

# Grads and Fads

*The Dynamics of  
Human Capital Location*

***National Meeting  
November 5, 2004***



**Robert Weissbourd, RW Ventures, LLC &  
Christopher Berry, University of Chicago**

# Agenda

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**Where We Left Off : The Importance of College Education**



**Patterns of Change**



**Causes of Change: Economics and Amenities?**



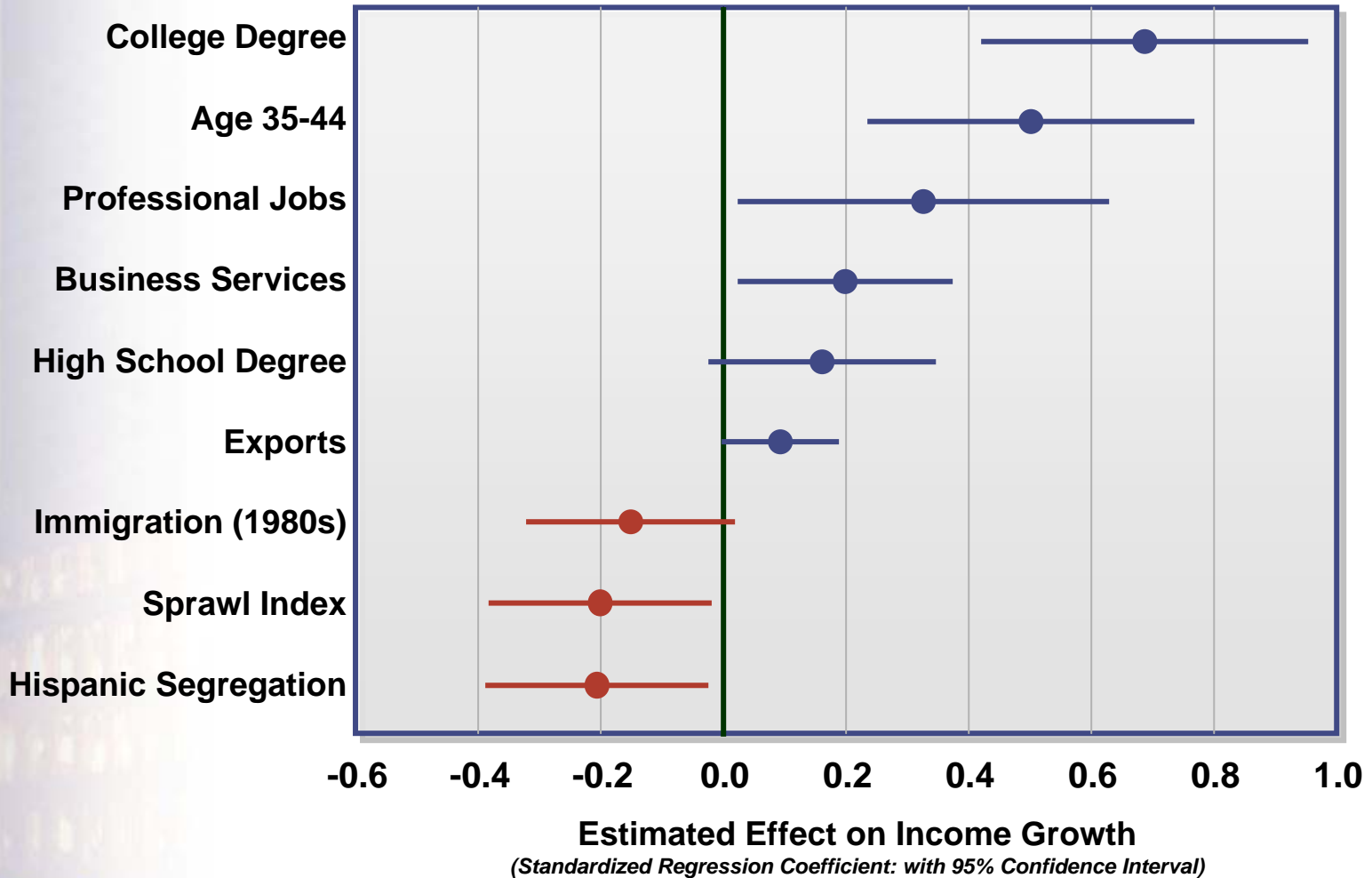
**What Moves the Young, Educated?**



**Building HC Economies**

# Many Factors Matter

## Education is a Leading Driver of Prosperity



# How to Improve College Attainment Levels?



***People and Jobs Are Intertwined***

# Improving College Attainment Levels

## *Varied Theories → Varied Strategies*

**THEORY 1: It's the Jobs → Attract Firms**

**Industry**



**Workers**



**Quality of Life**





# Improving College Attainment Levels

## *Varied Theories → Varied Strategies*

**THEORY 2: It's the Amenities → Improve Q of L to Attract BAs**

**Quality of Life**



**Knowledge Workers**



**Industry**



# The Project: The Dynamics of Human Capital Location

***Goal: To Understand the Key Drivers of Increased College Attainment Levels***

## Project Design

- Using Changing Dynamics Capacity: **comprehensive database** and base models for all MSAs;
- Add new datasets, including more quality of life variables, migration, PUMs data;
- Run **econometric models** to test the effect of 1990 conditions on **college and non-college growth**, and on **young and older BA migration** from 1990-2000 for all 316 metros;
- Focus on Metropolitan Areas, not Cities.

# Clarifying the Question: What Affects Attainment?

## Factors Affecting Attainment Growth

- + New Graduates (Production)
- + Graduates Moving In (Attraction)
- Graduates Moving Out (Non-Retention)
- + Non-Graduates Moving Out
- Non-Graduates Moving In



# Agenda

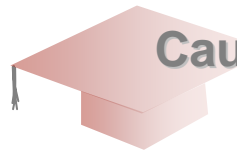
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**Where We Left Off: The Importance of College Education**



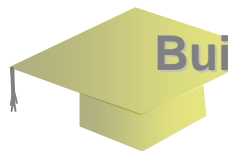
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**Causes of Change: Economics and Amenities?**



