# College Education, Regional Economic Benefits, and Impact of Public Policies

#### John V. Winters Oklahoma State University





#### Overview

- College education is beneficial for:
  - Individuals
  - Cities, states, and nations

• How does Oklahoma compare to other states?

• How can we encourage/improve college education?





#### Individual Benefits

• On average persons with more education have higher earnings.

Table 1: Mean Earnings in the U.S. in 2012 by Education Level

High School	High School	Some	Bachelor's	Graduate
Dropout	Graduate	College	Degree	Degree
24,076	33,052	39,759	62,362	88,717





# Individual Benefits (cont.)

• Persons with more education have higher employment rates.

|--|

High School	High School	Some	Bachelor's	Graduate
Dropout	Graduate	College	Degree	Degree
53.6%	67.7%	74.6%	82.7%	87.0%





## Individual Benefits (cont.)

- Other individual benefits of education include:
  - Better health
  - Greater life satisfaction
  - Better education for one's children





#### Societal Benefits

• States and local areas with higher shares of college graduates have higher average earnings, even for a given education level.

Table 3: Mean Earnings in 2012 For Low and High Education States							
	HS	HS	Bachelor's	Graduate			
	Dropout	Graduate	College	Degree	Degree		
Below Median	24,522	31,962	36,942	54,195	76,048		
Above Median	26,175	34,915	41,095	61,834	88,055		
Source: Computations based on 2012 American Community Survey.							





### Societal Benefits (cont.)

• States and local areas with higher shares of college graduates have higher employment rates, even for a given education level.

Table 4: Employment Rates in 2012 For Low and High Education States							
HS HS Some Bachelon					Graduate		
	Dropout	Graduate	College	Degree	Degree		

	40.370	07.570	/4.0/0	02.970	88.070
Above Median	56.5%	71.3%	77.6%	84.2%	87.8%

71 00/

 $0^{-0}0^{-1}$ 

Source: Computations based on 2012 American Community Survey.

(7 20)



Dalarry Madian

10 50/



 $00 \ n0/$ 

### Societal Benefits (cont.)

- Other "external" benefits of higher education include:
  - Higher income workers payer higher taxes
  - Lower public service usage
  - Lower crime
  - Better amenities





#### **STEM Graduates**

- The individual and societal benefits are likely amplified for graduates in science, technology, engineering, and mathematics (STEM) fields.
- Business graduates do better on average than other non-STEM fields.





# How Does Oklahoma Compare?

#### Table 5: Educational Shares in 2012 by State

	HS Dropout	HS Graduate	Some College	Bachelor's Degree	Graduate Degree
U.S.A.	12.0%	26.5%	30.9%	19.8%	10.9%
Oklahoma	12.3%	31.1%	32.3%	16.5%	7.8%
Arkansas	12.8%	34.4%	30.5%	15.0%	7.3%
Louisiana	14.5%	33.8%	28.6%	15.6%	7.5%
Texas	17.3%	24.8%	30.3%	18.8%	8.8%





# How Does OK Compare? (cont.)

#### Table 6: Employment Rates in 2012 by State

	HS	HS	Some	Bachelor's	Graduate
	Dropout	Graduate	College	Degree	Degree
U.S.A.	53.6%	67.7%	74.6%	82.7%	87.0%
Oklahoma	52.6%	68.8%	73.8%	82.8%	87.2%
Arkansas	52.8%	65.5%	70.6%	84.4%	89.6%
Louisiana	48.2%	67.7%	74.6%	83.4%	88.1%
Texas	59.2%	68.6%	75.1%	82.6%	86.6%





# How Does OK Compare? (cont.)

#### Table 7: Mean Earnings in 2012 by State

	HS	HS	Some	Bachelor's	Graduate
	Dropout	Graduate	College	Degree	Degree
U.S.A.	24,076	33,052	39,759	62,362	88,717
Oklahoma	24,390	32,489	36,945	54,790	77,292
Arkansas	25,120	30,430	33,448	51,179	69,073
Louisiana	26,116	36,147	37,777	55,791	79,233
Texas	24,280	33,002	41,155	64,455	92,119





# How Does OK Compare? (cont.)

	STEM	Business	Education	Health	Liberal Arts	Social Sciences
U.S.A.	23.7%	22.3%	11.2%	6.6%	19.7%	16.6%
Oklahoma	19.4%	24.8%	16.8%	7.8%	16.5%	14.7%
Arkansas	19.8%	25.2%	19.4%	8.3%	15.2%	12.2%
Louisiana	20.8%	23.7%	14.0%	10.0%	18.0%	13.4%
Texas	25.4%	25.1%	12.0%	6.1%	17.3%	14.1%

Table 8: Distribution of College Graduates by Major





#### What Can We Do?

- Policies can be broken down into those affecting either the supply or demand of college graduates.
- Supply-side policies can be further separated into those affecting production and those affecting migration.
- Most of these policies cost money and there is still considerable uncertainty about what policies are most effective.





#### Policies to Increase Production

- Lowering the cost of college attendance
  - Tuition and fees
  - Need-based aid
  - Merit-based aid
  - Universal aid
  - Last-dollar aid
  - Help completing the FAFSA





# Increasing Production (cont.)

- Better K-12 education to prepare for college
  - Increased instructional time
  - High-dosage tutoring
  - Teacher feedback
  - High expectations
  - Student performance incentives
  - Teacher pay





# Increasing Production (cont.)

- Lowering geographic barriers
  - More campuses
  - Distance learning
  - School-to-home shuttles (on Fridays and Sundays)
- Mandatory ACT
- Pre-college math "bootcamp" for at-risk STEM students





# Policies to Affect Migration

- Better locational amenities
- Recruiting skilled foreigners
- Service-forgivable loans
- New graduate tax credit





#### Policies to Increase Demand

- ???
- Tax incentives
  - For R&D
  - For physical investments
- Create a "culture of entrepreneurship"
  - Innovation
  - Calculated risk-taking
  - Willingness to fail
  - Helping out start-ups



