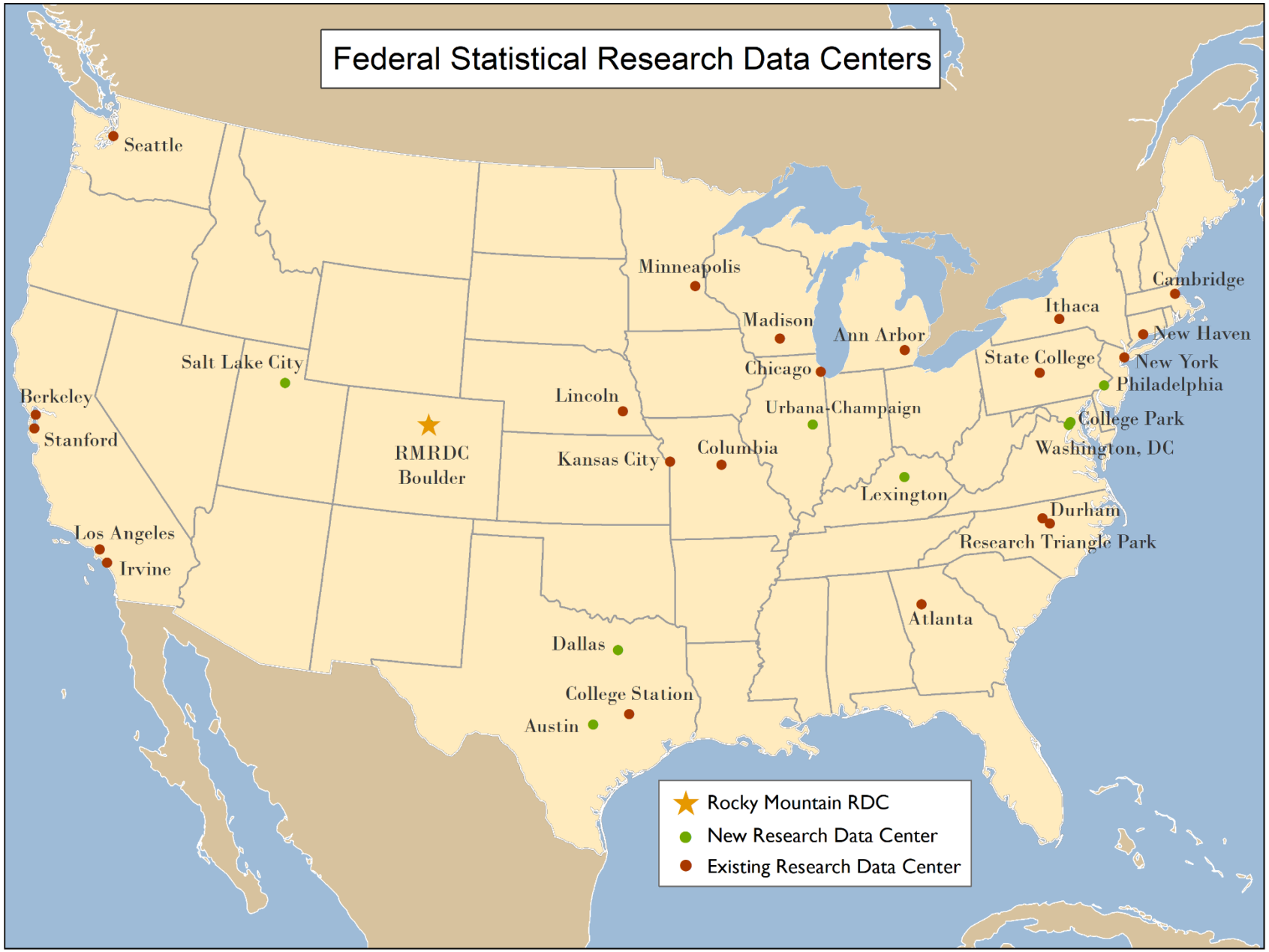
The Rocky Mountain Research Data Center (RMRDC)

Jani Little, Executive Director

Phil Pendergast, Administrator (Census)

Kas McLean, GRA (Econ)

A National Network of Scholars



What is a Federal Statistical Research Data Center (FSRDC)?

