

# Leveraging Existing Data in Business Surveys

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Disclaimer: Any opinions and conclusions expressed herein are those of the author(s) and do not necessarily represent the views of the U.S. Census Bureau.

# Background

- Traditional Design based surveys
  - largely self contained
  - rarely any longitudinal treatment
  - over sample larger units to get aggregates correct for lower cost (miss dynamics of young/small businesses)
  - little if any consideration in design to linking to other survey or admin data
- Survey issues
  - Declining response rates
  - Expensive relative to other data collection modes

# Background

- However, it's possible to design business surveys to take full advantage of other pre-existing data and ongoing collection activities.
  - Better frames
  - Data rich world
  - Utilize panel features
  - Improve efficiency of data collection

# Importance of good Frames

- Non-survey (“organic”) data have unknown measurement characteristics
- Linking to universe frames and scientific survey data can help address this
- Question is, do you have a valid frame for the measurement task?

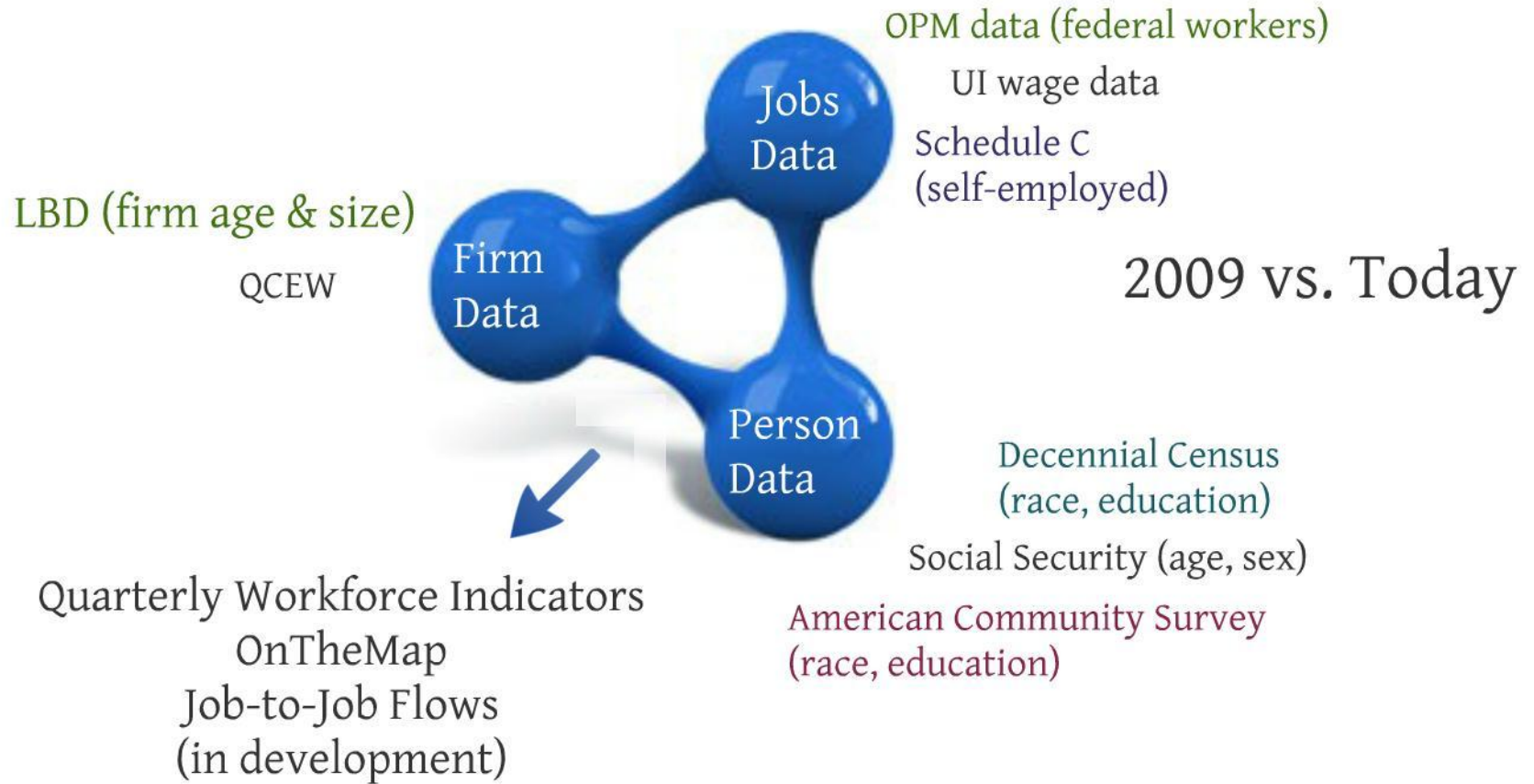
# Business Frames

- Universe (or near universe) administrative data make excellent frames for business surveys.
  - Low cost and high quality
  - Good system of identifiers (IDs, names, addresses etc)
  - Some longitudinal information
  - Can directly support the creation of data products (e.g., CBP, LBD/BDS, LEHD)

