



International Comparability

- **Move by other countries to the 1993 System of National Accounts will help comparability**
 - Move to hedonics, chain indexes, new banking measures and capitalization of software
- **In the interim – discontinuities in time series and, at times, widening cross-country differences in specific components**



International Comparability

- **Many of the differences are offsetting so at the top, real GDP growth across most countries is roughly comparable**
- **Major offsets include:**
 - Hedonics offset by high share of imported IT in other countries
 - Hedonics and substitution bias in other goods and services offset by the move to chain indexes
- **Also, some changes largely affect nominal GDP**



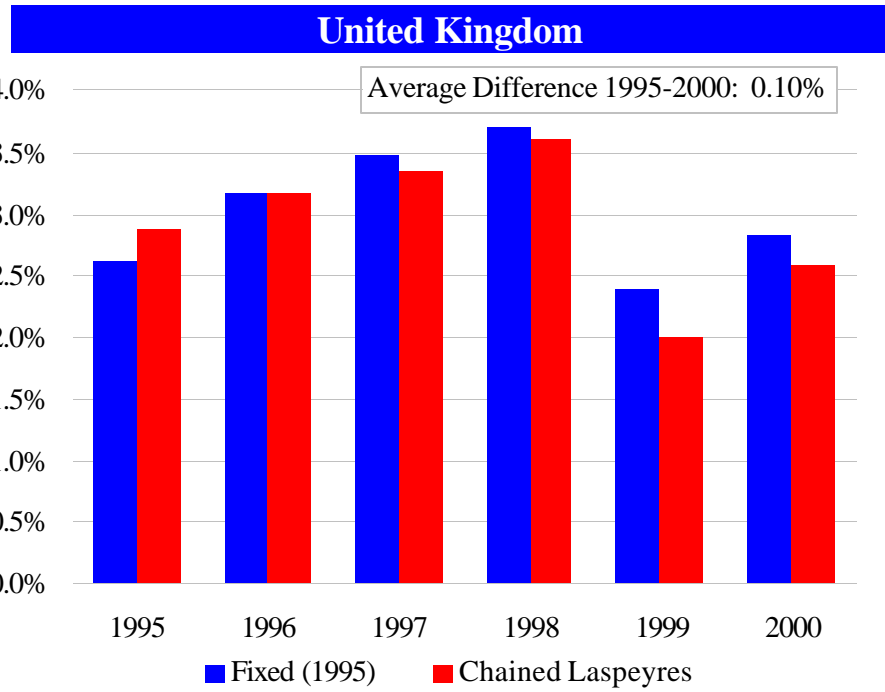
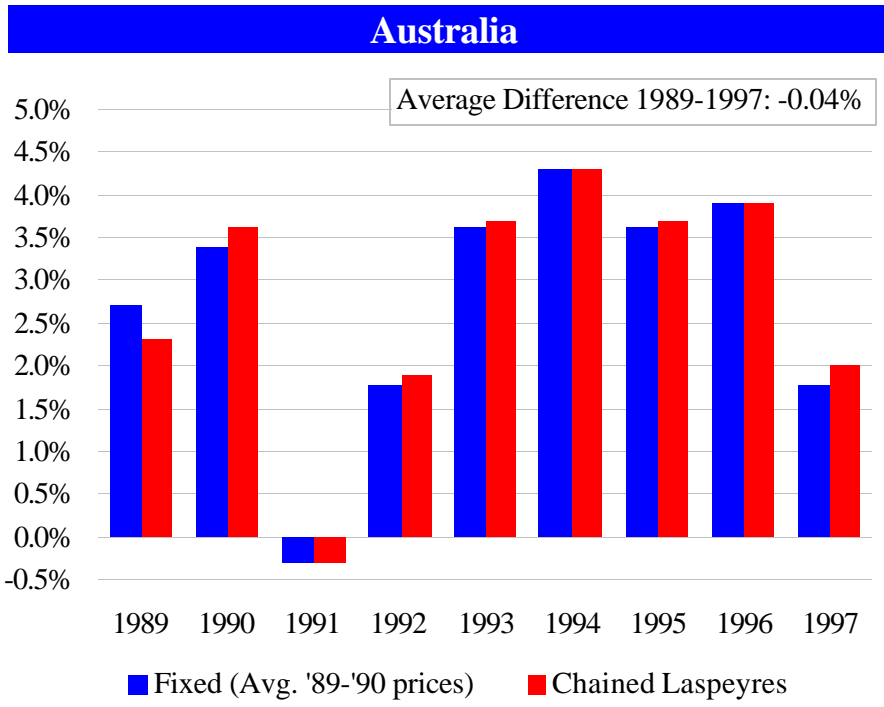
Major Sources of Differences Between the United States and Other OECD Countries