**What Moves the Young, Educated?**

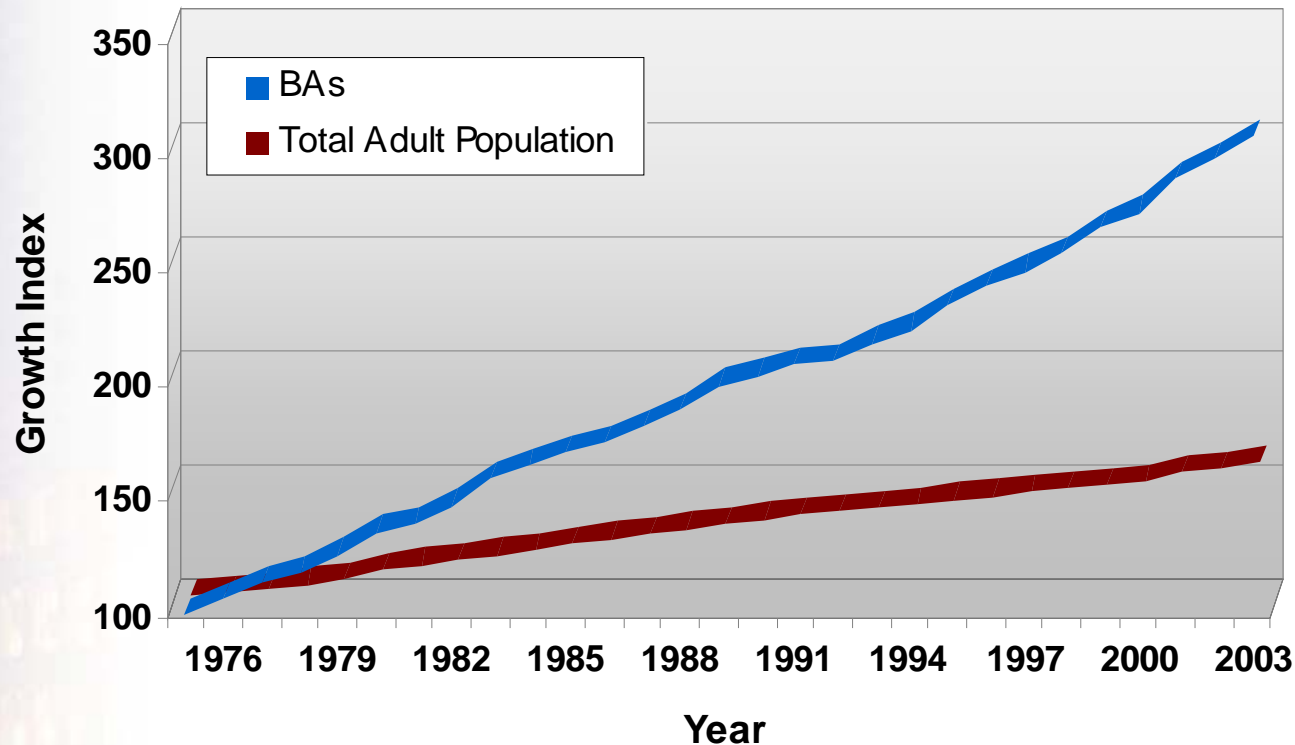


**Building HC Economies**

# The American Population is Getting More Educated at an Astounding Pace

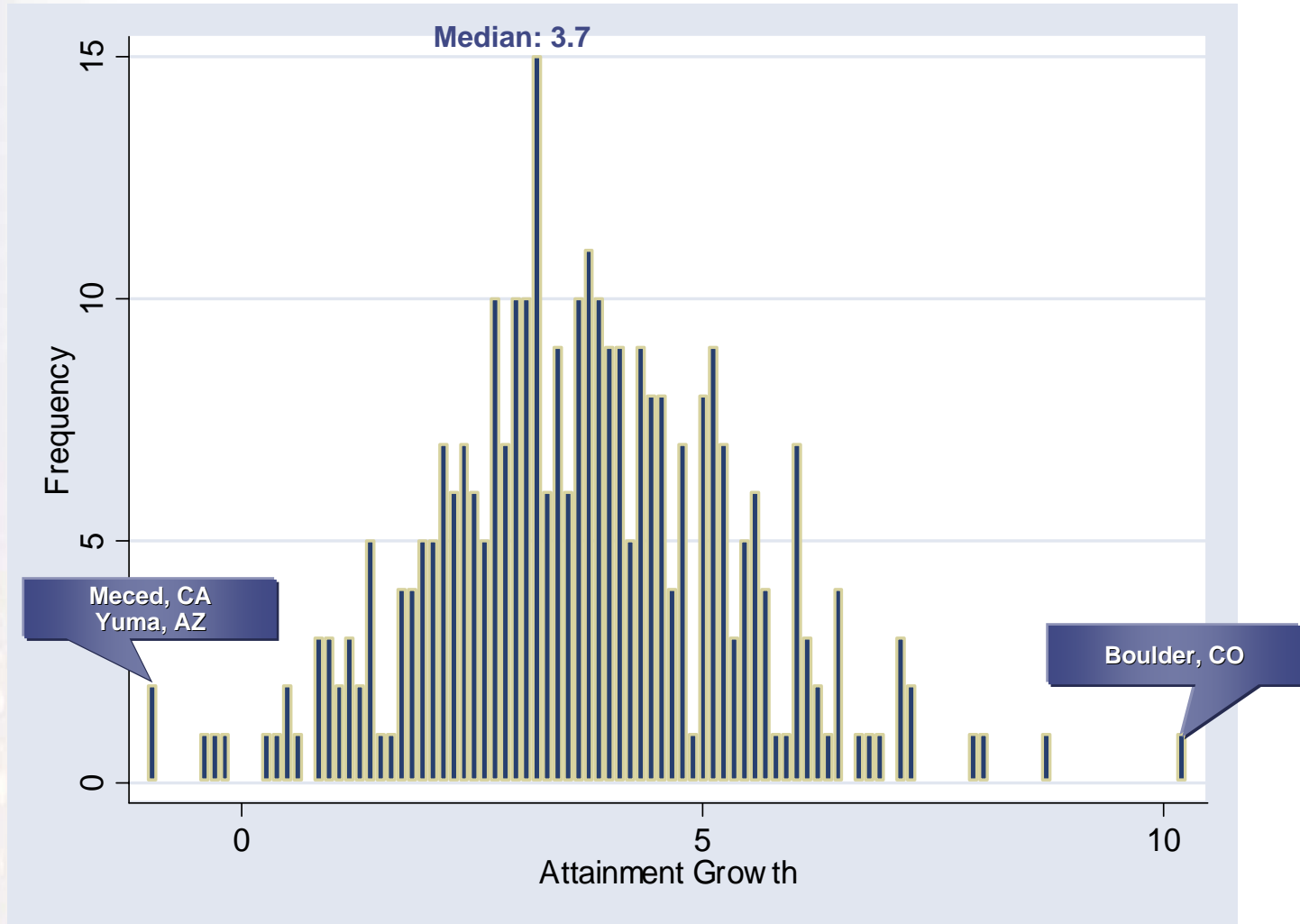
## Population Trends (1975-2003)

Source: CPS and Census Estimates

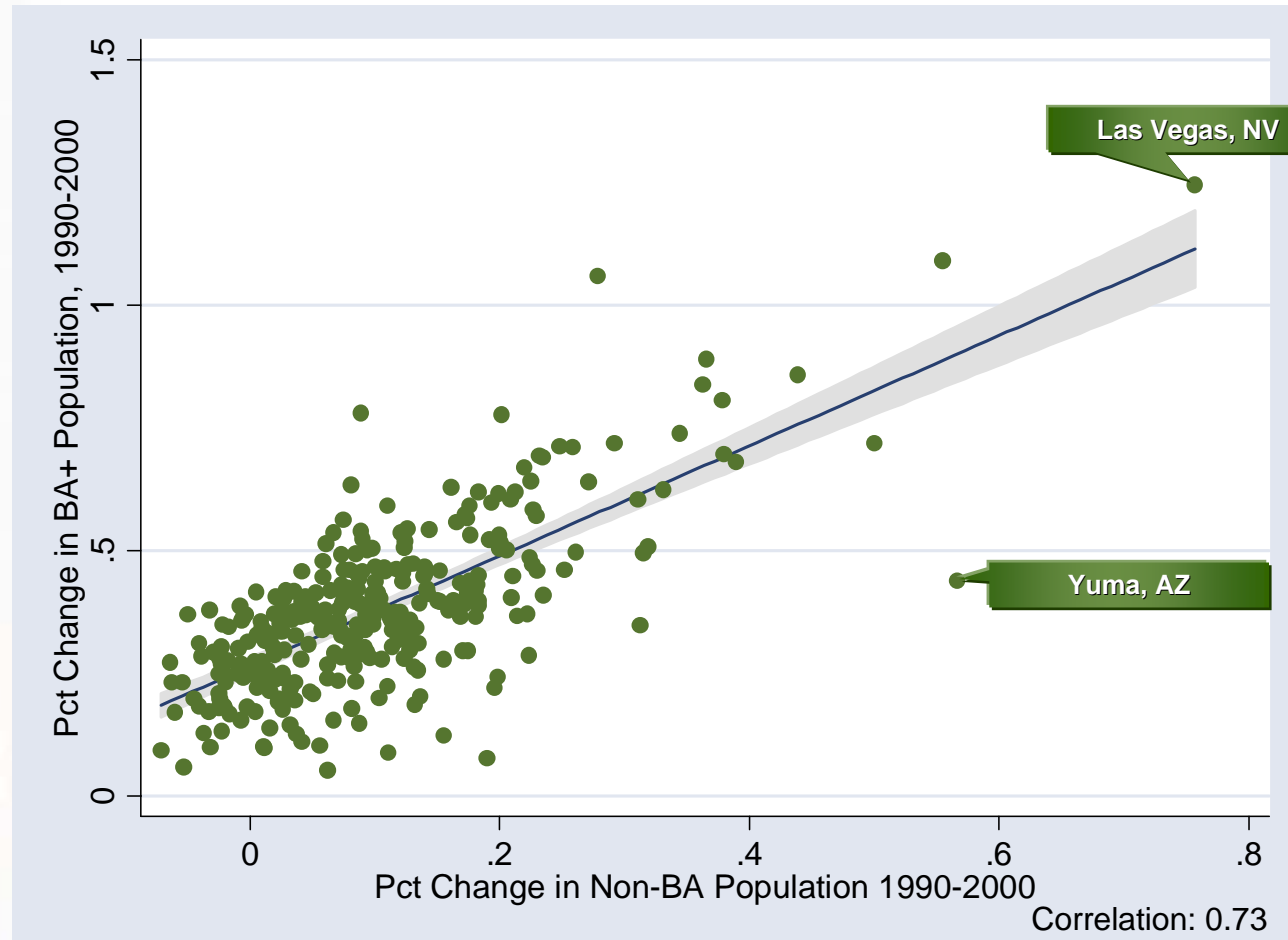


***Number of College Graduates Increased 38% in the '90s, Representing 7.4 Million New College Graduates in Excess of Population Growth***

# ... But there is Great Variation

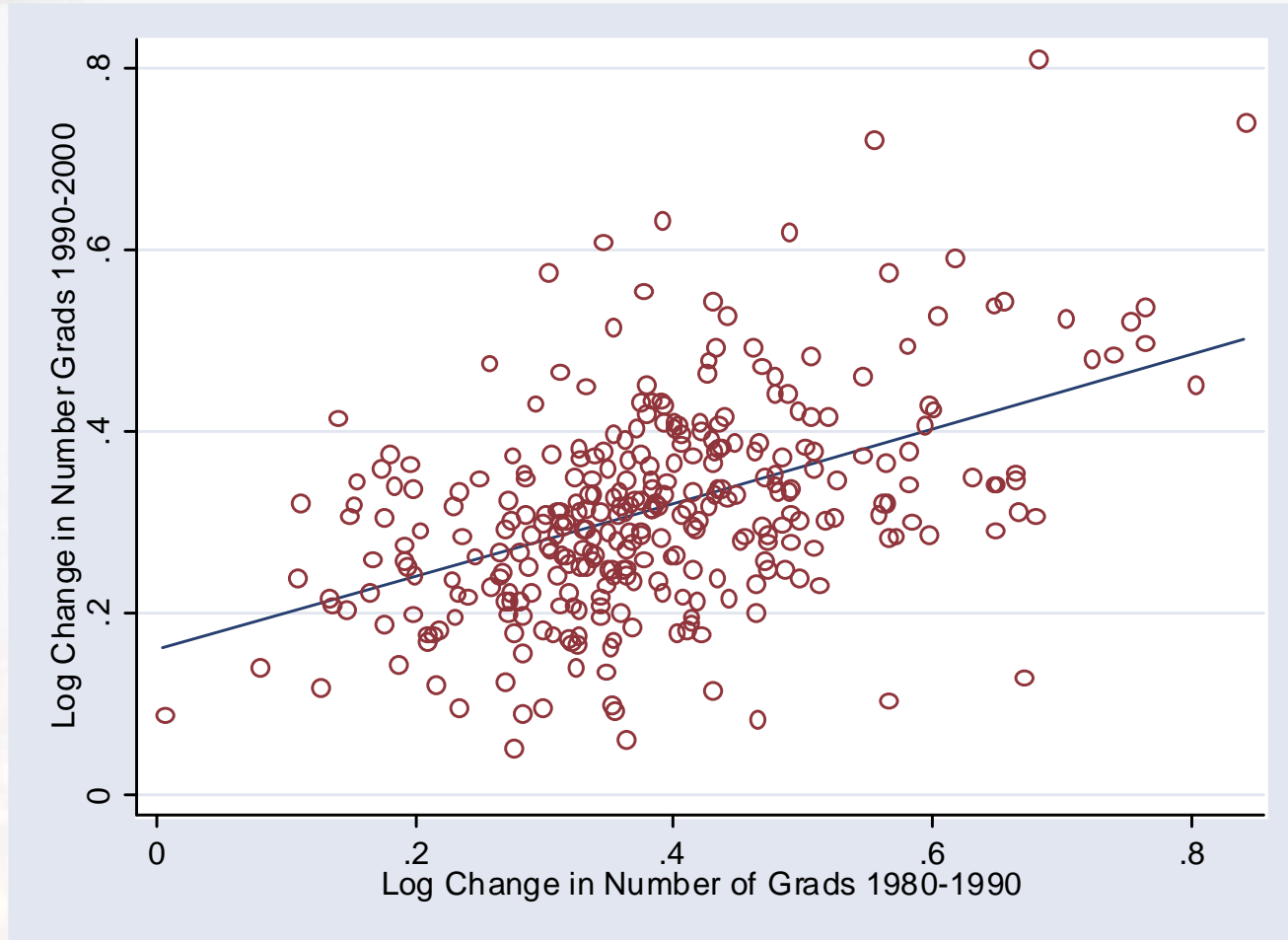


# Contrary to Popular Belief, the College Educated Are not Generally Segregating



**... But There Are Important Variations Between the Two Groups**

# Comparative Attainment Changes Slowly



***Long-Term Strategies Needed***



# Agenda

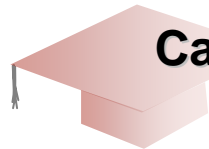
Where We Left Off: The Importance of College Education



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Causes of Change: Economics and Amenities?