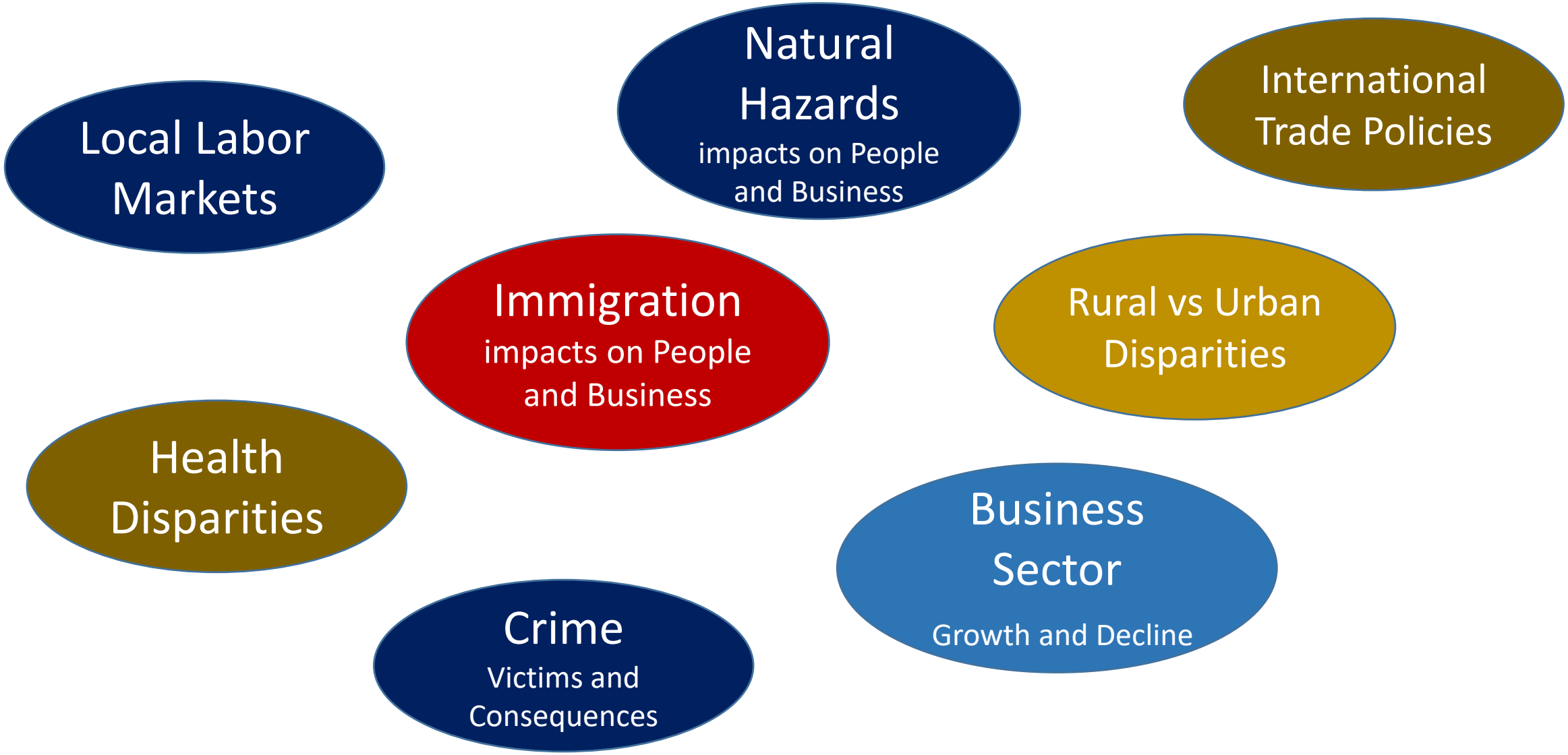
--A secure computing lab where restricted data, collected by federal agencies, can be accessed FOR STATISTICAL PURPOSES ONLY

--Confidentiality is protected by Federal Laws and Regs

--The Census Bureau directs all FSRDCs and the FSRDC Program

--FSRDCs are managed by an on-site Census employee—the administrator—who guides researchers on proposal development, enforces security guidelines, and serves as liaison with the research community.