# Business Relevant Frames at the Census Bureau

- Business Register – ***Establishments and Firms***
  - **Employer businesses** (payroll and business income tax, BLS records, survey and economic census data)
  - **Non-employer businesses** (income taxes)
- LEHD Infrastructure – ***Jobs Frame*** (QCEW and UI Wage data from states, OPM)
- Master Address File – ***Housing Units and Addresses*** (postal service, Census, other sources)

# LEHD Linked Employer-Employee Data



# Example of recent Census Bureau survey explicitly designed to leverage pre-existing data

- Management and Organization Practices Survey (MOPS)
  - Collaboration of research team from Stanford, MIT, LSE and Census
  - Jointly funded by Census and NSF
  - Modeled on surveys academic team members fielded previously



# MOPS Design

- Primary goal to look at impact of management and organization practices on productivity
- Survey conducted as a supplement to the Annual Survey of Manufactures (ASM)
  - Limits to survey to U.S. manufacturing establishment
  - BUT, automatic access to rich establishment information from the ASM and Economic Census

# MOPS Design

- Management and Organization practices measured from MOPS survey responses
- Productivity computed from ASM responses
- Firm characteristics available from the Longitudinal Business Database (LBD)
  - Firm size, age, structure
- Similar to 1999 Computer Network Use Supplement (CNUS)
  - BUT MOPS makes **explicit** use of ASM in building public use products

# Management and Organizational Practices survey (MOPS)

Delivered to 47,534  
manufacturing plants in 2011

Quick and easy to fill out -  
and mandatory - so 78% of  
plants responded, covering  
5.6m employees (>50% of  
US manufacturing  
employment)



U.S. DEPARTMENT OF COMMERCE  
Economics and Statistics Administration  
U.S. CENSUS BUREAU  
FORM  
MP-10002 (DRAFT)

## 2010 MANAGEMENT AND ORGANIZATIONAL PRACTICES SURVEY

OMB No. 0607-0963; Approval Expires 2/28/2014

MP-10002

**Need help or have questions  
about filling out this form?**

**Visit** [www.census.gov/econhelp/mops](http://www.census.gov/econhelp/mops)

**Call** 1-301-763-4673, between 8:00 a.m.  
and 4:30 p.m., Eastern time, Monday  
through Friday.

- OR -

**Write** to the address below.  
Include your 11-digit Census File  
Number (CFN) printed in the mailing  
address.

**Mail** your completed form to:

**U.S. CENSUS BUREAU  
1201 East 10th Street  
Jeffersonville, IN 47132-0001**

(Please correct any errors in this mailing address.)

**YOUR RESPONSE IS REQUIRED BY LAW.** Title 13, United States Code, requires businesses and other organizations that receive this questionnaire to answer the questions and return the report to the U.S. Census Bureau. By the same law, **YOUR CENSUS REPORT IS CONFIDENTIAL.** It may be seen only by persons sworn to uphold the confidentiality of Census Bureau information and may be used only for statistical purposes. Further, copies retained in respondents' files are immune from legal process.

**INTERNET REPORTING OPTION AVAILABLE - We encourage you to complete this survey  
online at: [www.census.gov/econhelp/mops](http://www.census.gov/econhelp/mops)**

User ID:

Password:

Public reporting burden for this collection is estimated to be 30 minutes. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: Paperwork Project 0607-0963, U.S. Census Bureau, 4800 Silver Hill Road, ASDM - 3K138, Washington, DC 20233. You may e-mail comments to [Paperwork@census.gov](mailto:Paperwork@census.gov); use "Paperwork Project 0607-0963" as the subject.

An Office of Management and Budget (OMB) approval number is printed in the upper right corner of this form. Without displaying this number, we could not collect this information or require your response.