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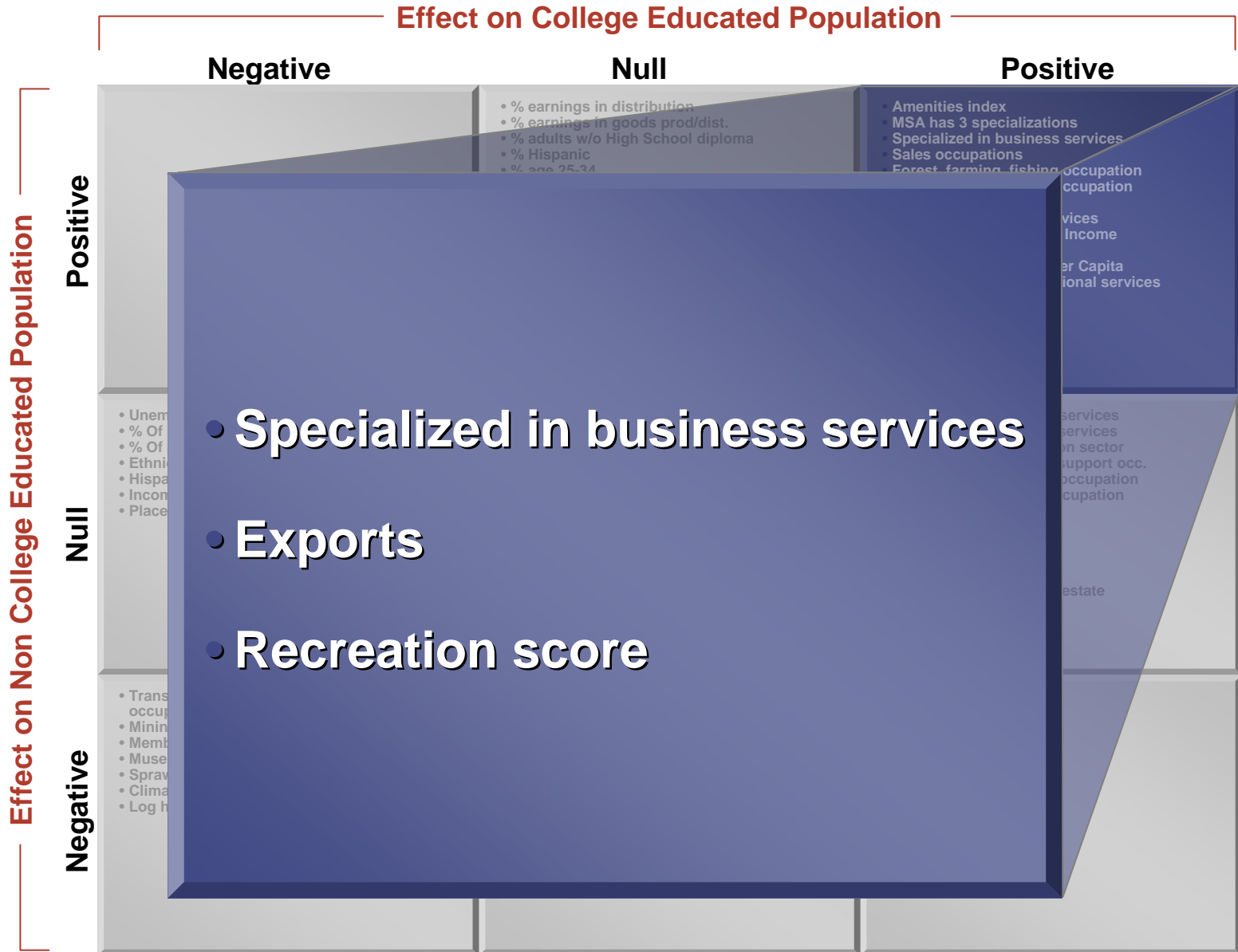


# Exploratory Model Results: Many Factors Matter

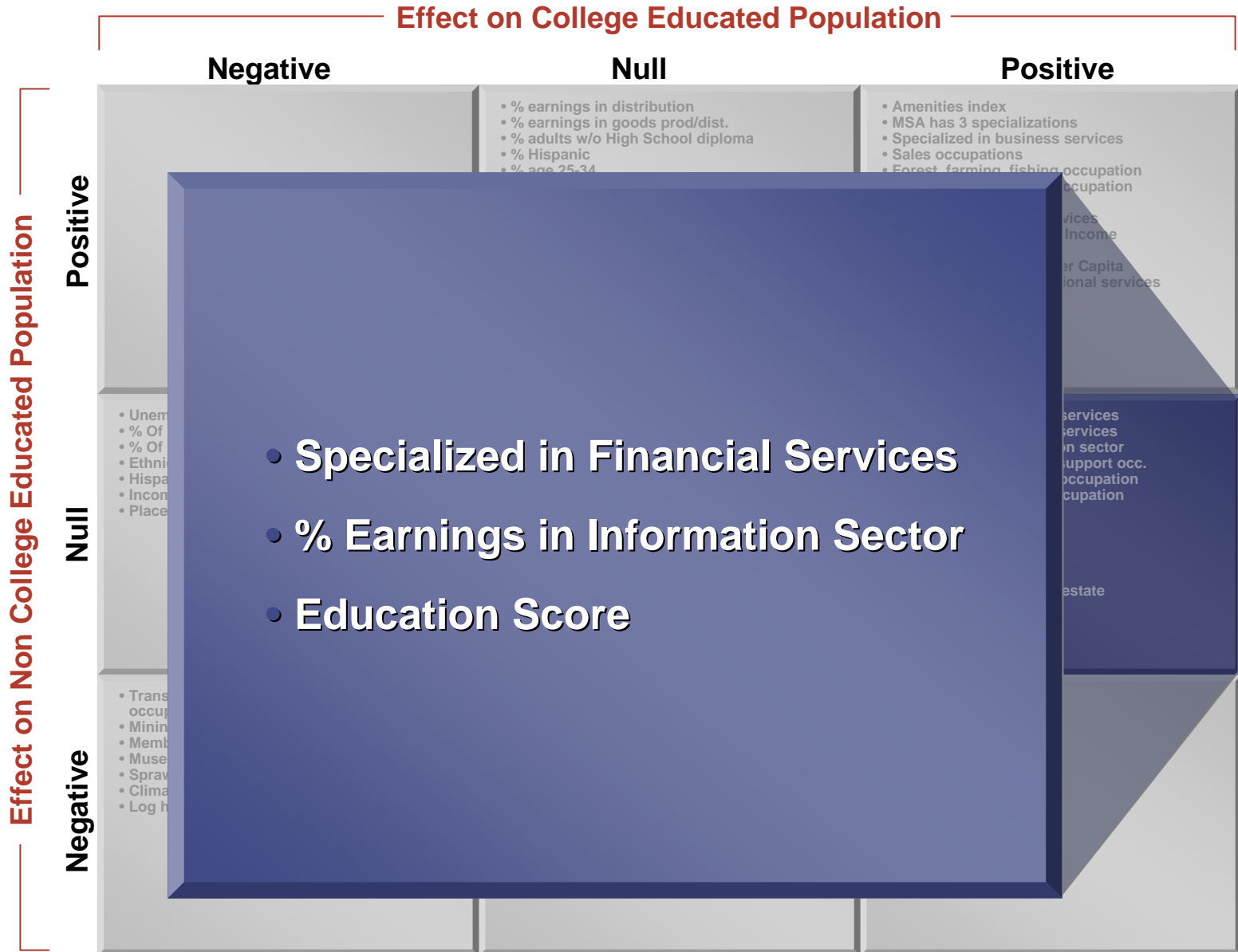
		Effect on College Educated Population		
		Negative	Null	Positive
Effect on Non College Educated Population	Positive		<ul style="list-style-type: none"> <li>• % earnings in distribution</li> <li>• % earnings in goods prod/dist.</li> <li>• % adults w/o High School diploma</li> <li>• % Hispanic</li> <li>• % age 25-34</li> <li>• Crime score</li> <li>• January mean temperature</li> <li>• July mean temperature</li> </ul>	<ul style="list-style-type: none"> <li>• Amenities index</li> <li>• MSA has 3 specializations</li> <li>• Specialized in business services</li> <li>• Sales occupations</li> <li>• Forest, farming, fishing occupation</li> <li>• Handlers and laborers occupation</li> <li>• Construction</li> <li>• Business and repair services</li> <li>• Export Sales as % Total Income</li> <li>• % adults with BA</li> <li>• Eating &amp; drinking est. Per Capita</li> <li>• Amusement and recreational services</li> <li>• % foreign born</li> <li>• MSA size</li> <li>• Cost of living</li> <li>• Jobs score</li> <li>• Recreation score</li> <li>• Gay index</li> </ul>
	Null	<ul style="list-style-type: none"> <li>• Unemployment</li> <li>• % Of adults w/ advanced degree</li> <li>• % Of adults w/ some college, no degree</li> <li>• Ethnic diversity</li> <li>• Hispanic segregation</li> <li>• Income inequality</li> <li>• Places rated total score</li> </ul>	<ul style="list-style-type: none"> <li>• Art Score</li> <li>• Movie Theaters per capita</li> <li>• Health establishments per capita</li> <li>• Industry Fragmentation</li> </ul> <p><b>And numerous others...</b></p>	<ul style="list-style-type: none"> <li>• Specialized in financial services</li> <li>• % earnings in financial services</li> <li>• % earnings in information sector</li> <li>• Technician and related support occ.</li> <li>• Administrative support occupation</li> <li>• Precision production occupation</li> <li>• Wholesale trade</li> <li>• Personal services</li> <li>• Commuting time</li> <li>• Education score</li> <li>• Bohemian index</li> <li>• Finance, insurance real estate</li> </ul>
	Negative	<ul style="list-style-type: none"> <li>• Transportation and material moving occupation</li> <li>• Mining</li> <li>• Membership organizations per capita</li> <li>• Museums</li> <li>• Sprawl component 1</li> <li>• Climate score</li> <li>• Log heating degree days</li> </ul>	<ul style="list-style-type: none"> <li>• Manufacturing (durable &amp; non-durable)</li> <li>• Transportation</li> <li>• Communication and utilities</li> <li>• Retail trade</li> <li>• Health services</li> <li>• Other professional services</li> <li>• Public administration</li> <li>• % adults w/ High School diploma</li> <li>• % age 35-44</li> <li>• Health score</li> </ul>	

*Note: Table represents results of regressions including only regional dummies as controls, and does not indicate causal effects.*

