DATA, DATA, DATA:
THE PAST AND FUTURE
OF RESEARCH ON
HOUSEHOLD FINANCE

CORNELL IBHF HOUSEHOLD AND
BEHAVIORAL FINANCE SYMPOSIUM
THE EMPIRICIST’S MANTRA

“Data, Data, Data,” he cried impatiently.
“I can’t make bricks without clay.”

--Sherlock Holmes
BACK IN THE OLD DAYS....

2016 Survey of Consumer Finances

Your voice in economic policy
THE LAST FIVE YEARS...

2011

2016
...A DATA EXPLOSION!
SURVEY DATA
THE EUROPEAN HOUSEHOLD FINANCE AND CONSUMPTION SURVEY (HFCS)

- SCF-like household survey in several (15) Eurozone countries
- First fielded in 2010/2011; data available starting in 2013
- Standardized questions
  - Household questions on assets, liabilities, saving and consumption
  - Individual questions on demographics, employment, and income

Examines the prevalence of **hand-to-mouth** consumers who consume all of their disposable income each pay period

- High MPC out of transitory income
- Poor hand to mouth consumers (P-HtM), no liquid or illiquid wealth
- Wealthy hand to mouth consumers (W-HtM), no liquid wealth, but do hold illiquid wealth

In the U.S., roughly one-third of households are HtM

- One-third of these are P-HtM (one-ninth overall)
- Two-thirds of these are W-HtM (two-ninths overall)

Share of W-HtM households > share of P-HtM households in all eight comparison countries

W-HtM share some characteristics with P-HtM, but not others ➔ models that don’t account for this group separately “provide misguided intuition about the effects of fiscal policy”
Wealthy Hand-to-Mouth
Poor Hand-to-Mouth

US: 20%
CA: 18%
AU: 17%
UK: 23%
DE: 25%
FR: 17%
IT: 16%
ES: 15%

US CA AU UK DE FR IT ES
ADMINISTRATIVE DATA
THE NATIONAL STUDENT LOAN DATA SYSTEM (NSLDS)

- Data system used to administer U.S. federal student loan programs
  - FAFSA loan application data (from 1995)
  - Loan data over time (from 1969)
- Panel data—follows borrowers over time
- 4% random sample of borrowers

- NSLDS data merged with de-identified tax records
- Student loan default is concentrated among
  - Students attending for-profit schools
  - Students in non-degree, certificate and/or two-year programs
  - Students attending non-selective schools
  - Non-traditional students
- Much of the rise in the student loan default rate results from changes in the composition of student loan borrowers

REPRESENTATIVE RESEARCH USING THE NSLDS DATA
REPRESENTATIVE RESEARCH USING THE NSLDS DATA

Student Loan Default Rate

<table>
<thead>
<tr>
<th>Year</th>
<th>Traditional Borrowers</th>
<th>Non-traditional Borrowers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>9%</td>
<td>22%</td>
</tr>
<tr>
<td>2011</td>
<td>13%</td>
<td>32%</td>
</tr>
</tbody>
</table>

Factors Explaining the Increase in Student Loan Default Rates

- School type: 11%
- Demographics: 9%
- Educational outcomes: 10%
- Labor market conditions: 23%
- Unexplained: 47%
FINRA BROKER-CHECK DATA

- Data on the universe of broker-dealers and their registered representatives
  - Registration, employment and residential history
  - Criminal activity (misdemeanors and felonies)
  - Civil litigation
  - Past regulatory actions by other regulators
  - Financial disclosures (past bankruptcy, etc.)

- Examines the prevalence and consequences of broker misconduct
  - 7% of brokers have a disclosure event
  - Significant variation across firms in the rates of broker misconduct
  - About half of brokers lose their job after an incidence of misconduct
  - Of those who lose their jobs following misconduct
    - Less than half reemployed in the industry within a year
    - Those who are reemployed move to less reputable firms with lower compensation
  - Misconduct rates are higher in counties with lower education levels, a larger elderly population, and higher incomes
Percentage of Brokers Disciplined for Misconduct by County (2015)
CREDIT BUREAU DATA
FEDERAL RESERVE BANK OF NEW YORK
CONSUMER CREDIT PANEL

- 5% nationally representative sample of all individuals with a credit record and SSN
  - Starts in 1999
  - Quarterly panel
  - New entrants to parallel population
  - Credit bureau credit report data
Bhutta and Keys (2016) “Interest Rates and Equity Extraction During the Housing Boom”

Estimates the impact of declining interest rates on home equity extraction and on subsequent delinquency

