

# Making Estimates of National Income Better Reflect Economic Well-Being: The U.S. Experience



**Arnold J. Katz**

*IARIW-BOK Special Conference*

*Seoul, Korea*

*April 26, 2017*

# Preliminary

---



- **The Bureau of Economic Analysis (BEA) publishes the U.S. National Income and Product Accounts (NIPAs).**
- **Gross Domestic Product (GDP) is its headline measure of production.**

# Outline of Presentation

---



- **Early history of GDP and the NIPAs.**
- **Early conceptual debates.**
- **Efforts by BEA to move beyond the initial version of the NIPAs.**
- **Efforts at the Commerce Department to measure the size distribution of income.**
- **Author's views on the way forward.**

# Founding of the NIPAs



- **BEA first publishes GDP in March 1942.**
- **Gilbert, Denison, Jaszi, and Schwartz found the NIPAs. They are first published in July 1947.**
- **NIPA design:**
  - **Summary accounts show how the major aggregates are interrelated.**
  - **Greater detail is shown in subordinate tables.**
  - **Basic design is still used today.**

# NIPAs Rise To Prominence



- **The National Bureau of Economic Research (NBER) publishes 2 important reports in 1958.**
  - **Proceedings of a conference devoted exclusively to critiquing the NIPAs. The lead paper is Jaszi’s “The Conceptual Basis of the Accounts.”**
  - **An NBER committee reports to Congress with its review of the NIPAs.**

# Expansion and Development

---



- **1958 – NIPAs are greatly expanded.**
- **1965 – NIPAs are integrated with an input-output table.**
- **Subsequent changes are introduced gradually. After 1990, NIPAs move toward greater consistency with the *System of National Accounts*.**

# What is GDP?

- **The circular flow – the aggregate value of goods produced equals the aggregate value of all incomes from production.**
- **An old definition – GDP is the summation of the market values of final products.**
- **Central Problems**
  - **Which products are “final?”**
  - **What is their market value?**

# GDP and Economic Welfare

---



- **Kuznets - GDP and economic welfare are directly connected.**
- **Denison - GDP is just one component of economic welfare. Other components include the “goodness” of the size distribution of income.**



# GDP and Planning for World War II



- **In 1940, Nathan used full employment GDP to determine that the iron and steel industries needed to be expanded.**
  
- **After Pearl harbor, Nathan and Kuznets used the concept to determine how big a war effort the U.S. could support and when Europe could be invaded.**

# Is GDP a Subjective Concept?

---



**Kuznets – The measurement of GDP is inherently subjective.**

**Jaszi – The measurement should be as objective as possible. Treatments should flow from definitions that are clear.**

# What are Final Products?



**Kuznets – Much of government output and some products purchased by consumers are “intermediate.”**

**Jaszi – All products produced by government or purchased by consumers must be treated as “final.” It is impossible to construct a clear operational definition of what a final product is.**

# The Accounting Approach



- **Is the “accounting” approach to measuring national income useful?**

**Kuznets – No.**

**Jaszi – Yes. The incomings and the outgoings of each transactor must be equal.**

# What Should Be GDP's Scope?



- **Mitchell et al. had a broad scope. They imputed rent for owner-occupied housing and consumer durables.**
- **Kuznets had a narrow scope. He initially excluded all of the above. He also excluded certain government services and consumer expenditures as being “intermediate.”**

- **Kuznets wanted a narrow definition of product.**
- **He would not narrow his definition of income.**
- **National income could not equal national product as required by the accounting approach.**

# Environmental and Nonmarket Economics

---



- **Expenditures on pollution abatement and control are published from 1975 – 1995.**
- **The Measures of Economic Well-Being Branch operates from 1978-81. Published articles value: the services of consumer and government durables, changes in oil and gas reserves, household work, and investment in health.**

# Green GDP

- **Nine BEA staffers develop the Integrated Economic and Environmental Satellite Accounts. They are described in two articles published in 1994 that explore conceptual issues and provide estimates for mineral resources.**
- **Congress orders BEA to stop this work.**



# Broadening Capital

- **1995 - Government durables are capitalized.**
- **1999 - Computer software is capitalized.**
- **2013 - Expenditures on research and development are capitalized.**
- **2013 - Expenditures on literary, entertainment and artistic originals are capitalized.**

# Additional Satellite Accounts

---



- **An arts and cultural production satellite accounts is first released in 2015.**
  
- **A health care satellite account is published in 2015 based on expenditures on specific diseases.**

# Size Distribution of Income



- **From 1953 – 1974, BEA publishes estimates of the size distribution of personal income.**
- **Cooper and Katz (1978) develop a definition of in-kind income for distributional work.**
  - **Income is the receipt of an economic right that others do not have.**
  - **In-kind income is a right that is constrained or abridged. Constraints lower its value.**
  - **Hicksian measures of “cash-equivalent value” (cev) can be estimated from observable data.**

# Distributional Work at the Census Bureau

---



- **The Census Bureau published size distributions of income from 1944 on.**
- **Starting in the 1980's, the value of major in-kind benefits was included in its distributions. Some estimates used the cev concept.**
- **At one point estimates were made for 15 alternative definitions of income.**

# Recommendations for Size Distributions of Income



- **Schanz (1892), Haig (1921), and Simons (1938) developed broad definitions of income.**
  - They all included capital gains and in-kind income in their measures.
  - Schanz and Simons also included the services of consumer durable goods.
- **We need to be at least as bold as they were and include these items in our measures.**
- **In-kind income is huge and growing; we should stop treating it like cash.**

# Recommendations for National Accounts - I



- **We should distinguish between work that can be put in the main accounts and work that should be put into satellite accounts.**
  
- **The main accounts**
  - **Consumer durable goods should be treated as fixed assets.**
  - **Capital gains should be recorded as an addenda item.**
  - **Greater efforts should be made to collect data on executive perquisites and other in-kind income.**

# Recommendations for National Accounts - II

---



- **Satellite Accounts**

- In kind-income should be valued using cash-equivalent values or similar measures.
- Insights from Smolensky et al. (1977) may be useful in getting the accounts to balance.