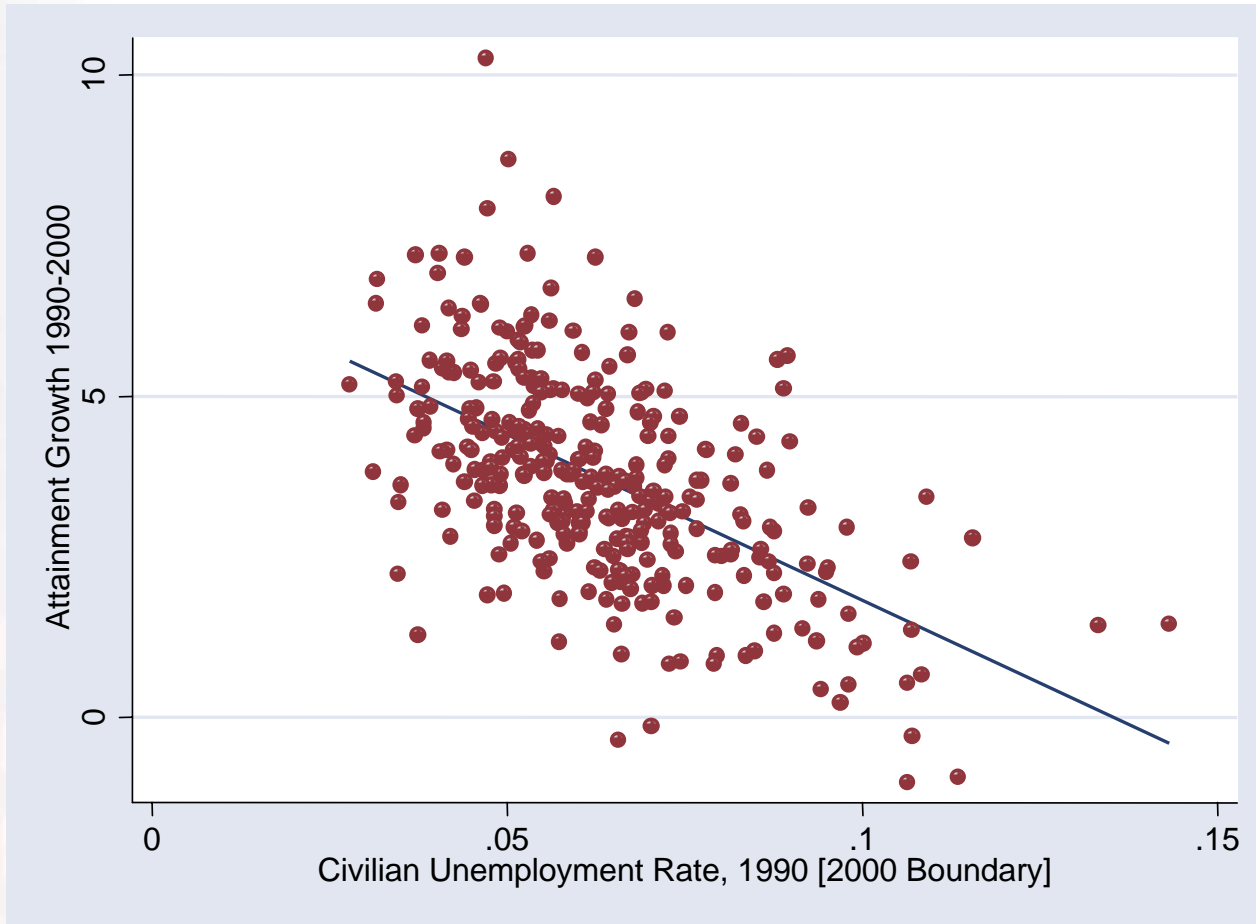
# Exploratory Model Results



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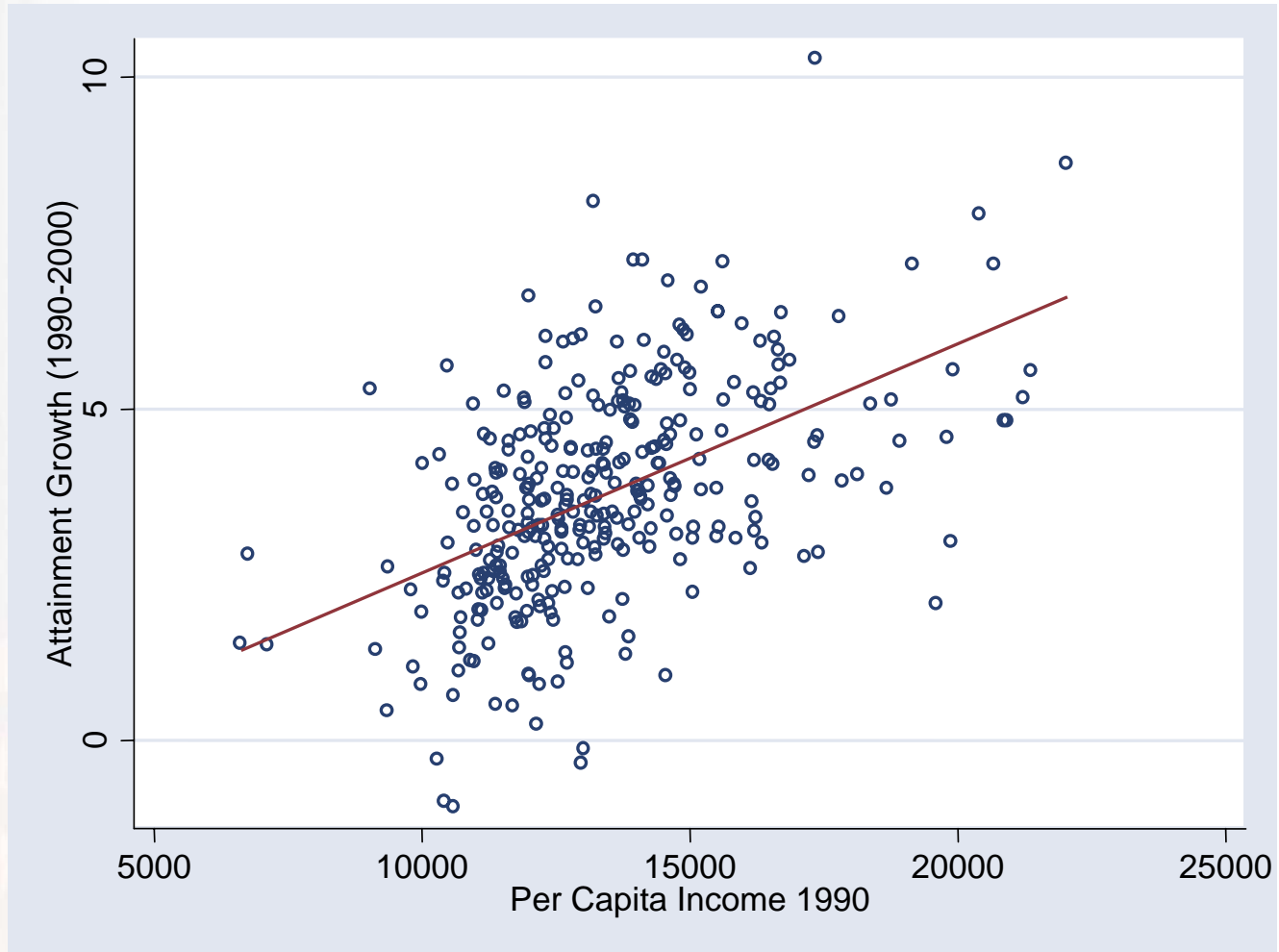
# It's the Economy: The Effect of Unemployment



***College Graduates Move Away from Places without Jobs***

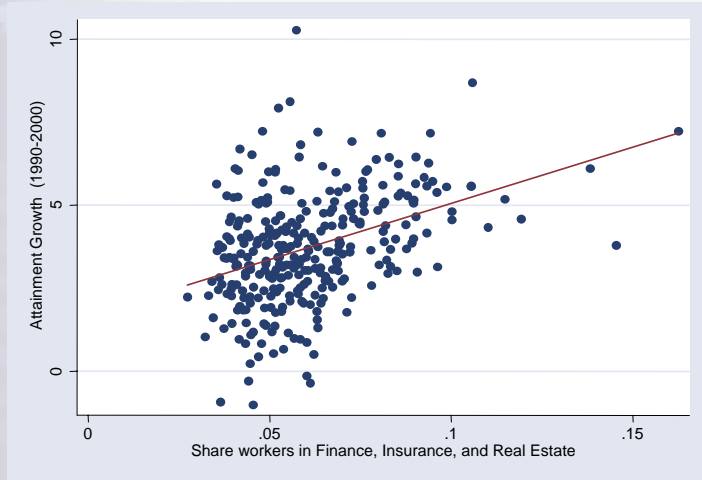


# It's the Economy: The Effect of Income

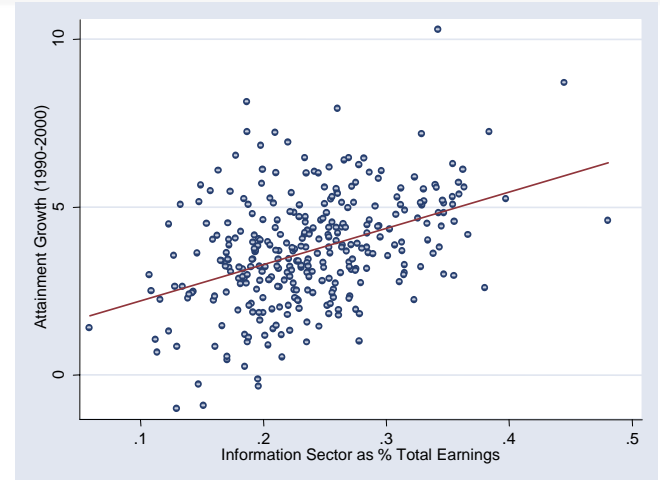


***And Go to Places with High Income***

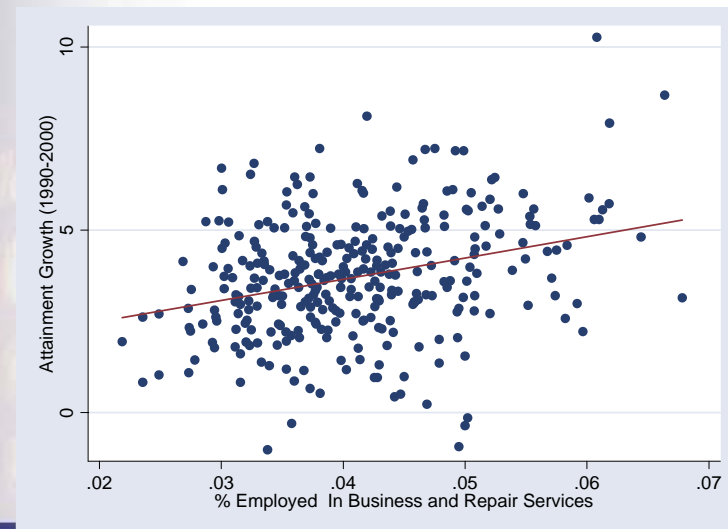
# It's the *Knowledge Economy*: Knowledge Industries Attract BAs