Restricted Data to Investigate Society's Most Pressing Challenges



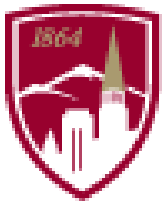
A Regional Network of Scholars

University of Colorado Boulder

Denver

Colorado State University

Anschutz



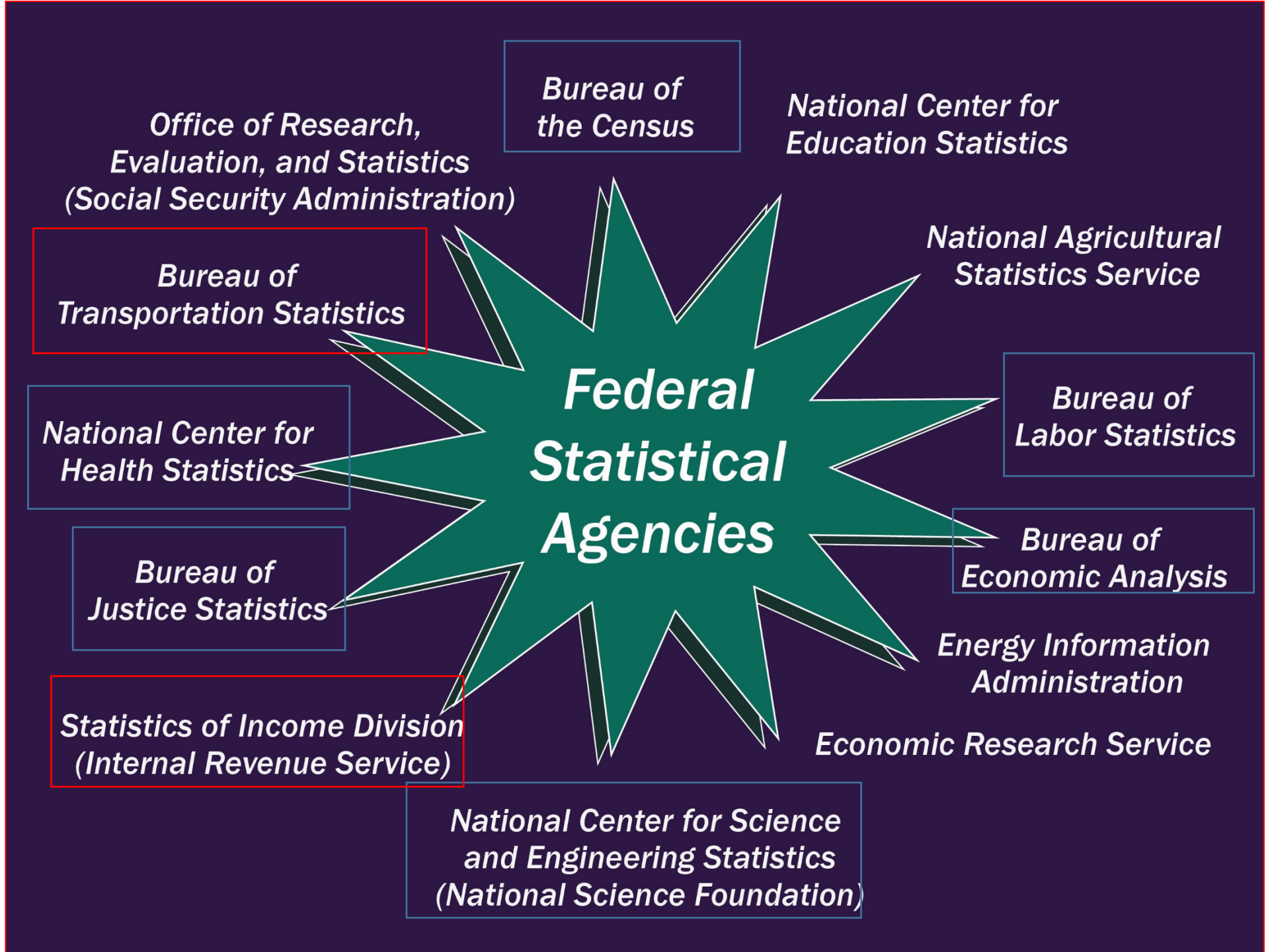
UNIVERSITY of DENVER

Today's Topics

Jani Little—Emerging Restricted-Data Offerings—Census, BLS, NCHS

Kas McLean—Longitudinal Business Database (LBD) and
Longitudinal Employer-Household Dynamics (LEHD)

Phil Pendergast—International Trade Data and
National Crime Victimization Survey (NCVS)