- **Use of hedonic and other quality-adjusted indexes**
 - United States, France, Australia, Japan, and United Kingdom
 - Use raises real growth
- **Use of chain quantity and price indexes**
 - Addresses substitution bias
 - Use lowers real GDP growth after the base year
 - More than offsets use of hedonics (for the U.S.)
 - Improves time series accuracy but partial introduction increases discontinuities
 - May cause a rethinking of post-war economic comparisons



Major Sources of Differences Between the United States and Other OECD Countries

Fixed-weighted vs. Chain-weighted Measures

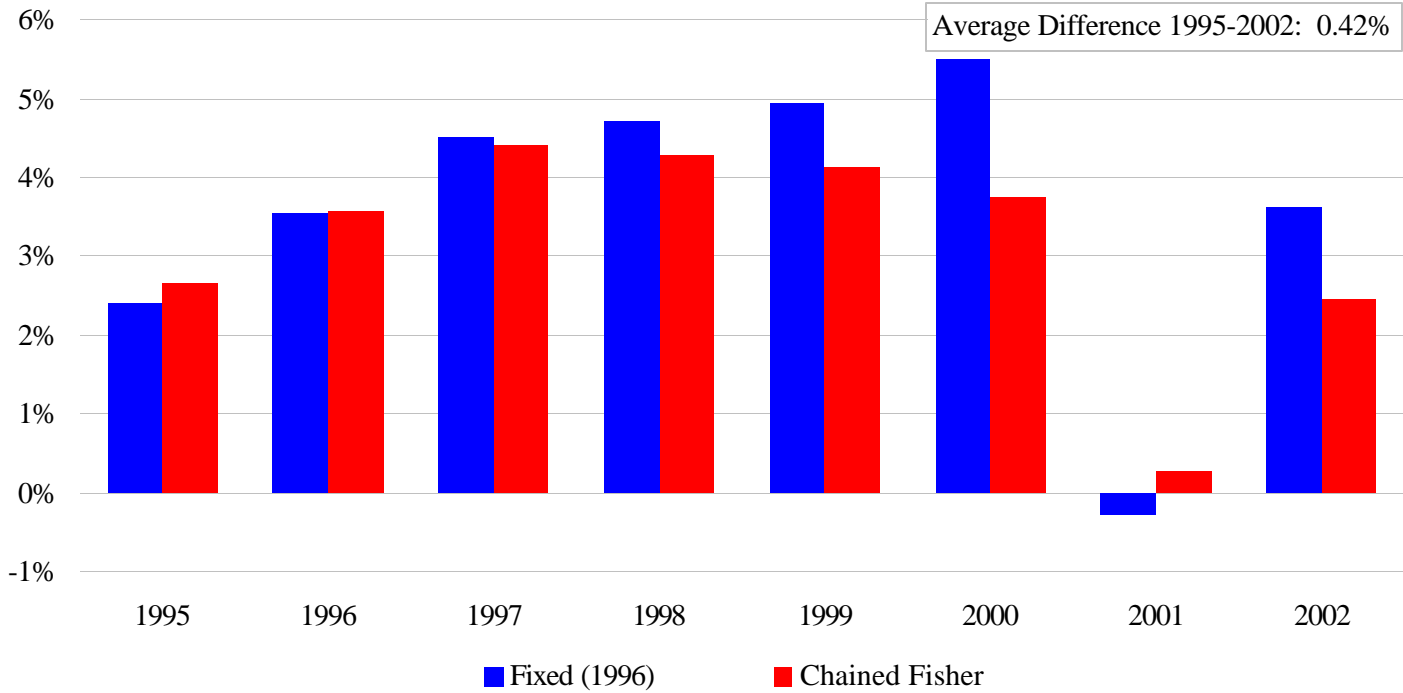


Source: Australian Bureau of Statistics. McLennan, W. March 19, 1998. "Introduction of Chain Volume Measures in the Australian National Accounts." p. 42.
Office for National Statistics (UK). Tuke, Amanda. April 2000. "Analyzing the Effects of Annual Chain-linking on the Output Measure of GDP." pp. 32-33.



Major Sources of Differences Between the United States and Other OECD Countries

Fixed-weighted vs. Chain-weighted Measures: U.S. Experience

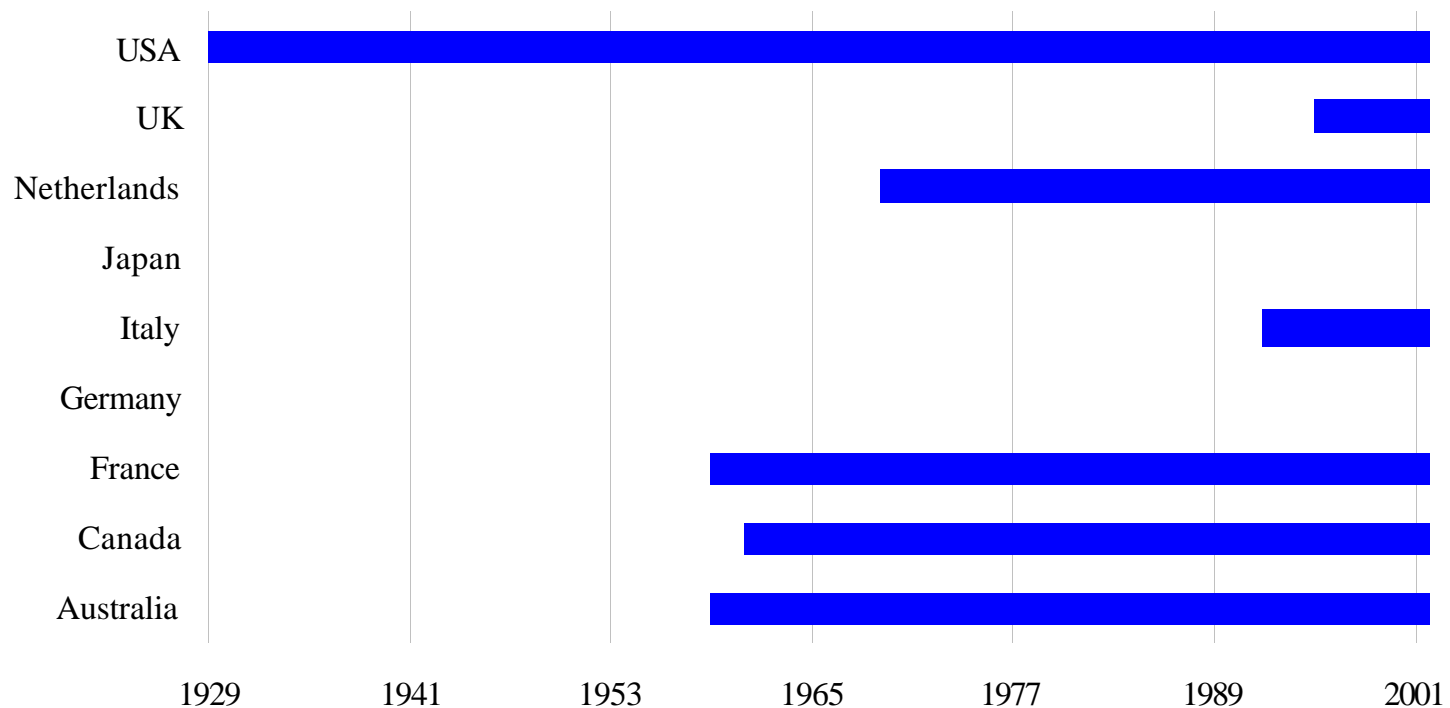


Source: BEA.