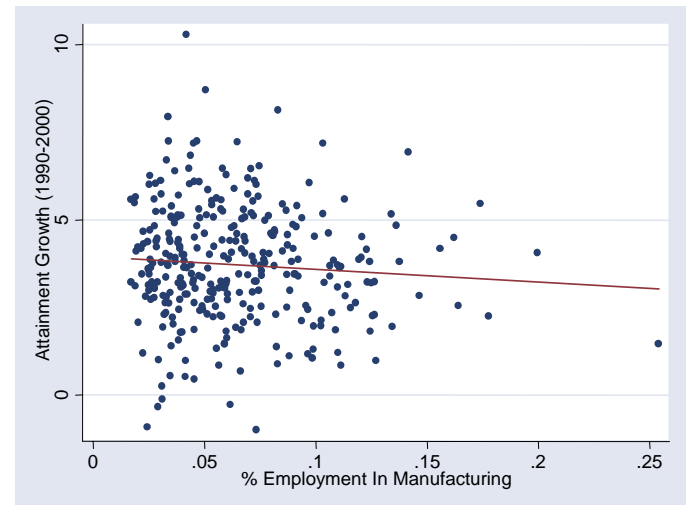
**Finance, Insurance, and Real Estate**



**Information Sector**

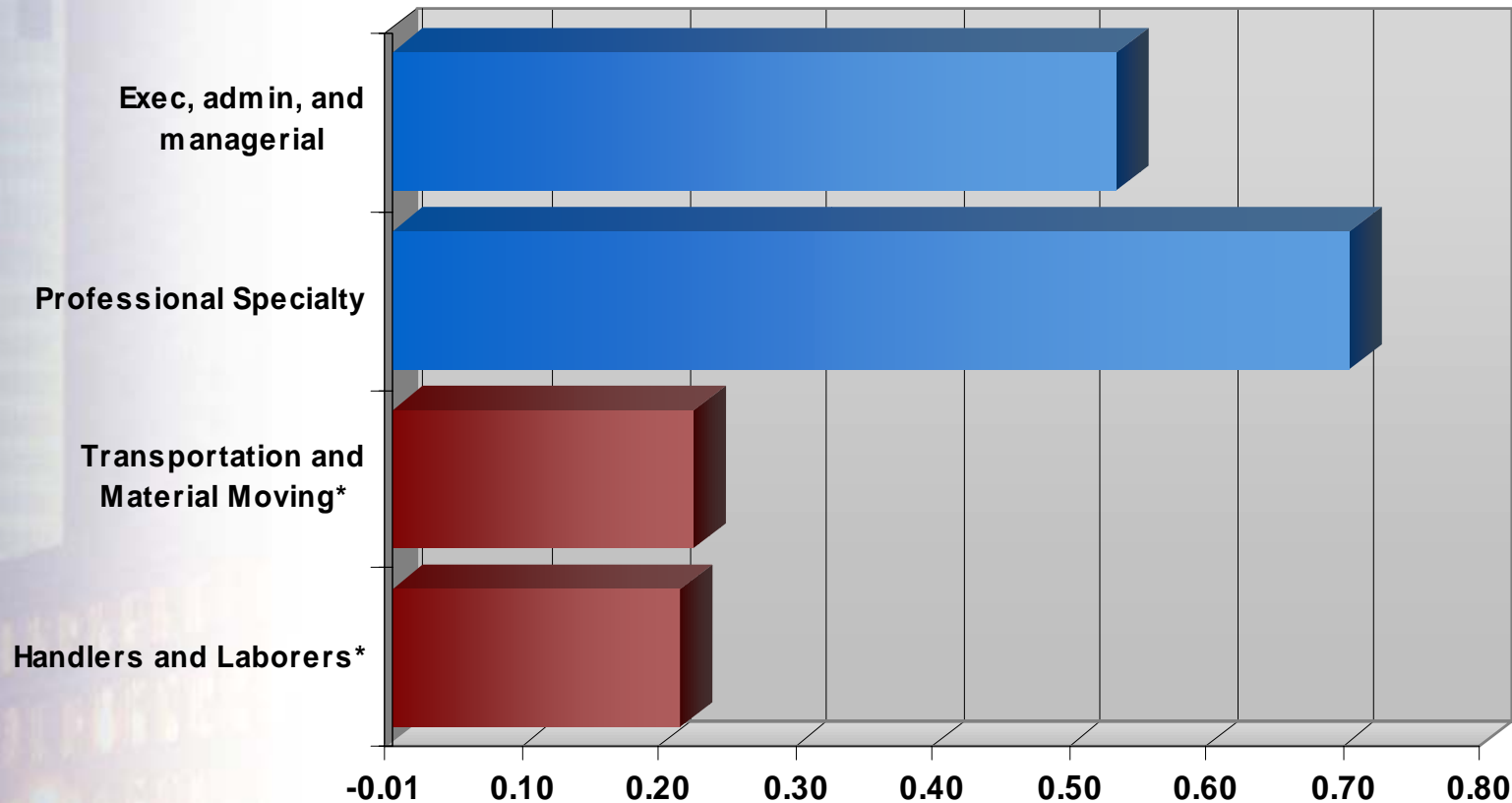


**Business Services**



**Manufacturing**

# It's the *Knowledge Economy*: High Human Capital Occupations Attract BAs



Standardized Regression Coefficients: 1990 Occupation and 1990-2000 Attainment Growth  
Regression includes unemployment, wages, amenity index, and regional dummies as controls.

\* Not Statistically Significant

# What About Amenities?

- **Amenities (broadly defined) have a significant effect on changes in educational attainment**
- **Amenities include a broad range of characteristics, from highways to coffee bars**
- **Amenities include things we can change, such as parks, and things we can't change, such as weather**
- **Many consumption amenities (i.e. quality of life factors) commonly perceived as important do not matter, or matter less than people think**

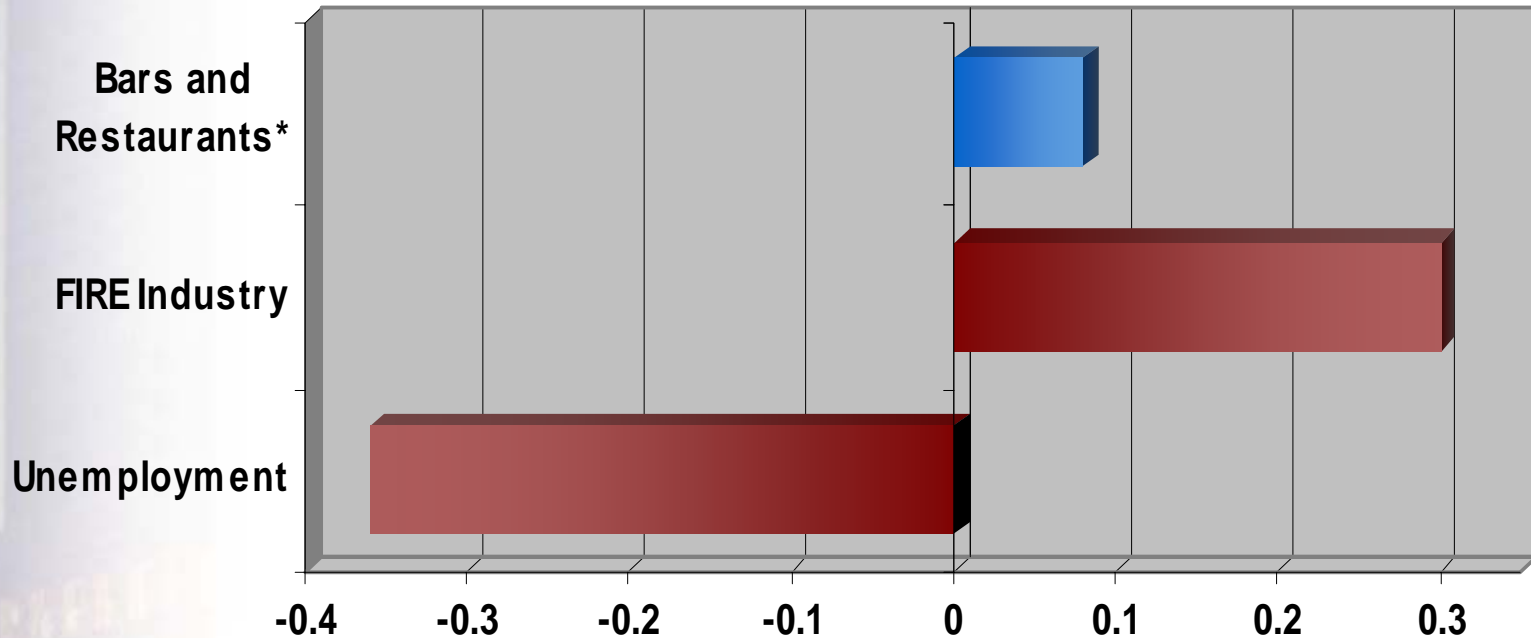
# It's Not Cultural Amenities

<b>Factor</b>	<b>College Graduates</b>	<b>Non College Graduates</b>
<b>Movie Theaters</b>	0	0
<b>Art Score</b>	0	0
<b>Gay Index</b>	0	0
<b>Bars and Restaurants</b>	+	+
<b>Weather</b>	+	++

The table reports the results of regression models including unemployment, wages, amenity index, and regional dummies as controls.



# Quality of Life does Not Matter as Much as Economic Factors



Standardized Regression Coefficients: 1990 Factors and 1990-2000 Attainment Growth  
Regressions Include unemployment, wages, amenity index, and regional dummies as controls

\* Not Statistically Significant

***Good Weather and Night Life are Not Nearly as Important to College Graduates as Employment***

# Agenda

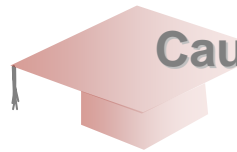
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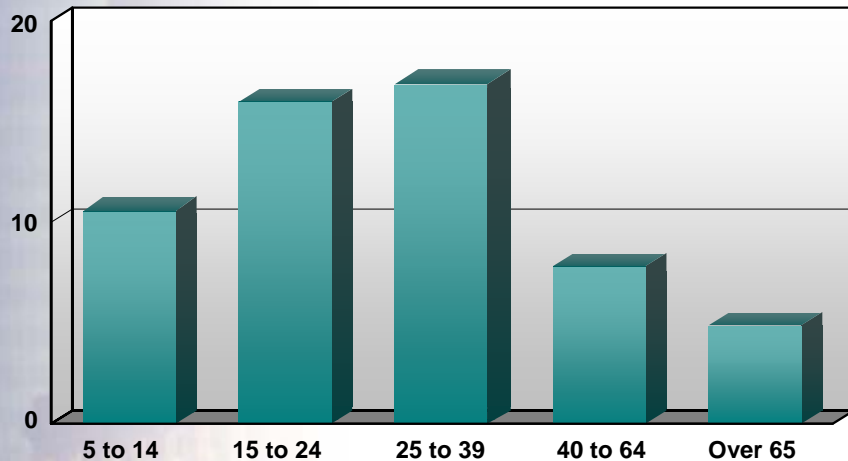
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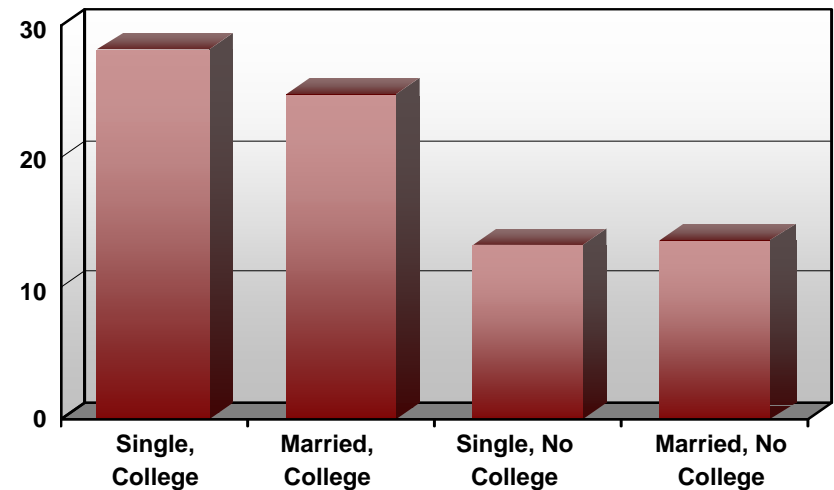
**Building HC Economies**