Federal Statistical Agencies
Bureau of the Census
National Center for Education Statistics
Office of Research, Evaluation, and Statistics (Social Security Administration)
National Agricultural Statistics Service
Bureau of Transportation Statistics
Bureau of Labor Statistics
National Center for Health Statistics
Bureau of Economic Analysis
Bureau of Justice Statistics
Energy Information Administration
Economic Research Service
Statistics of Income Division (Internal Revenue Service)
National Center for Science and Engineering Statistics (National Science Foundation)

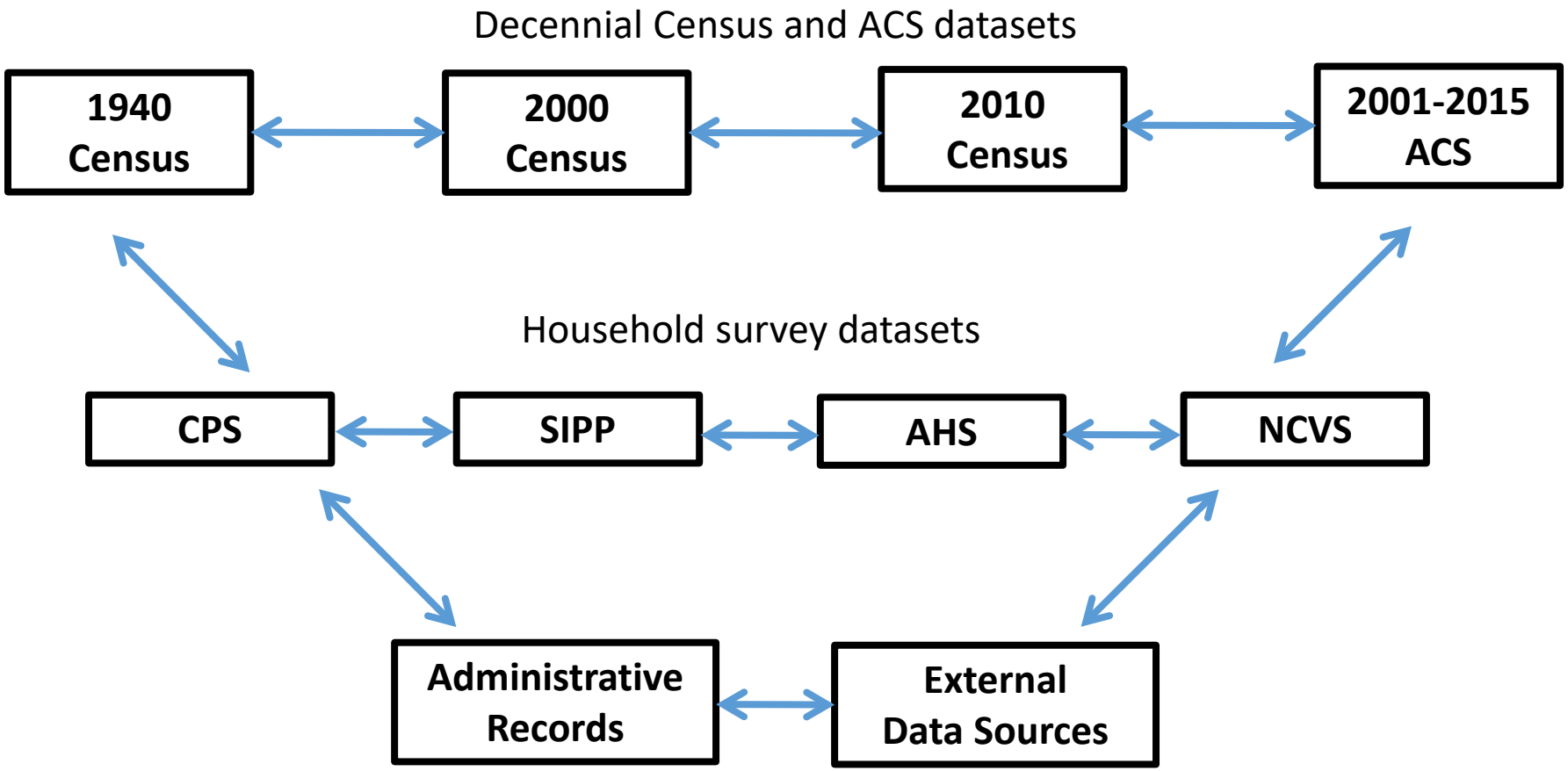
Public-Use Microdata: created so that original records cannot be reproduced or linked to other databases