The reporting unit for this form is an **establishment** which is generally a single physical location where business is conducted or where services or industrial operations are performed.

10002012

# The Management and Organizational Practices survey asks about performance monitoring e.g.

**2** In 2005 and 2010, how many key performance indicators were monitored at this establishment?

Examples: Metrics on production, cost, waste, quality, inventory, energy, absenteeism and deliveries on time.

*Check one box for each year*

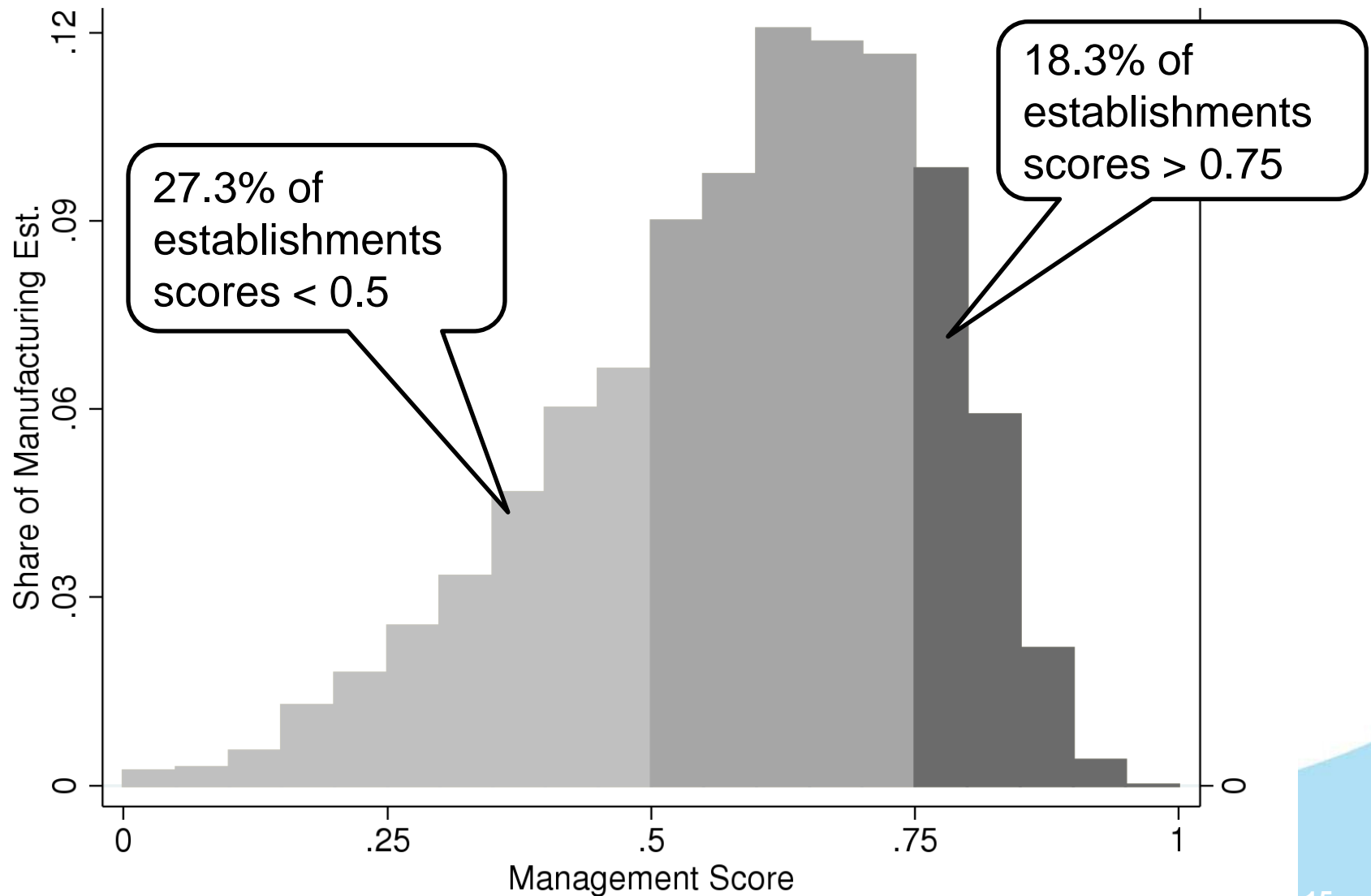
	2005	2010
1-2 key performance indicators . . . . .	<input type="checkbox"/>	<input type="checkbox"/>
3-9 key performance indicators . . . . .	<input type="checkbox"/>	<input type="checkbox"/>
10 or more key performance indicators . . . . .	<input type="checkbox"/>	<input type="checkbox"/>
No key performance indicators (If no key performance indicators in both years, SKIP to <b>6</b> ) . . . . .	<input type="checkbox"/>	<input type="checkbox"/>