# Why the Young?

**Percent Movers by Age Group**



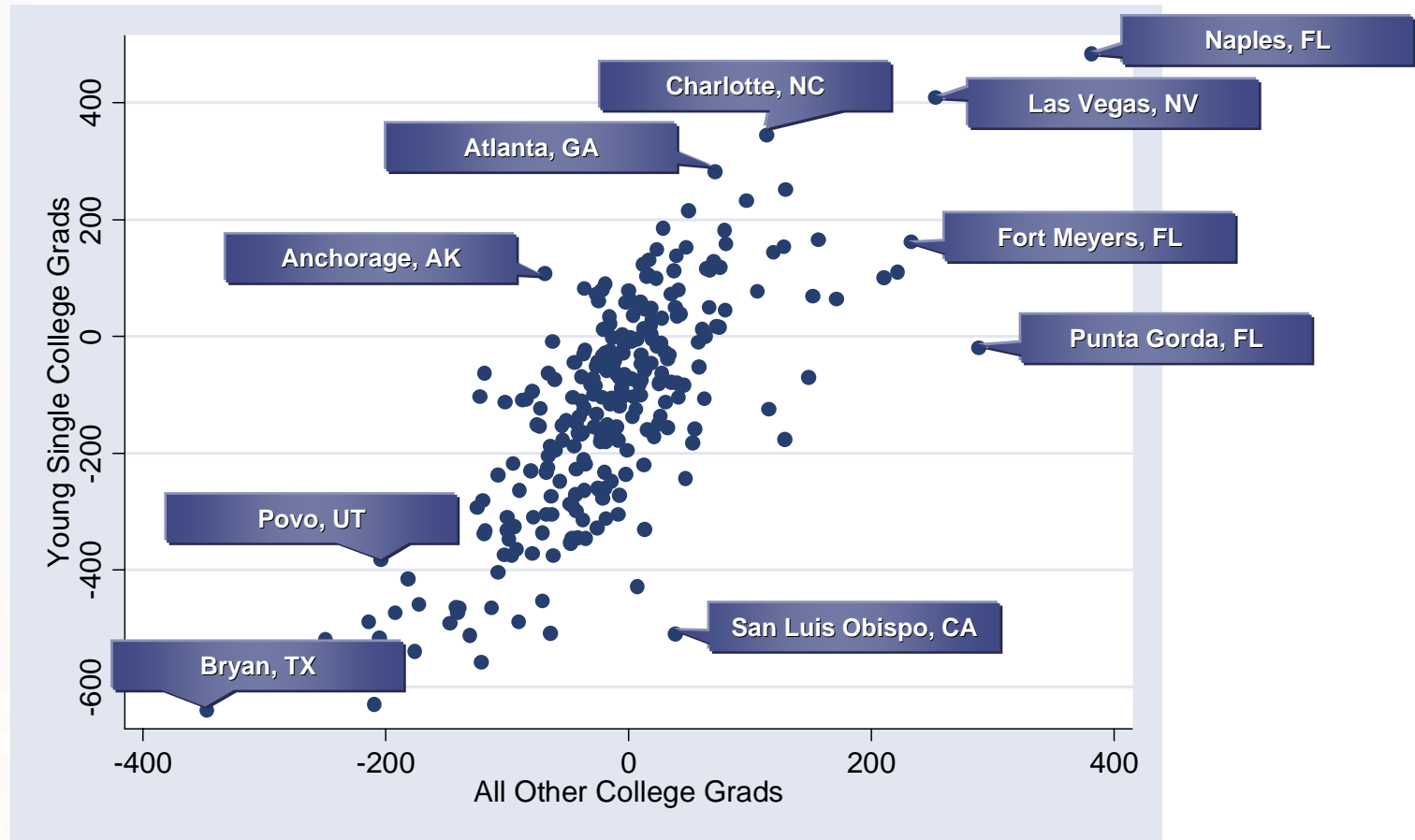
**Percent Movers 25 to 39  
by Education and Marital Status**



*Source: Census Bureau Special Report, Movers from Out of State Only*

**Younger Age Groups Are More Mobile, and BAs Move More than Non-BAs**

# Migration Patterns Vary Little by Age



***Both Groups Have Similar Migration Patterns***

# Age Effects Don't Matter Much

**General pattern is similarity, not difference, in migration models of young, single graduates relative to other grads.**

- **College town effects are especially strong for young grads**
- **Young grads migrate to larger MSAs**
- **Young grads migrate more to MSAs with high attainment**
- **Young grads are more likely to move to or stay in MSAs with non-white population**
- **Young grads are more likely to leave MSAs with manufacturing/production jobs**



# Agenda

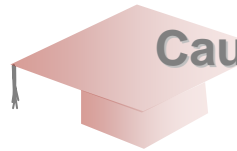
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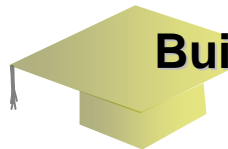
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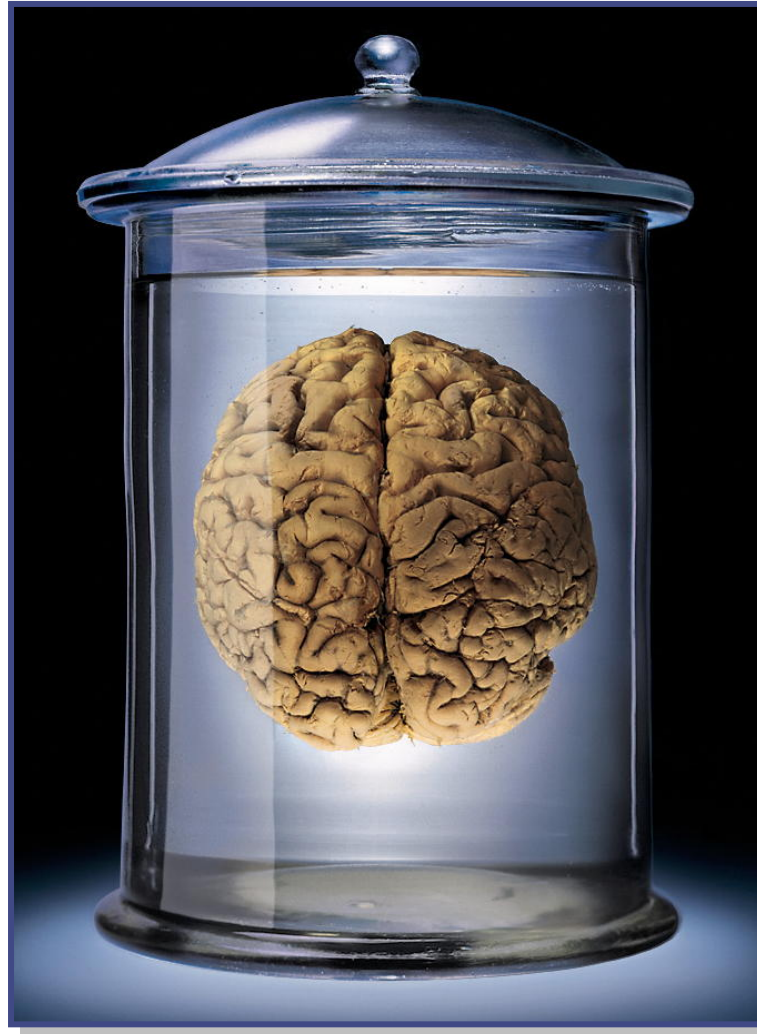


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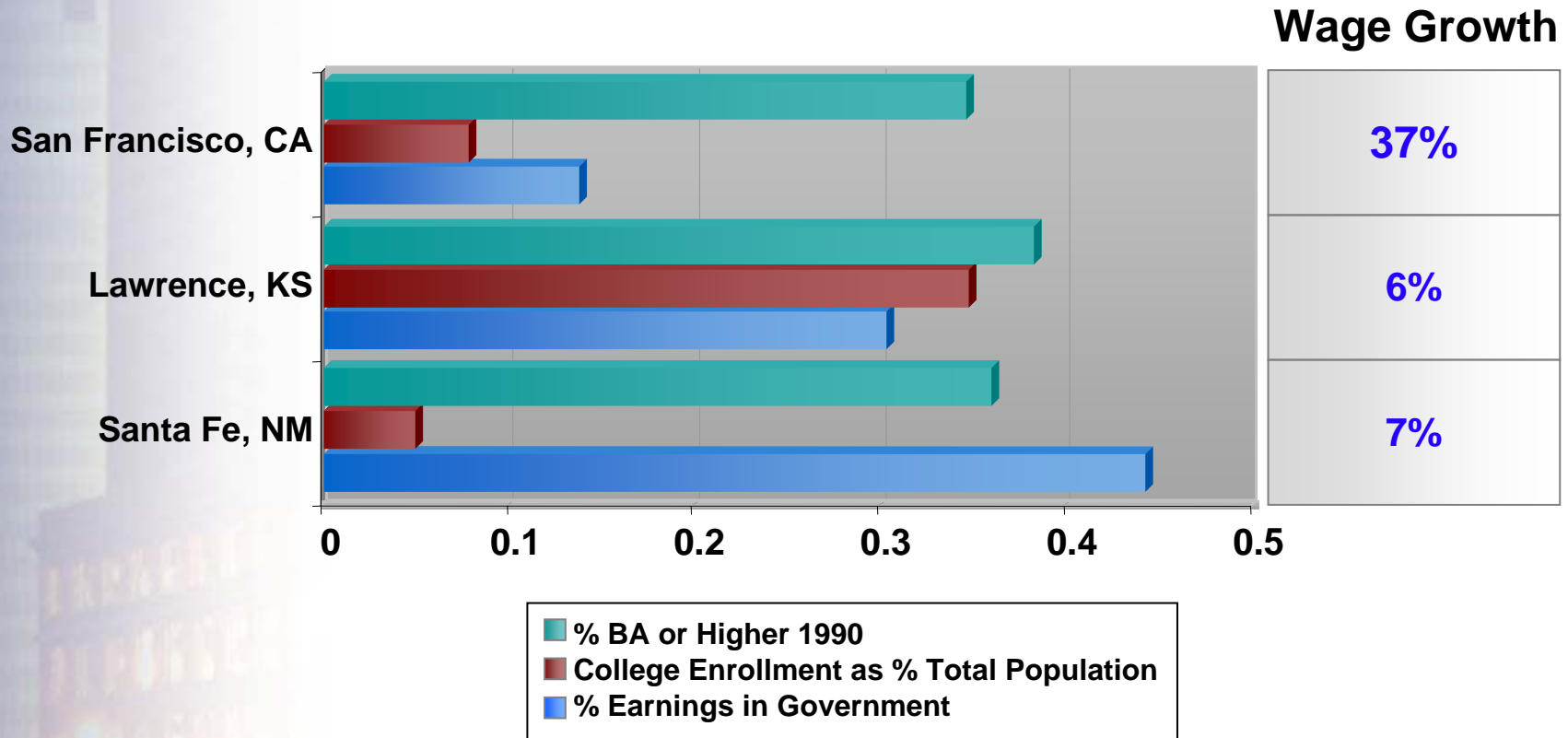