- A 100 basis point interest rate decline ➔ 25% increase in the likelihood of home equity extraction
- This effect is even larger in counties that have experienced substantial house price growth
- Home equity extraction is associated with a subsequent increase in mortgage default over the next four years for all time periods, but particularly for those who extract home equity at the height of the housing market in 2006
Estimates of the Effect of Extracting Equity on Subsequent Delinquency (by year of potential extraction)
CREDIT BUREAU + ADMINISTRATIVE DATA

Examines mandatory 8 hr. personal finance course after basic training rolled out 2003-08
- 2 hours on retirement saving
- 1 hour on consumer credit

Data
- Army payroll data
- Merged to credit bureau data
ARMY PAYROLL DATA MERGED WITH CREDIT BUREAU DATA

Impact of Personal Financial Management Course on Financial Outcomes

-6.3% - Any debt
-3.1% - Any delinquent balances
-1.2% - Any adverse legal action
15.0% - Retirement plan participation

- Exploit variation in the timing of interest rate resets for ARM mortgages
- Reduction in mortgage payments due to rate resets ➔
  - Decline in mortgage defaults
  - Increase in financing of durable goods purchases
  - Improved household credit standing
- Low wealth households are particularly responsive
- Regions more exposed to mortgage rate declines had a quicker economic recovery from the Great Recession
CREDIT CARD DATA
Credit card account level data on
- Utilization
- Contract characteristics
- Interest/fees
- Performance

Reported to the OCC monthly starting in 2008 for the largest banks
Representative Research Using the OCC Credit Card Metrics Data

- Agarwal, Chomsisngphet, Mahoney and Stroebel (2014)
- Estimates the effect of the CARD act on consumer credit outcomes
- Empirical Approach: compare consumer (affected) vs. small business cards (unaffected) before vs. after reform
- Findings
  - Lower borrowing costs through reduced fees
    - Late fees
    - Total fees
    - Biggest effects for low FICO consumers who pay these fees
  - No offsetting increase in interest charges
  - No offsetting reduction in credit volume
  - Small effect of new disclosure requirements
REPRESENTATIVE RESEARCH USING THE OCC CREDIT CARD METRICS DATA
PAYDAY LOAN DATA
Loan level data from several large payday lenders

- Loan characteristics
- Loan repayment
- Income amounts and source

All loans for each lender over a 12-month period between 2010 and 2012

Examines the impact of income timing on payday loan utilization for Social Security recipients

Findings

- Borrowing is procyclical with liquidity
- Borrowing is much higher over 5-week pay periods vs. 4-week pay periods
- Borrowing is lower for recipients paid on the fourth Wednesday of the month vs. the third Wednesday of the month

Overall: 15% of payday loan volume results from failures to adjust to predictable variation in income
Distribution of Loan Volume over the Month by Payment Receipt Date
On-line service that connects accounts so that users can see summarized information from all accounts at once

Account balances and transactions for bank, investment, and credit accounts

Millions of active users, billions of transactions
Comparison of user-derived spending and census retail data by spending category

Examines the consumption responses to household income shocks

Findings

- A one standard deviation increase in the debt-to-asset ratio ⇒ 25% increase in the elasticity of consumption w.r.t. income
- Higher leverage at the start of the Great Recession ⇒ 20% higher decline in consumption than would have occurred with household leverage levels of the 1980s
FACEBOOK DATA
**FACEBOOK SOCIAL NETWORK DATA**

- De-identified Facebook user data
  - Demographics, including geography
  - Facebook friends
- Can merge with aggregated external data (e.g., by geography)
Geographical Distribution of Friends for Residents of Laramie, WY
FACEBOOK SOCIAL NETWORK DATA

Share of Friends within 100 Miles (by county)
Bailey, Cao, Kuchler and Stroebel (2016) “Social Networks and Housing Markets”

Examines the impact of social networks on housing market outcomes

Findings:
- Individuals whose Facebook friends experience larger house price increases in the previous 24-months
  - Are more likely to transition from renting to owning
  - Buy a larger house
  - Pay more for their house
  - Make a larger down payment
- The aggregated effect of these individual-level responses is large enough to impact county-level house prices and trading volume
THE LAST FIVE YEARS...

2011 2016
THE NEXT FIVE YEARS?

2011 2016 2021
MORE DATA!
THE DATA HOLY GRAIL

- Assets
- Credit
- Insurance
- Transactions
HOW WILL HOUSEHOLD FINANCE RESEARCH CHANGE?

- Relationships will become more important
  - With potential collaborators
  - With potential data providers

- Collaborations will become more important and more complicated
  - Larger coauthor networks
  - How to divvy up credit/coauthor ordering

- Bigger data
  - Data storage/management
  - Empirical methods

- More frequent data, potentially in real time
  - Replicability

- More extensive data
  - Privacy considerations
  - Data access
  - Data muddying
Be careful what you wish for... because you just might get it!