

RUTGERS

School of Management
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**EDUCATION AND EMPLOYMENT
RESEARCH CENTER**

Illuminating Economic Development in Community Colleges: Lessons from NSF ATE Grants

*The Hidden Innovation Infrastructure:
The Role of Economic Development in Technician Education in
the Changing Future of Work (NSF ATE: 2026262)*

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Overview

- Project background
- Conceptual model
- Research findings
- Questions? Comments?



Study Goals & Objectives

- Uncover how ATE's development of the technician workforce through innovation in community college technician education programs contributes to economic development.
- Develop a better conception of how community college technician education contributes to economic development in terms of skill development and support of the innovation ecosystem.
- Develop measures of how technician skill development contributes to firm-level innovation and productivity and regional economic development.



Key Project Activities

- *National Analysis of ATE and Community College Technician Education*
 - Review of Past and Current ATE Grants
 - Quantitative analysis of trends and impacts
- *Regional Case Studies of Community College Technician Education in Manufacturing in Regions and Firms*
 - In-depth Interviews
 - Employer Surveys



Conceptual Model



Economic Development

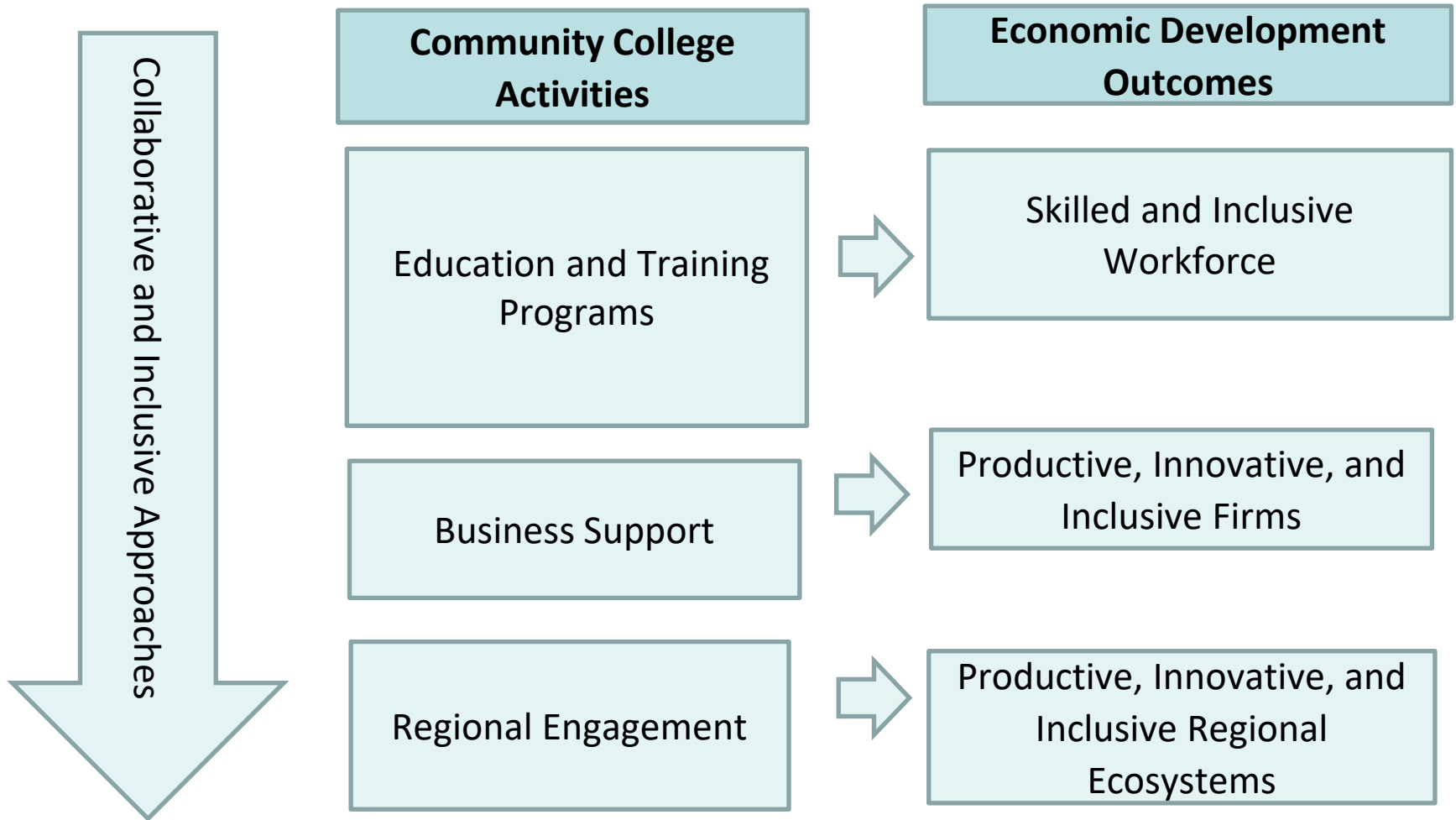
All the activities that seek to promote economic activity in a region, state, or country