**Building HC Economies**

# Education Must Be Deployed To Increase Productivity



# Education Alone is not Enough



***What People Do Is as Important as What They Know***

# The Economics of Human Capital

- **Education matters only as a component of *Human Capital* -- the level of skill and expertise embedded in the labor force**
- **Human Capital is more important to productivity than ever in the knowledge economy**
- **Human Capital is more productive when concentrated, such as in cities, and in knowledge occupations or functions**
- **Both workers and firms are attracted by pools of human capital deployed in knowledge job networks and economic functions**

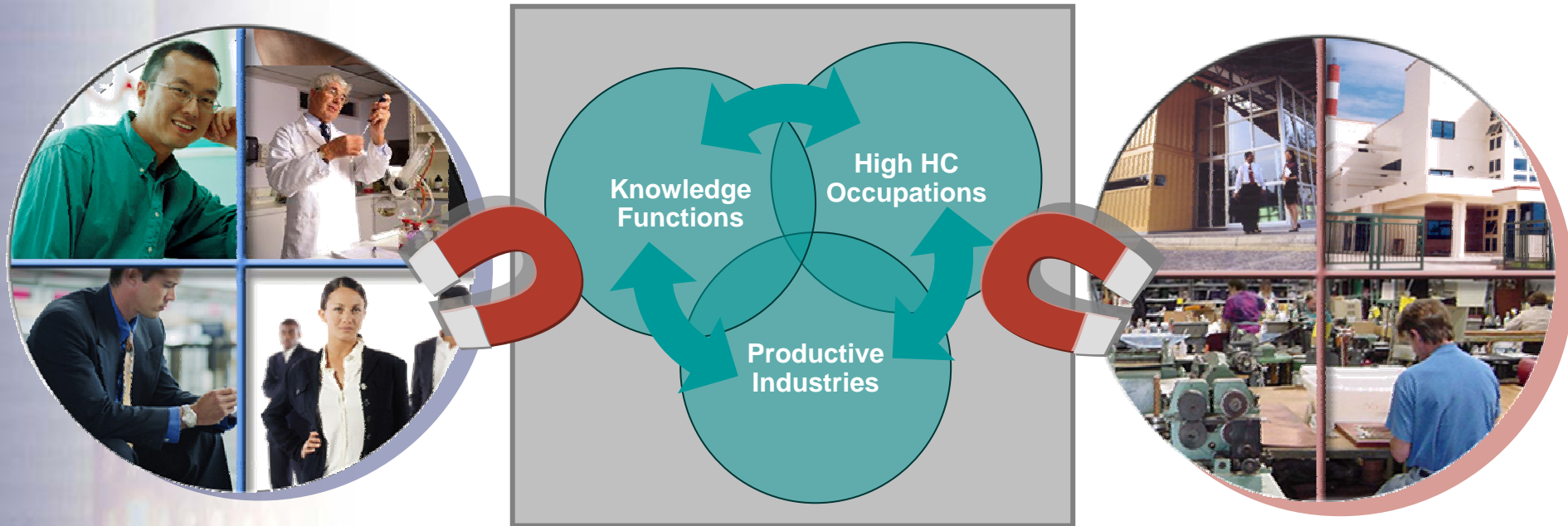
# It's not the Chicken or the Egg – It's the *Incubator*

IT'S ABOUT PRODUCTIVITY

Knowledge Workers

Active Human Capital

Industry



**To Attract Knowledge Workers, Build an  
Economy Characterized by High-Human Capital  
Occupations and Functions**



# Policy Implications

## 1. Take Care of the Basics

- Increase Human Capital through Education and Training
- Support Innovation
- Invest in Knowledge Institutions



## 2. Target Local Opportunities

- Identify Existing Occupational, Functional Concentrations or Opportunities
- Target High Human Capital Sectors and Occupations that are likely to Grow and Offer Cross-fertilization Opportunities

## 3. Build a Human-Capital Intensive Economy

- Support Business Formation in Key Sectors and Functions
- Create Rich Networks of People and Jobs
- Invest in Amenities and Quality of Life to *Complement* Your Strategy, not to Supplant It



# Examples of Programs to Strengthen Human Capital Intensive Economy

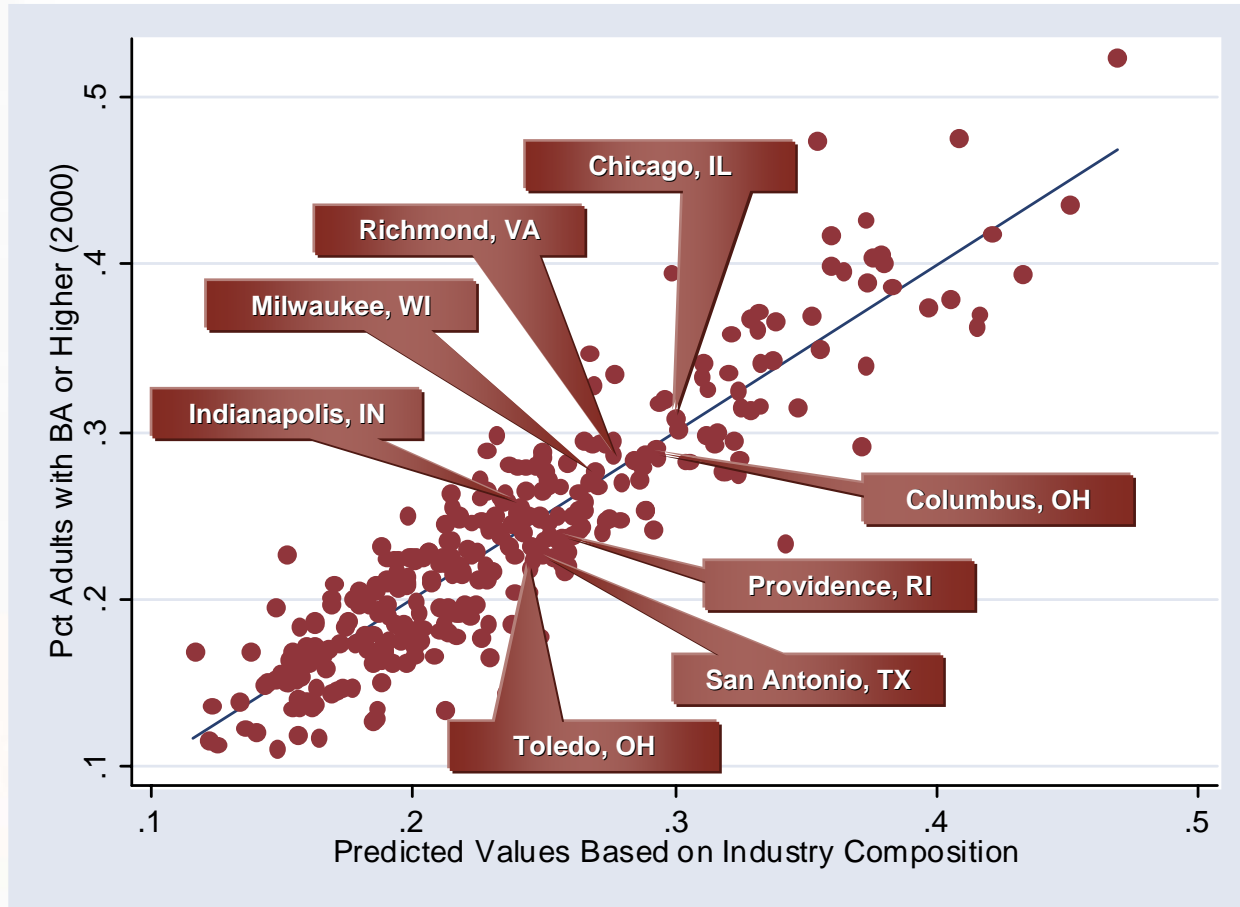
## (1) Support business formation in key sectors and functions:

- Innovation and Commercialization of Knowledge: technical assistance programs, cooperative R&D centers, technology transfer.
- Entrepreneurship: entrepreneurship education in schools and universities, business incubators, efficient regulatory and licensing process.
- Targeted Access to Capital: ensure appropriate types of capital to support stages of targeted business development (seed money, venture capital, mezzanine financing, SBA loans).