1. No obvious identifiers or PII (personally identifiable information)
2. Includes only a portion of the surveyed sample
3. Includes only a selection of variables. Sensitive variables removed.
4. Limit geographic detail
5. Limit the number and detailed breakdown of categories within variables on the file, e.g., race and ethnicity, exact dates of events
6. Truncate extreme codes for certain variables (top or bottom coding), e.g., income
7. Recode into intervals or round continuous variables
8. No unique or sensitive populations: disabled children, teenagers with STDs, LGBT, mixed race persons
9. No highly unique records
10. Perturbed values or noise added

Restricted Access Microdata

1. No obvious identifiers or PII (personally identifiable information) replaced by PIK (Protected Identification Key) to allow linkages
2. Includes all microdata records
3. Includes unlimited number of variables including sensitive variables and LINKED data records
4. Geographic detail as precise as original data
5. Unlimited categories within variables on the file, e.g., race and ethnicity, exact dates of events
6. No truncated extreme codes for certain variables (top or bottom coding), e.g., income
7. No recoding into intervals or rounded continuous variables
8. Unique and sensitive populations included
9. Highly unique records
10. Original records unperturbed and without added noise

Census Longitudinal Infrastructure Project (CLIP)



Current projects making use of linked Census Data

- Linking 2010, 2000 full count census to assess race response changes and how is racial identity influenced by neighborhood characteristics

- Interracial couples and children's race – how are they reported, how does that change over time

Master Address File (MAF)

- MAF Extract
  - Complete list of addresses with lat/lon and geo information
  - Yearly snapshot of MAF can be used for research
- MAF-Auxiliary Reference File (ARF)
  - Links addresses to individuals

Current projects making use of MAF Linked Data

- Linking MAF with ACS data to get more precise estimates and characteristics of small areas and how they change over time.

Bureau of Labor Statistics (BLS) Offerings:

--Survey of Occupational Injuries and Illnesses (SOII)

--Census of Fatal Occupational Injuries (CFOI)

--American Time Use Survey (ATUS)

Current projects making use of ATUS

- How child care costs affect time spent away from home with spouse?
- How does smoking affect a single mother's time with children?

Current projects making use of MAF Linked Data

- Linking MAF with ACS data to get more precise estimates and characteristics of small areas and how they change over time.

Federal Statistical Data for Health Research and Policy Spring 2020

CU Denver|Main and Anschutz Medical Campus

Instructors: Jani Little, Phil Pendergast, Kas McLean

Fridays, 9am-12noon

Federal Statistical Data for Health Research and Policy Spring 2020

Students develop the knowledge and skills required to effectively use a variety of federal statistical data sets for health research and policy analysis.

Students get “hands on” exercises using SAS to analyze public versions of the federal data sets

The semester project is a restricted data proposal.

Federal Statistical Data for Health Research and Policy Spring 2020

Anyone at University of Denver is invited to attend the lectures (9-10am) by zoom

https://ucdenver.zoom.us/j/981548769

Federal Statistical Data for Health Research and Policy
Topics Covered and Schedule

• National Vital Statistics System (NVSS)	• Jan 31
• National Health and Nutrition Examination Surveys (NHANES)	• Feb 7
• National Health Interview Survey (NHIS) linked with National Death Index (NDI)	• Feb 14
• NHIS linked with Medical Expenditure Panel Survey (MEPS)	• Feb 28
• American Community Survey (ACS) and Current Population Survey (CPS)	• Mar 6
• National Crime Victimization Survey (NCVS)	• April 3
• Survey of Occupational Injuries and Illnesses (SOII), Census of Fatal Occupational Injuries (CFOI), American Time Use Survey (ATUS)	• April 10

Longitudinal Business Database (1976-2017)

- **Complete U.S. business establishment histories (with paid employees)**
  - Establishment birth and death dates
  - All employer establishments in the Economic Censuses
  - Detailed linkage documentation over time and very accurate histories
- **Basic establishment demographic data linkable to other business datasets by EIN, SEIN**
  - Establishment size
  - Industry
  - Location

Longitudinal Employer-Household Dynamics (LEHD) https://www.census.gov/ces/dataproducts/lehddata.html

Combines administrative data from states' Unemployment Insurance systems with Census Bureau business data and the individual demographic data using the Social Security Administration number database of encrypted identifiers.

