Is America in Decline?

- For the first time in America’s history, this generation’s standards of living are lower than those of the previous generation.
  - Real earnings of average male worker today are declining and have reached 1978 levels
  - Income inequality and uncertainty have been growing
<table>
<thead>
<tr>
<th></th>
<th>1980</th>
<th>2010</th>
<th>Percent Change</th>
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<td>Drop Out</td>
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<tr>
<td>College</td>
<td>$25.2</td>
<td>$31.5</td>
<td>+25%</td>
</tr>
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</table>
Lights and Shadows

• The economic picture is more complex than the current debate may suggest

• America’s labor market is undergoing a momentous shift that is reshaping its economy and its geography.

• While some sectors and occupations are dying, others are growing stronger. Most of all, the geography of jobs is shifting in profound ways.
What the book is about

- This book concerns the most important changes that have taken place in the US labor market the past three decades and the ones that we can expect in the next three decades: globalization, technological progress, immigration.

- The effect of these changes is very different for different groups of workers and especially for different cities.

- Example: globalization has a positive effect on the labor market of some cities; it has a negative effect on the labor market of other cities.
The Demise of a Giant

- Over the past 50 years, the US economy has shifted from a labor force centered on manufacturing to a labor force centered on the innovation sector.
• Since 1985, the US has lost an average of 350,000 manufacturing jobs per year.

• Causes:
  
  - globalization
  
  - technological progress

• The productivity paradox
  
  Example: GM

• These trends are unlikely to be reversed
Effects of the Decline of Manufacturing

- The effect is geographically uneven

- Detroit has lost over a million residents. Its unemployment rate is three times the national average. The murder rate is the highest in America. Its housing values have dropped more than those of any other city.

- Even more painful is the indirect effect: Every time a city loses a manufacturing job, additional jobs are lost through decreased demand for local services: Barbers, waiters, lawyers, doctors, cleaners and retailers, etc.

- The loss of construction jobs is particularly painful in Rust Belt cities.
Multiplier Effect

- For each manufacturing job lost, 1.6 additional jobs are eventually lost outside the manufacturing sector in the same city over the next 10 years (Moretti, 2010)

- Effect is larger for skilled jobs, because they command higher earnings.

- Losing one additional skilled job generates 2.5 additional jobs losses local goods and services.

- The corresponding figure for unskilled jobs is 1.
The Rise of Innovation

- Jobs in the innovation sector are growing

- Diverse set of human capital intensive industries

Examples:

- Information technology, software, Internet services
- Life science
- Clean-tech
- New materials (nanotechnology, etc.)
- Digital entertainment
- Parts of finance, marketing
Figure 2: The Rise of Jobs in Innovation
Why Are Innovation Jobs Growing?

- The same two forces that have caused the demise of manufacturing are causing the rise of innovation jobs

- Globalization
  - Fixed vs variable costs

- Technological progress
An Example: the iPhone

- Designed in California, Assembled in China
- The rise of Shenzen
- Where is value added?
- Wages and economic rents
- What about outsourcing?
Why Should We Care?

- The typical American worker will never work for Google or in biotech. Why should she care?

- Traded vs non-traded

- 65% of jobs are in local services (non-traded sector)
  
  Examples:
  
  - 33% in Education and health services
  - 25% in Retail, leisure and hospitality
  - 14% in Professional and business services

Most of the 27 million jobs created by the labor market over the past two decades were in the non-traded sector, with health care as the fastest growing component.

- Even in Silicon Valley, most jobs are in services, not high-tech
Innovation as Economic Engine

- The rise of the innovation sector does not mean that the majority of jobs will ever be in innovation.

- Innovation matters because
  1) Productivity growth comes from the tradable sector
     It used to be manufacturing. Today is innovation

  2) Multiplier effect: High tech industries have the largest multiplier.
     - For each new high-tech job in a city, five additional jobs are created outside high-tech in that city over the next 10 years (Moretti, 2010)

- This is why the rise of innovation is so crucial: it is more than just the jobs in innovation that are at stake—the entire nation’s economy is at stake.
How the Innovation Economy Reshapes Communities: A Tale of Two Cities

- Seattle economy looks pretty good today: largest concentration of software jobs in the world

- In 1979, Seattle was more similar to Detroit

- That year, Microsoft moved from Albuquerque to Seattle

- Albuquerque had more high tech than Seattle

- From that point on, Seattle kept growing, Albuquerque stagnated
The Changing Geography of Jobs