## (2) Create Rich Networks of People and Jobs:

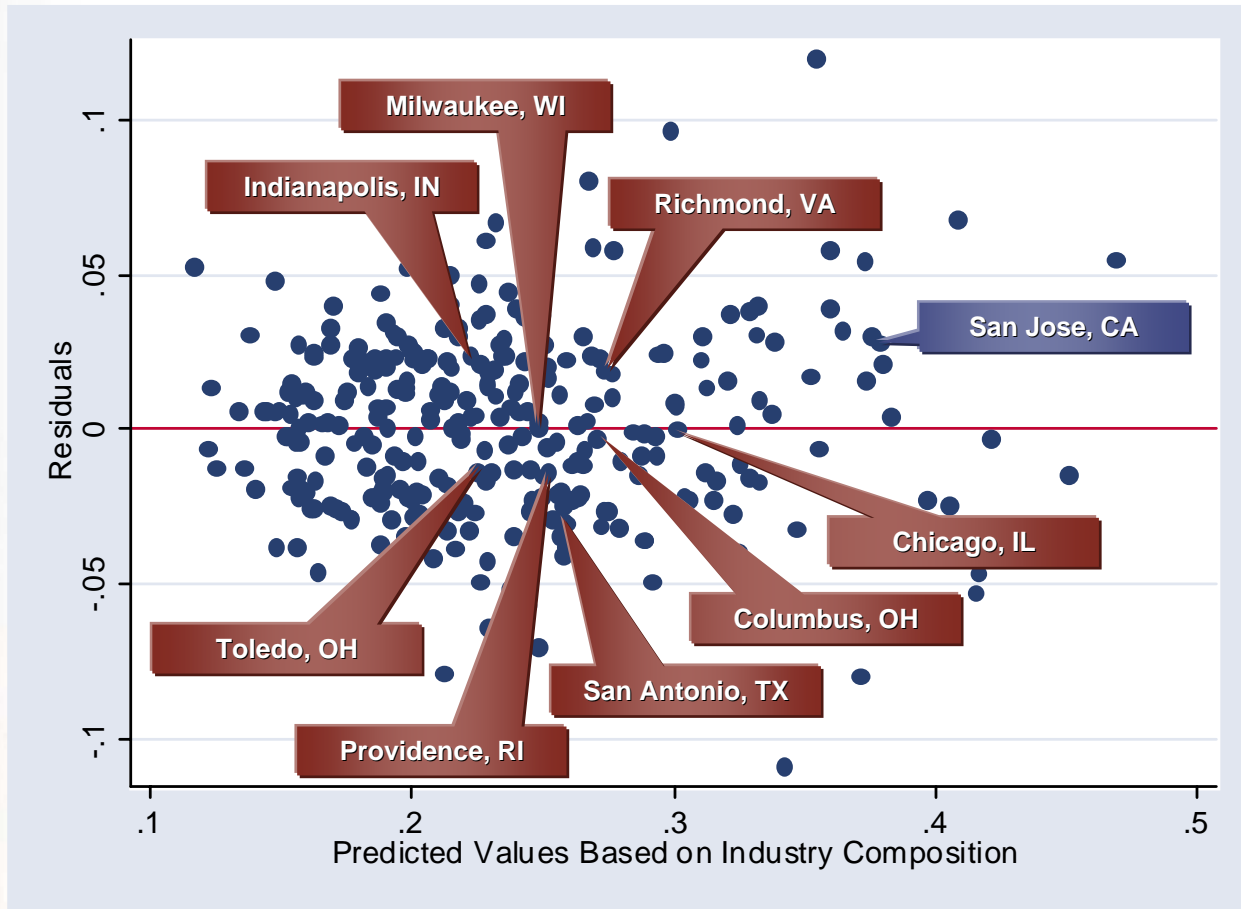
- Industry Research Centers: support university-industry partnerships (e.g. Research Triangle Park); invest in industry innovation initiatives (e.g. Innovation @ Scale project in RI; Bay Area Science and Innovation Consortium)
- Professional Organizations: support and strengthen already existing networks; create “knowledge hubs” to share learning and best practices.
- Job Market Connections: Set up targeted internship programs, aimed particularly at students in fields that city seeks to strengthen (e.g. KIP in Philadelphia, Summer of the Cuyahoga program in Cleveland).

# Practical First Steps: Do You Have Knowledge Industries?



***Industrial Composition Predicts Attainment***

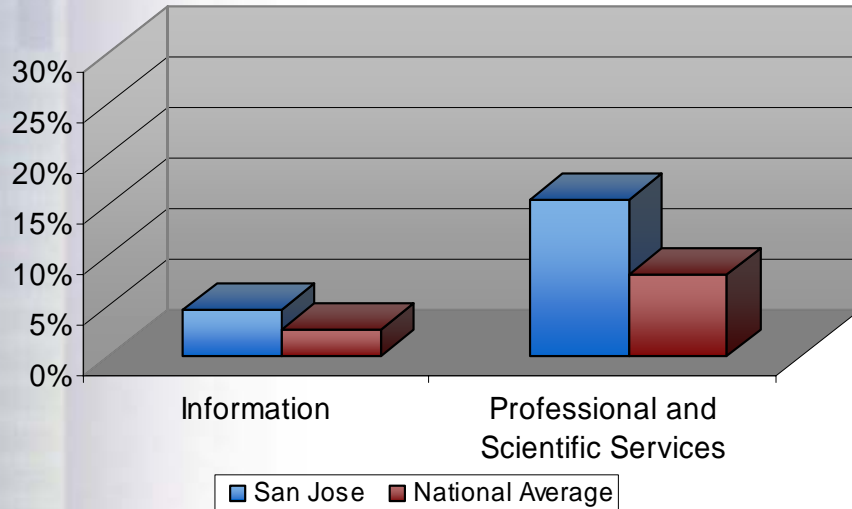
# It's Not Just Where You Work



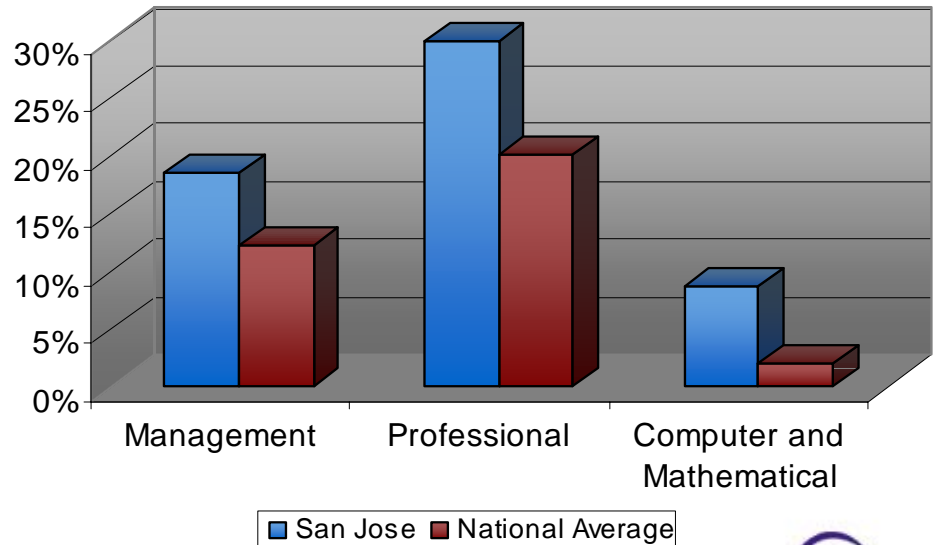
***Over or Under Performance Compared to Predicted***

# ... It's What You Do

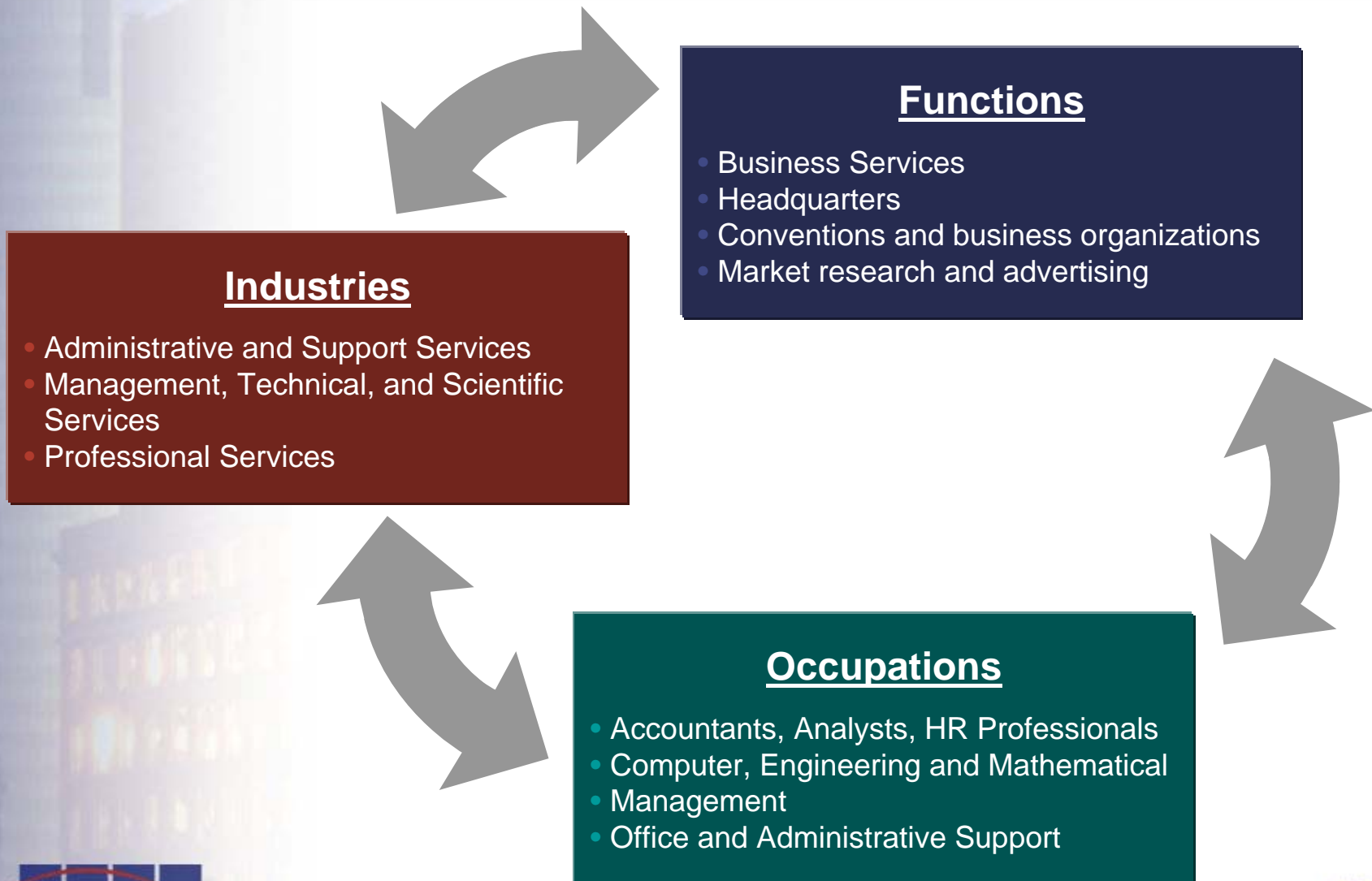
### San Jose - Industries



### San Jose - Occupations



# Example: Kansas City



# Take-Aways

- **“It’s the Economy, Stupid”**
- **It’s the *Knowledge* Economy**
- **Amenities Matter at the Margin**
- **Find the Nexus of Knowledge Industries, Functions, and Occupations**



**It’s not the Chicken or the Egg:  
It’s a Human Capital-Based Economic Strategy**

# Grads and Fads

The Dynamics of  
Human Capital Location

## ***DISCUSSION***



by: Robert Weissbourd, RW Ventures &  
Christopher Berry, Harvard University