Major Sources of Differences Between the United States and Other OECD Countries

Time Series of Chain-type Measures



Source: Web sites of national statistical agencies.



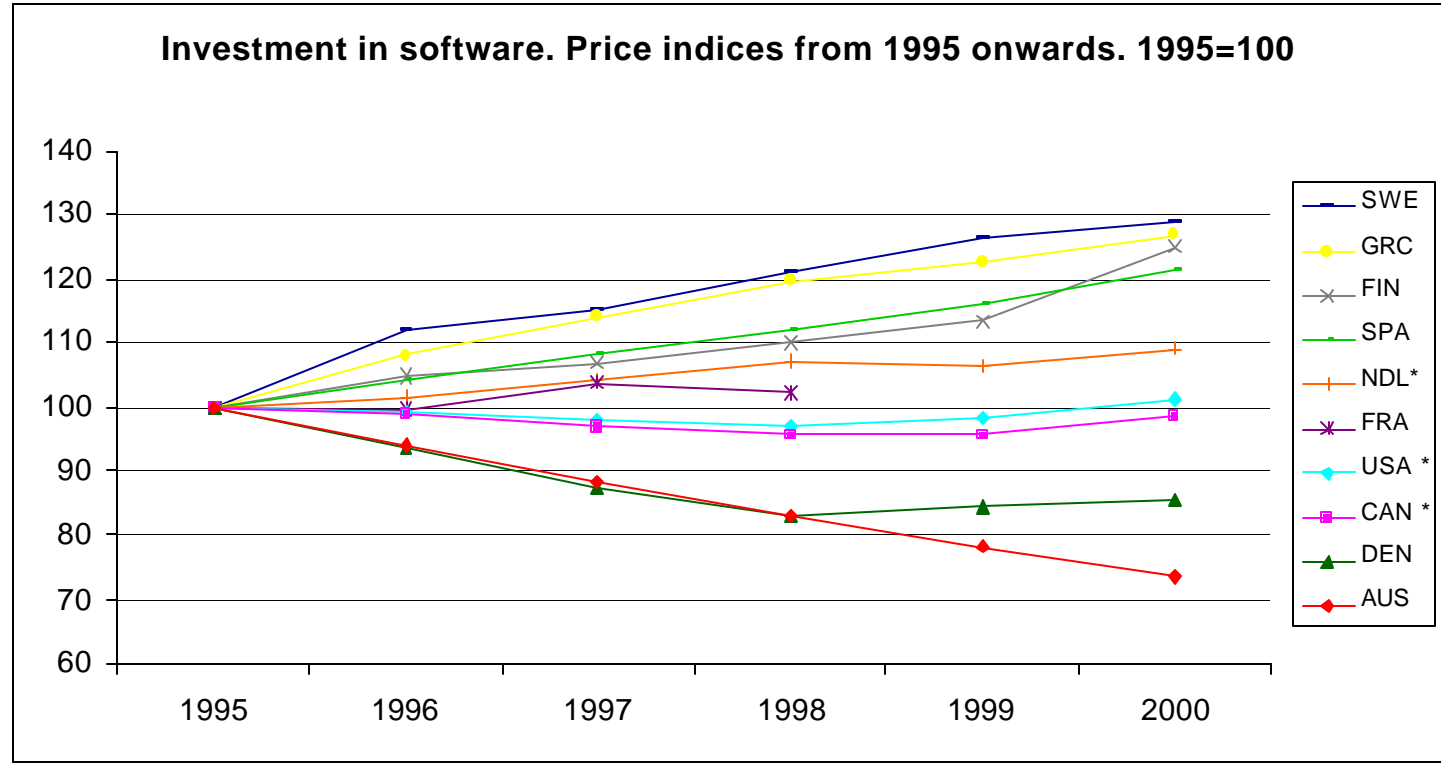
Major Sources of Differences Between the United States and Other OECD Countries