# The Management and Organizational Practices survey asks about incentives e.g.

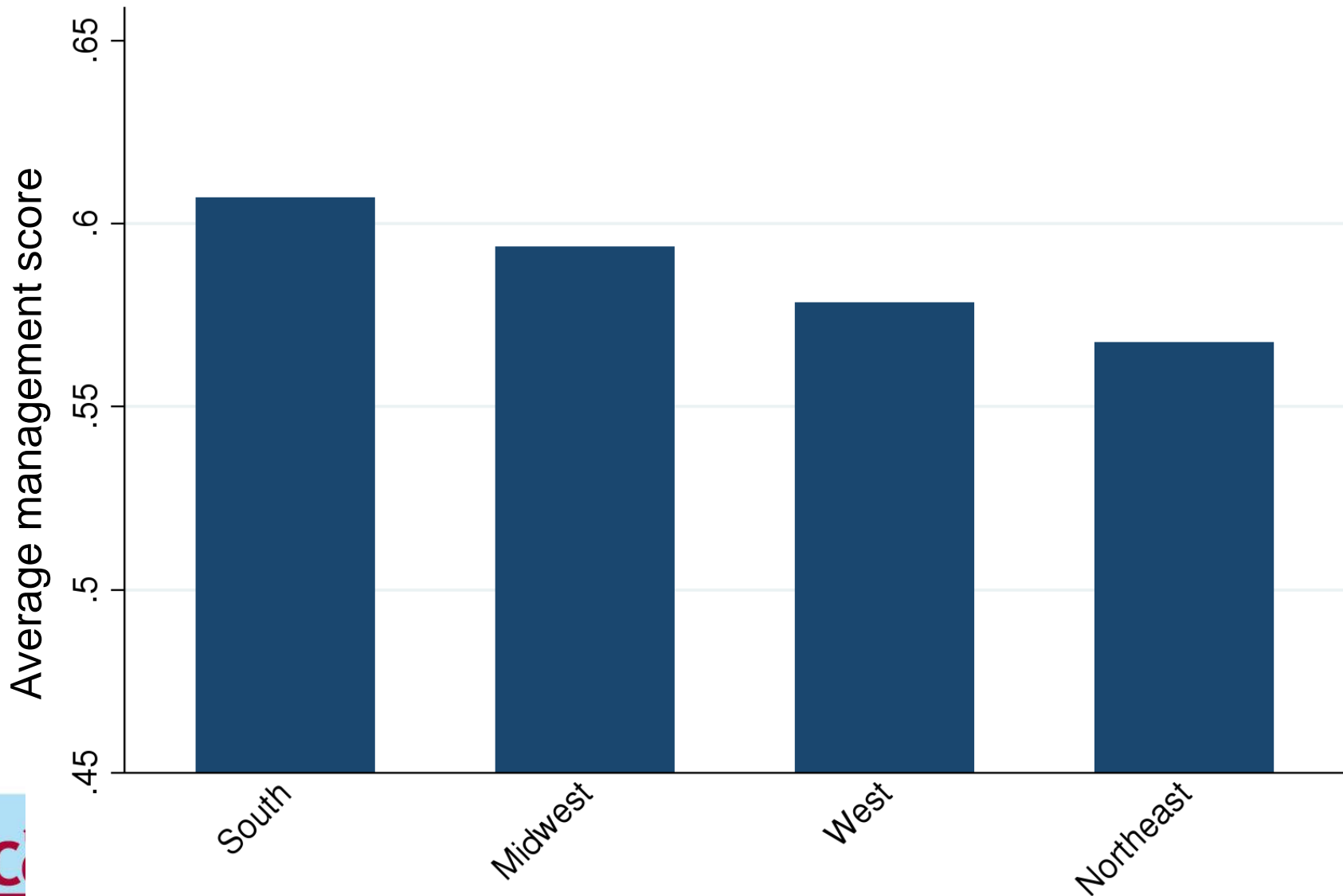
**10** In 2005 and 2010, when production targets were met, what percent of **non-managers** at this establishment received performance bonuses? *Check one box for each year*

