

# 大数据革命对经济学研究主题，方法与中国经济研究的影响

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# 什么是大数据革命？

- 人类社会信息记录的方式、频率与数量的根本性变化
- 信息量的存储与运算的根本性变化
- 抽样？全样本？

# 经济学研究的四个特点

## 1. 研究对象

## 2. 研究对象的内涵与外延

- “经济学帝国主义”

## 3. 研究的方法

- 归纳（经验分析）与演绎（理论分析）的辩证互动

## 4. 信息与数据

- 信息与数据的革命如何影响经济学研究对象的内涵与外延，**经济学方法，以及新的理论框架的构建**

- 信息与数据的革命如何提高经济学研究的科学性

# 经济分析史---熊彼特

- Chapter 2: 古典时期经济分析技术的发展
- 数据、统计与经济分析的科学性
- Cowles Foundation (reduced-form vs. structural的哲学与方法论基础)
  - Motto: Theory and measurement
  - Friedman vs. others (Koopmans & Marschak)
- 现代计量经济学的发展

# 大数据与经济学研究的趋势的例证

- Clark medalists
  - <https://www.aeaweb.org/about-aea/honors-awards/bates-clark>
- Others
  - <https://economics.uchicago.edu/directory/magne-mogstad>
  - <http://www.ufukakcigit.com/>
- Health, environment, energy, education, public economics, genomics, inequality (e.g., Thomas Piketty)

# Methods

- Traditional methods: Zooming in
- Unsupervised learning: Generate variables
- Supervised learning
  - Prediction
  - Specification checks (high dimensionality associated with X: Sparse models)
  - Multinomial choice (high dimensionality associated with Y)
  - Enrich heterogeneity (classification, matching, etc.)
  - Solve some technical problems associated with high dimensionality in structural estimation
- Useless for solving the unconfoundedness problem

# 中国经济研究与社会经济政策

- 如何实现弯道超车？
  - Unique big data
  - Unique institutional context
  - Combine the two to develop more fundamental conceptual framework through inductions and deductions, which would have more explanatory power in social sciences
- 如何帮助制定更为科学的社会经济政策？

# Some suggestions

- Build you own data infrastructure (needs a huge amount of time + extremely high social and managerial skills)
- Big data + experiments
- Data + institutional context + theory
- Focus