Workers--Employer history and wage history, Individual characteristics (sex, age, race, ethnicity, education, place of birth), Point in time residence

Employers--Industry, # employees, firmage, total payroll, location

Linkages between workers and employers

Longitudinal Employer-Household Dynamics (LEHD) https://www.census.gov/ces/dataproducts/lehddata.html

For external projects-only available from cooperating states

- Option A: AZ AR DE DC IN IA KS ME MD NV OK TN
- Option B: AL CA CO CT FL GA HI ID IL KY LA MA MI MN MO MT NE NH NJ NM NY NC ND OR PA RI SC TX UT VT VA WA WV WI WY

Trade Data – Bureau of Economic Analysis (BEA)

- Somewhat different rules – you become a BEA "Special Sworn Employee"
- Additional requirements:
  - Must be a US citizen
  - Must not be employed by an agency with investigative, regulatory, or policy functions
  - Provide a benefit to BEA
- Go to BEA home page (www.bea.gov):
  - 'Research'
    - "Special Sworn Employee Program"
- Expensive! Fees per year:

	FY20	FY21	FY22	FY23
First year of project	$7,174	$7,265	$7,358	$7,452
Subsequent years	$1,830	$1,867	$1,904	$1,942

Trade Data – BEA Company-level Microdata

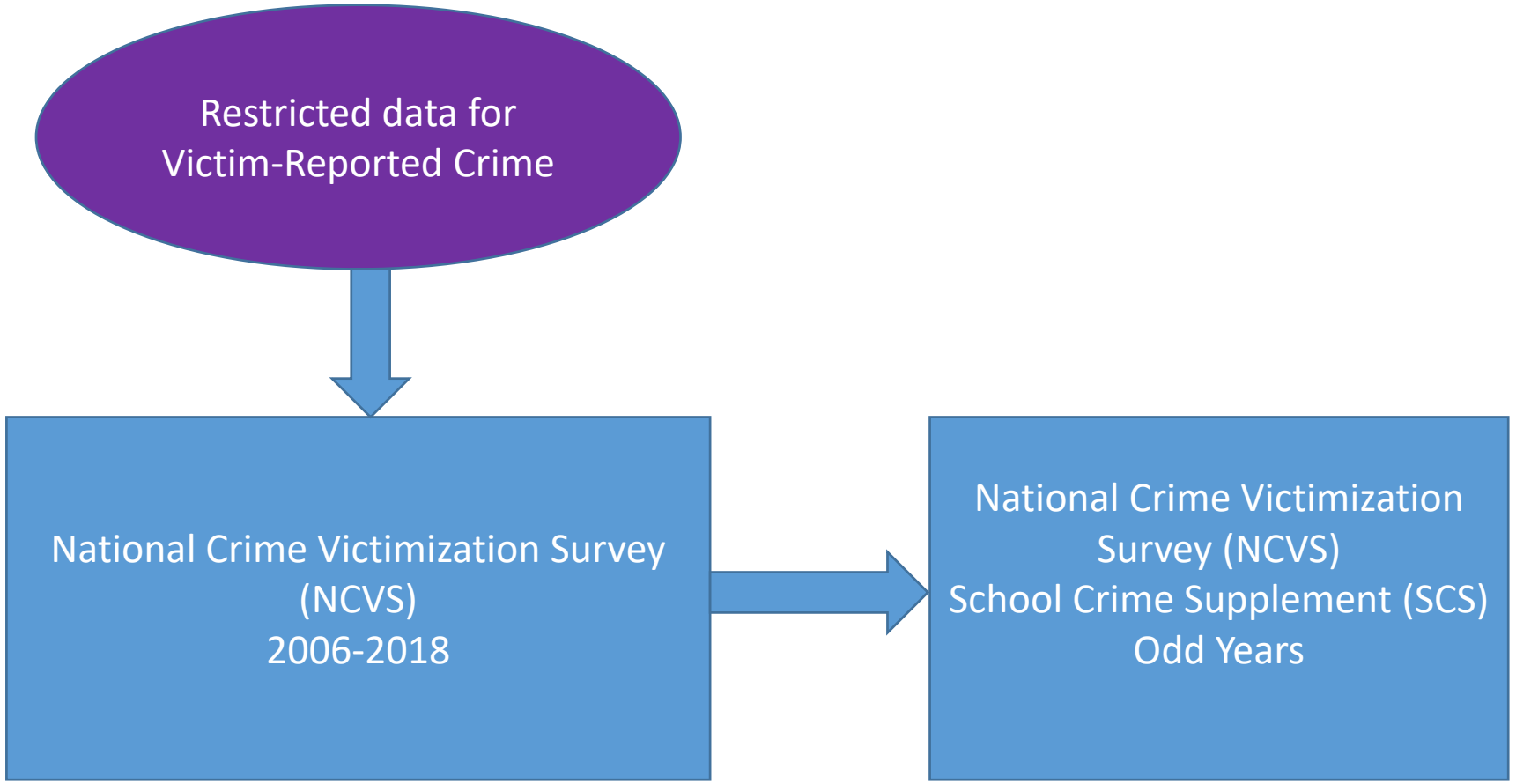
- Foreign Direct Investment (FDI)
  - Operations of multinational enterprises (MNEs)
    - U.S.-based MNEs' operations worldwide (BE-10 and BE-11)
    - Foreign-based MNEs operations in the U.S. (BE-12/13/15)
  - Quarterly FDI transactions for
    - Every directly owned foreign affiliate with total assets, sales, or revenues of more than $60 million USD in the year.
    - Indirectly owned foreign affiliates meeting this threshold that have intercompany debt balance with US reporter >$1 million
- Trade In Services