	2005	2010
0% . . . . .	<input type="checkbox"/>	<input type="checkbox"/>
1-33% . . . . .	<input type="checkbox"/>	<input type="checkbox"/>
34-66% . . . . .	<input type="checkbox"/>	<input type="checkbox"/>
67-99% . . . . .	<input type="checkbox"/>	<input type="checkbox"/>
100% . . . . .	<input type="checkbox"/>	<input type="checkbox"/>
Production targets not met . . . . .	<input type="checkbox"/>	<input type="checkbox"/>

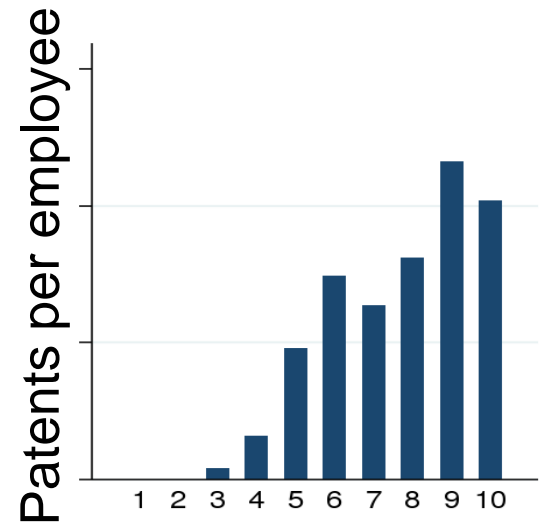
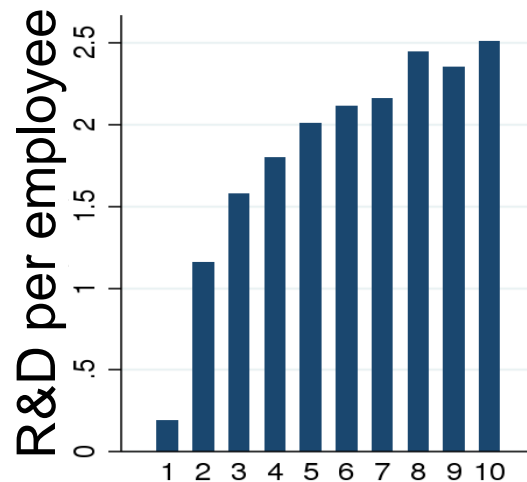
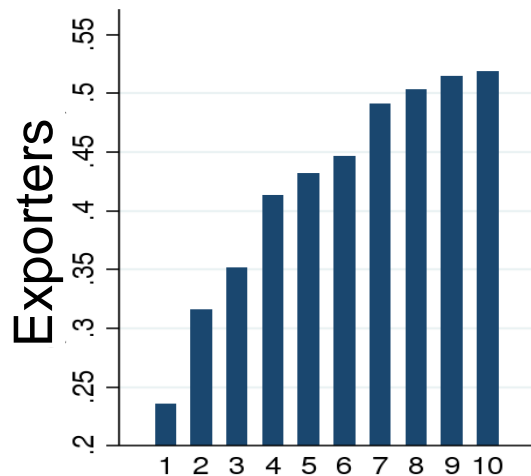
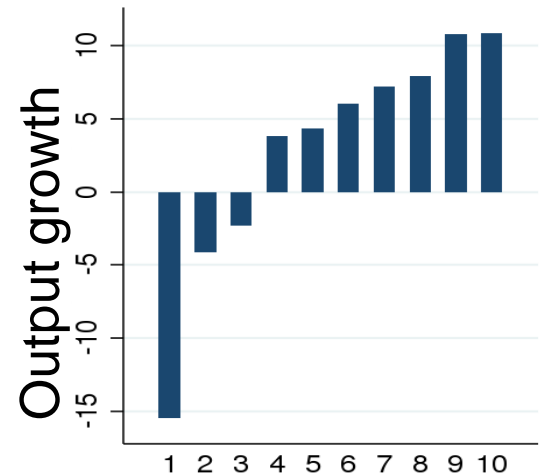
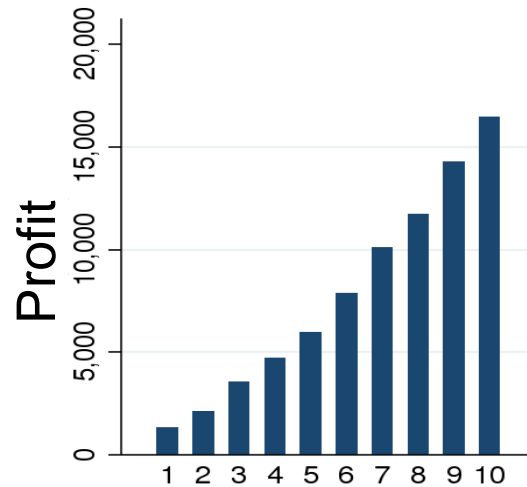
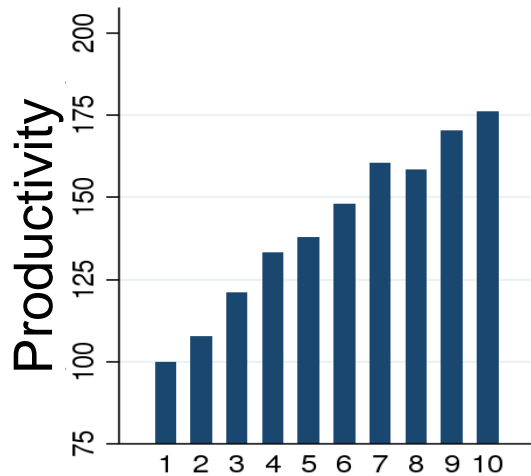
# There is a very wide spread of the adoption of structured management in the US