Inclusive economic development refers to access to economic growth for all actors in an economy is an important lens for economic development

Geographic focus can include national, state, regional, or local; for community colleges it is often regional



Community Colleges & Economic Development



Community College Economic Development Activities

Education and Training

- Courses & programs aligned with local workforce needs
- Customized training

Business Support

- Entrepreneurship training; small-business incubation and assistance
- Opening up facilities for use by local companies
- Technology transfer
- Applied research

Regional Engagement

- Conducting economic scans
- Participation in local economic planning/policymaking
- Assistance in attracting employers to the region
- Convening regional stakeholders



Approaches to Community College Activities

Overarching approaches to industry engagement can shape how colleges advance economic development goals, including:

- How much the college takes a lead role in fostering collaboration
- How the college balances the needs of its stakeholders



Economic Development Outcomes from Community College Activities

- Skilled and Inclusive Workforce
- Productive, Inclusive, and Innovative Workplaces
- Productive, Inclusive, and Innovative Regions



Key Questions for Discussion



Question 1

What makes workforce development become economic development?

What are important ways that community college technician programs currently contribute to economic development?

(And what does that look like?)



Question 2

**Who are key partners for
community college
technician programs in
economic development?**

And, how best to engage them
and keep them engaged?



Question 3

What untapped ways could community college technician programs contribute to economic development?



Findings from Grantee Reviews



Methods

- Analysis of EvaluATE survey data, 2010, 2018
- Interviews with ATE grantees:
 - Selection based on review of grant abstracts and recommendations from advisory board and former project officers; 39 grantees invited for interview
 - Interviews conducted with 28 respondents from 23 grantees, including national & regional centers, and projects
 - Conducted Mar. – Nov. 2022 via Zoom
 - Transcribed, summarized, reviewed for themes, completed structured analysis template



Grant Focus

- Most grantees are focused on workforce development.
- Few grantees intentionally articulated economic development goals
- Most ATE centers did focus on economic development goals.



Collaborations

- ATE grantees collaborate most with business and industry.
- Reported amount of collaboration with business and industry varies significantly across grantees.

Collaborator	Mean 2010	Mean 2018	Median 2010	Median 2018
Business/Industry	16.1	16.4	6	5
Within Your Host Institution	4.1	4.0	3	2
Other Education Institutions	14.1	15.5	4	2
Public agencies	3.5	3.0	2	0
Other ATE Grants	3.9	3.0	2	1

• Source: EvaluATE Survey

- Grantees discussed working with businesses in industries that are strategically tied to the economy.
- Grantees reported they sought ways to collaborate across multiple employers.



Collaborations

- Many grantees reported collaborations with **external organizations** including economic development organizations, regional industry associations or community-based organizations.
- Collaborations with **industry associations** serve a variety of purposes from tracking industry trends to informing curriculum and faculty development and scaling up programs.
- Collaborations with **four-year institutions** can promote innovation connected to broader economic development goals.
- **High schools** are a pipeline to the workforce, providing community colleges with an opportunity to engage students historically underserved in technician education and occupations.
- Some grantees engage in **stronger collaborations** where they work closely with partners and sometimes lead collaborative relationships.



Activities

- **Small business incubation and entrepreneurship** training are sometimes a part of grantee efforts to promote businesses in technician fields while supporting their technician education programs.
- Grantees can provide leadership by generating **economic research** to support regional economic development by understanding industry-specific trends.
- Some grantees worked with universities to generate **innovative uses of technology**.
- For some grantees regional coordination efforts with industry supported efforts to **promote hands-on learning** among students.
- Grantees can prioritize **outreach to high-need communities** to promote inclusive economic development.
- Several grantees were actively involved to **attract employers** to their region.
- Most grantees reported some degree of **convening regional stakeholders** as part of both workforce and economic development.



Discussion of Grantee Review Findings

- Do these findings make sense given your experience in the field?
- How do these findings inform our thinking about the relationship between workforce development and economic development?
- How can these findings inform the work of ATE?
- Do these findings raise other research questions?



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