

Economic Surveys

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Outline

- The Annual Survey of Manufactures
- The Longitudinal Research Database
- Some Research Examples
- The National Income and Product Accounts

ASM Overview

- Nature of the survey
- Sampling frame and plan
- Sample characteristics
- Working with the annual data in RDCs
- Examples of research uses

Nature of the Survey

- Target Population:
 - The Annual Survey of Manufactures (ASM) provides sample estimates of statistics for all manufacturing establishments with one or more paid employee. The U.S. Census Bureau conducts the ASM in each of the 4 years between the economic census which is collected for years ending in 2 and 7. The economic census - manufacturing is the sample frame from which the ASM is chosen and presents more detailed data than the ASM. Among the statistics included in this survey: employment, payroll, value added by manufacture, cost of materials consumed, value of shipments, detailed capital expenditures, supplemental labor costs, fuels and electric energy used, and inventories by stage of fabrication.
- <http://www.census.gov/mcd/asmhome.html>

Sampling Frame and Plan

- Frame population: Economic Census of Manufactures in the 2 and 7 years
- Sample is drawn in the 3 and 8 years, then used for five consecutive years (4-8 and 9-3)
 - This means that a component of any Census of Manufactures is the ASM sample, which was drawn from a frame population based on the previous EC
 - Supplemental frame of new establishments is used to refresh sample between ECs
- Base sample is a multistage probability sample with large establishments sampled with probability one (self-representing)
- There have been many significant redesigns of the ASM sample. Historical information is in McGuckin and Pascoe

Sample Characteristics

- Used to compute many industry statistics that feed the National Income and Product Accounts
- <http://help.econ.census.gov/BHS/ASM/About.html>
- [Statistics of Industries and Industry Groups 2001](#)

Working with the Annual Data in RDCs

- Overview see:
<http://148.129.75.160/ces.php/data>
- Annual Survey of Manufactures available from 1973 to 2001

Research Examples

- [CES/NBER Industry Productivity Data](#)
- See Bartelsman and Gray

LRD Overview

- Longitudinal integration of the ASM and Census of Manufactures (CM)
- Linking the LRD to other data
- Using the LRD in RDCs
- Research Uses of the LRD

Longitudinal Integration of the ASM and CM

- Described in detail in McGuckin and Pascoe
- Large establishments have a different dynamic pattern than small establishments due to sample design (self-representing v. sampled)
- Consistent variable definitions
- <http://www.census.gov/econ/overview/ma0800.html>

Linking the LRD to Other Data

- Establishment identifiers are provide, see lecture on Economic Censuses
- Some links (e.g., to EPA and ES-202 data) have already done
- Other links are accomplished by using the Business Register (formerly Standard Statistical Establishment List) and record linking software

Using the LRD in RDCs

- Support tools for combining the ASM and CM data
- Requested by requesting the appropriate years of ASM and CM

Examples

- All on the INFO747 web site and CES working papers web site
- See for example:
 - Shadbegian and Gray (2003)

NIPA Overview

- NIPA: Product side
- NIPA: Income side
- Reconciliation
- Examples
- Real v. Nominal
- Price Indices

The Product Side

- Components
 - C = consumption
 - I = investment
 - G = government spending
 - X = exports
 - M = imports
- GDP = Gross Domestic Product
- $GDP = C + I + G + X - M$

The Income Side

- Definitions
 - NI = national income
 - Dep = consumption of fixed capital (depreciation)
 - PROW = income payments to the rest of the world
 - RROW = income receipts from the rest of the world
 - SD = statistical discrepancy
- $GDP = NI + Dep + PROW - RROW + SD$

National Income Components

- Definitions
 - W = Compensation of employees
 - Prs = Proprietor's income (with adjustments)
 - R = Rental income (with adjustments)
 - Pr = Corporate profits (with adjustments)
 - Int = Net interest
 - $BTax$ = Taxes on production and imports
 - $BSub$ = Subsidies on production and imports
 - BTP = Business transfer payments
 - $GSurp$ = Current surplus of government enterprises
- $NI = W + Prs + R + Pr + Int + BTax - BSub + BTP + Gsurp$

Reconciliation

- GDP calculated from the product side should equal GDP calculated from the income side
- The difference is called the “Statistical Discrepancy”
- $C + I + G + X - M$ does **not** exactly equal $NI + Dep + PROW - RROW$
- The discrepancy is due to fact that both sides are estimated from different sources

Examples

- Table 3 (Product Side)
- Table 9 (Income Side)
- For spreadsheet format go here:
<http://www.bea.gov/bea/dn1.htm>
- In time series format go here:
http://www.ciser.cornell.edu/ASPs/search_athena.asp?CODEBOOK=ECON-023&IDTITLE=184

Real v. Nominal

- Nominal GDP is the sum of all goods and services produced in the economy valued at current market prices
- Think of this as the sum of all quantities produced times each good's price
- This can be decomposed into the product of Q (a quantity) and P (a price index)
- $Q \text{ is real GDP} = (\text{Nominal GDP})/P$

Types of Price Indices

- Historical weights (Laspeyres)
 - Index is created using quantities from some date in the past and the time series of prices
- Current weights (Paasche)
 - Index is created using current quantities and the time series of prices
- Chained
 - Index that combines a series of historical-weight indices by re-basing in the common period
 - NIPA price indices are chained

Examples

- Table 6