# The adoption of structured management practices varies across regions of the US



# “Structured Management” practices are associated with significantly better performance

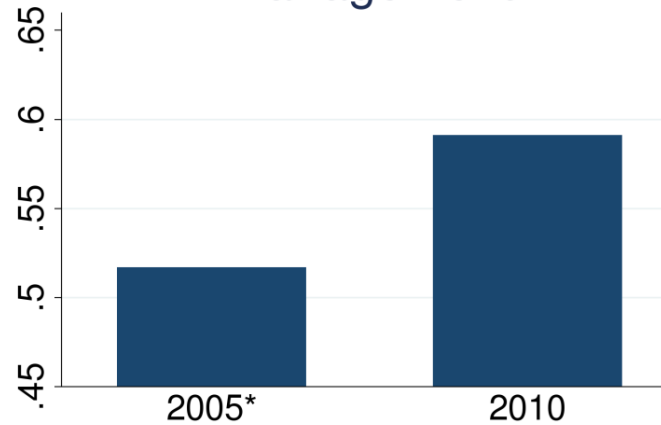




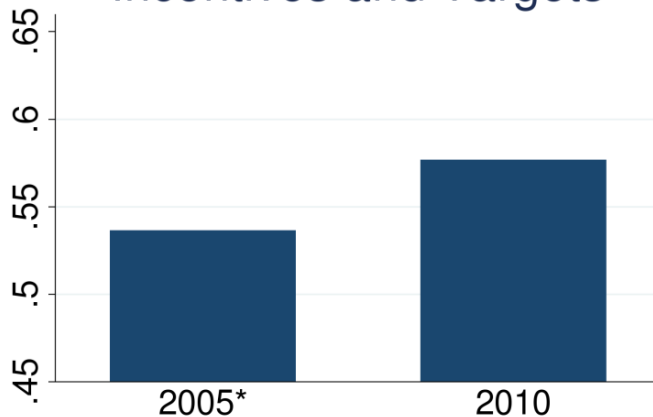
# Structured Management scores for data use have improved the most

