in Indiana
- Return smaller than diploma (Heckman, et al., 2011; Murnane et al., 2000; Jepsen et al., 2016)

### Later-life Interventions Can Have High Returns

- Disappointing return to training programs and GED
- Graduation unresponsive to returns to skill (Goldin and Katz, 2009; Murnane, 2013)
- Comprehensive supports in successful anti-poverty programs
  - Neighborhoods (Bergman et al., 2020)
  - Community college (Weiss et al., 2019; Azurdia and Galkin, 2020; Evans et al., 2017)
  - Self-sufficiency (Evans et al., 2020)





**THANK YOU**

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Paper available at:

[bit.ly/LEO\\_TEC](https://bit.ly/LEO_TEC)