Trade Data – BEA Company-level Microdata

- Foreign Direct Investment (FDI)
  - BE-10 *US MNEs , BE-12 Foreign MNEs*
    - Covers entire universe every 5 years (“Benchmark Years”)
    - Financials and operations, costs and expenses, employee headcount and compensation, infrastructure (property, plant, equip. spending), ex/imports
  - BE-11 *US MNEs, BE-15 Foreign MNEs*
    - Larger companies sampled/surveyed annually
    - Reports not required for smaller affiliates (carried forward from last BE-10)
  - BE-13 *Foreign MNEs*
    - For new foreign direct investments in the US
    - Acquisition, value, ownership information

Trade Data – BEA Company-level Microdata

- Trade In Services data
  - BE-120/125
    - Selected Services and Intellectual property sales between MNEs
      - Patents, reported performances or events, computer software, books, etc
  - BE-45/140
    - Insurance transactions between US companies and foreign persons
  - BE-180/185
    - Financial services – brokerage, underwriting, credit services, etc.
  - BE-9/29/30/37
    - Transport services – Airline transactions, revenues, etc.


Restricted data for
Victim-Reported Crime
National Crime Victimization Survey
(NCVS)
2006-2018
National Crime Victimization
Survey (NCVS)
School Crime Supplement (SCS)
Odd Years

National Crime Victimization Survey (NCVS) 2006-2018

- Approximately 135,000 households each year
- AND 240,000 individuals in the HH aged 12 or older
- Dwelling units remain in sample for 3.5 years, surveyed every 6 months
- Yields annual and change estimates of criminal victimization for persons age 12 or older
- Includes persons living in group quarters (e.g. dormitories) but excludes institutional settings (correctional or hospital facilities) and homeless

National Crime Victimization Survey (NCVS) 2006-2018

- Person Data
  - Demographics (age, sex, race, ethnicity, marital status, education, income, employment)
  - Nonfatal personal crimes (i.e., rape or sexual assault, robbery, aggravated and simple assault, and personal larceny)
  - Yields potentially longitudinal personal data on marital status, education, income, employment

- Victimization incident:
  - offender (e.g., age, race and Hispanic origin, sex, and victim-offender relationship),
  - characteristics of the crime (e.g., time and place of occurrence, use of weapons, nature of injury, and economic consequences)
  - crime was reported to police, reasons the crime was or was not reported, and victim experiences with the criminal justice system
  - sought medical treatment

NCVS School Crime Supplement (SCS) 2005, 2007,…2013, 2015, 2017

Student experiences with and perceptions of . . .

crime and safety at school

preventive measures employed by schools

participation in after school activities

school rules and enforcement

presence of weapons, drugs, alcohol, and gangs in school

bullying

hate-related incidents

fear of victimization at school

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