- The growth of human capital intensive industries is not spread uniformly across US cities =>
  The rise of the innovation sector benefits some cities but not others

- Human capital is one of the best predictors of a city economic success

- There are enormous differences in human capital and wages across US metro areas
<table>
<thead>
<tr>
<th>Rank</th>
<th>Rank</th>
<th>Percentage with College Degree</th>
<th>Salary of College Graduates</th>
<th>Salary of High School Graduates</th>
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<td>Merced, CA</td>
<td>306</td>
<td>11%</td>
<td>62411</td>
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</table>
Large Differences Between Cities

Stamford, CT has five times the number of college graduates per capita as Merced, CA.

This difference is much larger than the difference that we typically see in European countries.

This difference is much larger than the difference in schooling between the United States and many developing countries, like Peru (three times), South Africa (four times) or India (three times).
The disparity between cities is more than double the disparity between workers with different levels of education.

The difference in the average earnings between workers with a college degree and a high school diploma in cities like Raleigh-Durham or Austin is about $13,000;

The difference in average earnings between high school graduates in Raleigh-Durham or Austin and high school graduates in Flint or Merced is about $33,000.
High school graduates in the top group often make more than college graduates in the bottom group.

The average worker with a high school education living in Boston makes $62,423, or 44 percent more than a college graduate in Flint.

A high school graduate in San Jose earn $68,009, thousands more than college educated workers in Merced, Yuma, Danville.

It is not just that cities with a high concentration of skilled workers pay high average salaries because they have many college educated residents, and these residents earn high salaries. There is something more at play here. Cities with a high concentration of skilled workers pay high average salaries to non-skilled workers.
Why Your Salary Depends on Your Neighbor’s Education

- Complementarity

- Employers in cities with more human capital invest more in new technology

- Human capital spillovers
Social and Private Return to Education

This externality is good news for less educated workers in highly educated cities because it means that they end up earning more than they would otherwise.

But it also implies that well-educated individuals are not fully compensated for the social benefits that their education generates.
Geography Matters

Many observers (and some economic models) argue that because of cheap communications and cheap transportation, geography does not matter anymore.

Thomas Friedman: The World is Flat

Prediction: economic activity will spread quickly to low costs area within the US and abroad.

The reality is that geography matters more and more and economic activity is increasingly concentrated.
Divergence in Schooling

Gains in the Share of College Graduates Since 1980

- Cities with Few Coll. Grads
- Cities with Many Coll. Grads
Divergence in Earnings

Gains in Earnings of College Graduates Since 1980

- **Cities with Low Earnings**
- **Cities with High Earnings**
What Explains the Geographical Concentration of Economic Activity?

Why is the innovation sector more and more concentrated in high cost cities?

Example: Walmart.com

What is so special about Silicon Valley?
Economic Benefits of Innovation Clusters

- Thick labor markets
- Thick markets for intermediate inputs
- Human capital externalities

The forces of agglomeration imply that this divergence will keep increasing over time
Why Are Innovation Clusters Located Where They Are?

- Biotechnology Industry
  - Boston
  - San Diego
  - Bay Area

- Software Industry

- Film Industry

Policy Question: Can clusters be engineered?
The Effects of the Great Divergence

The growing divide among US cities is driven by economic forces.

These economic differences are causing an increasing divide in many social, cultural and political aspects of American communities.

Let’s take a look at three striking examples.
Divergence in Health

Large differences in life expectancy:

Example: Male life expectancy

Fairfax, VA; Marin and Santa Clara, CA: 81 years

Holmes, MS; Tunica, MS; and Baltimore, MD: 66 years
Life Expectancy Gains Since 1987

- Counties With Low Expectancy
- Counties With High Expectancy
Divergence in Divorce

The city with the highest divorce rate is Flint, MI.
Divergence in Political Participation

The ten counties with the highest voter turnout in 2008 cast a number of votes per capita four times larger than the ten counties with the lowest voter turnout.

![Change in Voter Turnout in Presidential Elections Since 1992](image)

- **Counties with Low Turnout**
- **Counties with High Turnout**
What Does This All Mean for the US?

Good News: the forces of agglomeration represent an important competitive advantage that anchors the innovation sector in the US

Bad News: not all parts of the US benefit. Differences among US communities are bound to increase