*Presumably this reflect the growing use of IT in modern firms*

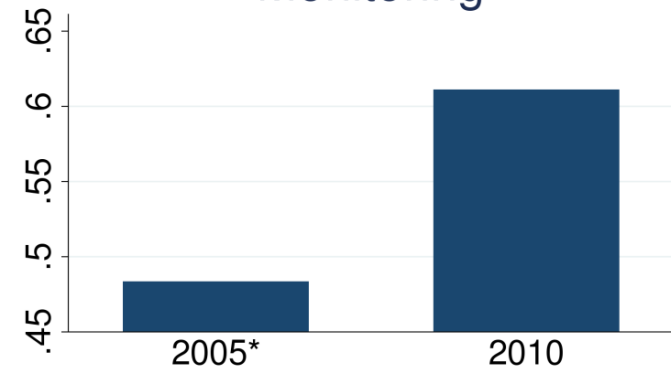
Management



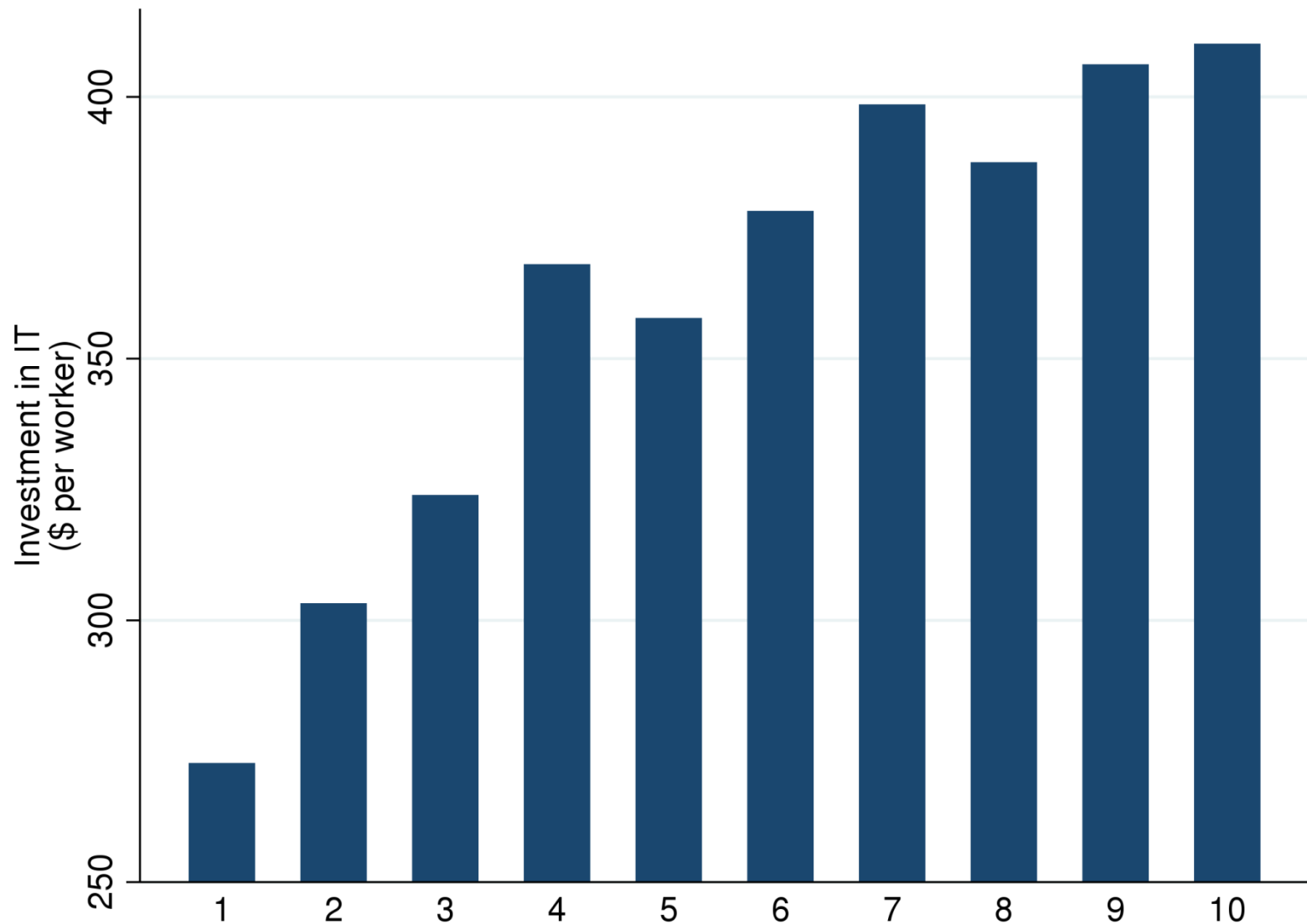
Incentives and Targets



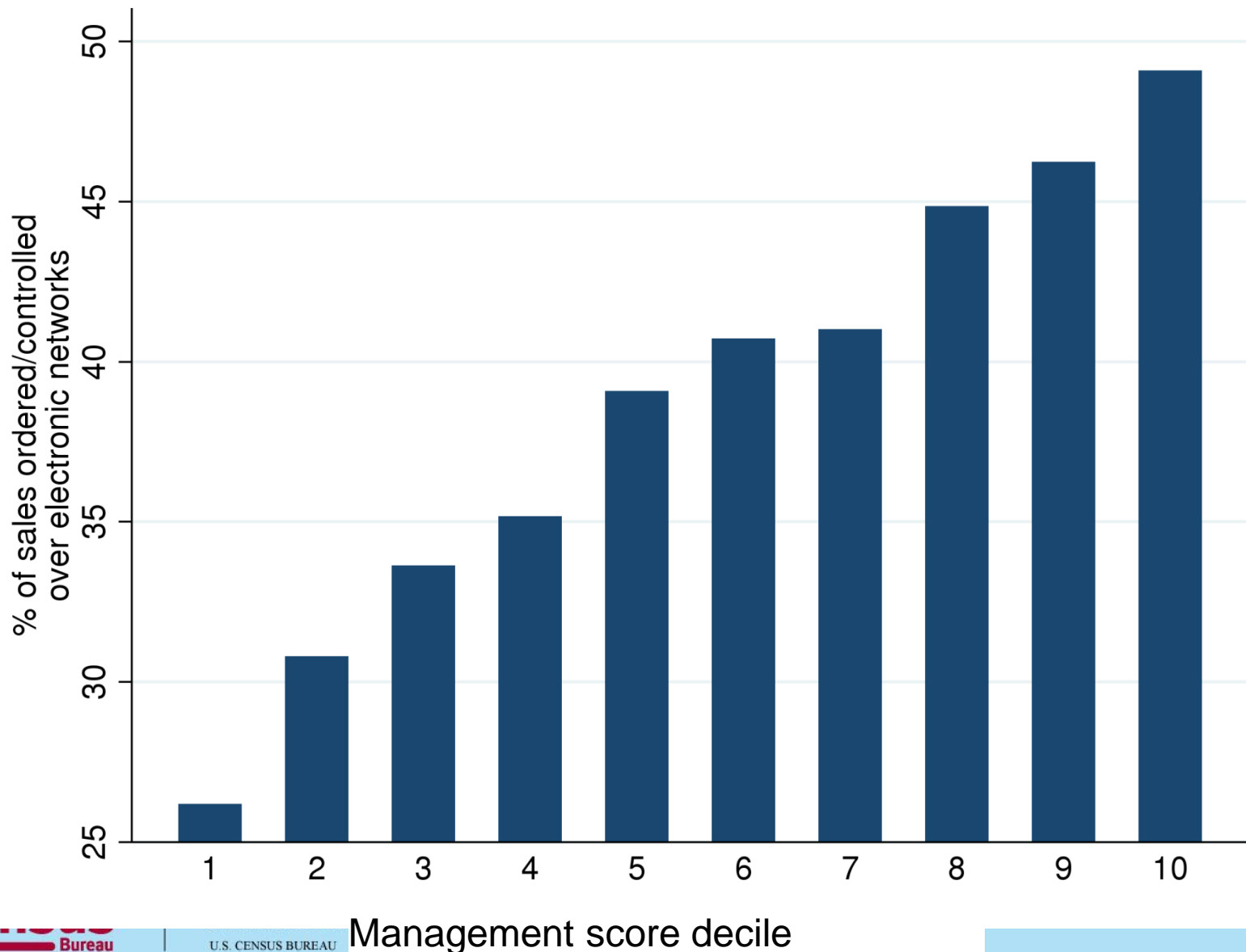
Data Driven Performance Monitoring



# Plants with more structured management practices are more IT intensive: IT per worker



# Plants with more structured management practices are more IT intensive: on-line sales



# Next Steps for the MOPS

- Available to approved RDC users
- Public-Use Micro File coming soon
- Benchmarking Website (direct benefit to respondents)
- Another wave in 2015?
- Expand to other sectors?

# Rethinking Data Collection

- Administrative data augmented with surveys
  - New measures from data like LEHD could allow us to stratify surveys based on new characteristics (e.g., degrees of worker turnover, occupational mix or similar)
- Data collection can be better optimized by fully utilizing administrative and survey sources together.
- Additional sources of “admin” data for businesses?
  - Scanners, RFID, Accounting systems

# Changing Role of Surveys

- Collect what admin systems do/can not.
- Refine/enhance what admin systems collect.
- Complex organizations have multiple and distinct sources for information.
- Surveys like the MOPS allow us to peer into the “Black Box”.
- Successful model developed with MOPS can be replicated, but resources always an issue.

# Issues with expanding and integrating the data infrastructure

- Importance of good link keys for mashing up data from different sources
- Computational issues
- Legal and policy issues
- Data access
- Too much information in one place?