- **Differences in overall and imported share of computers and IT**
 - For high IT-using countries with low import shares, significant impact from hedonics on real investment and GDP growth
 - For high-IT using countries with high import shares, significant impact on real investment, little impact on real GDP growth
- **Capitalization of software**
 - Impact differs depending upon overall share in the economy, rules/practice on share capitalized, and prices used



Major Sources of Differences Between the United States and Other OECD Countries

Software Prices



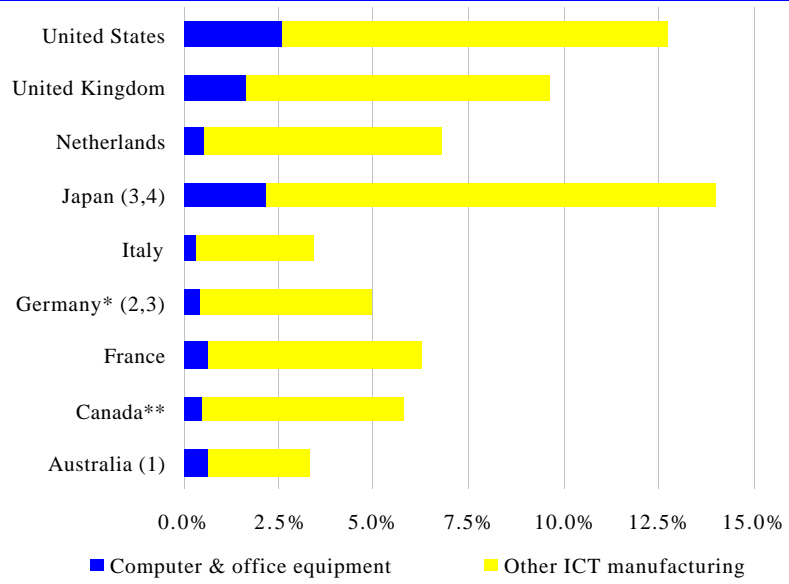
Source: OECD.



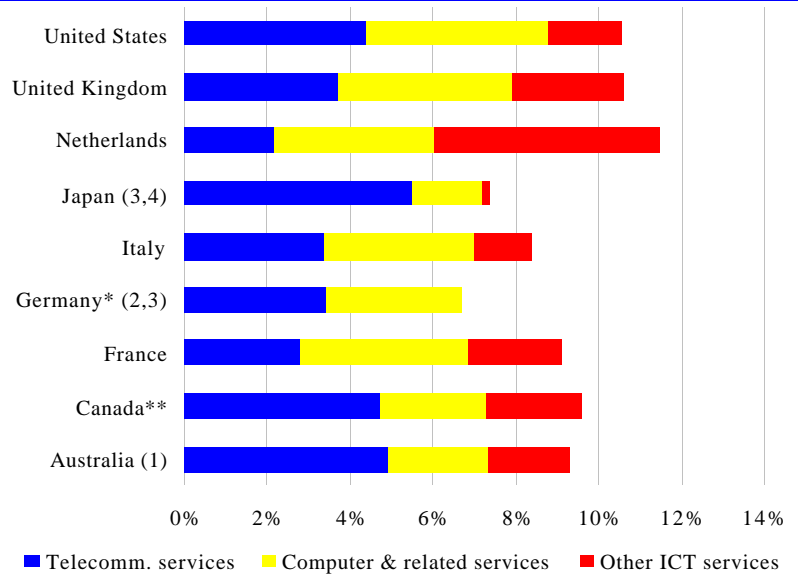
Major Sources of Differences Between the United States and Other OECD Countries

Computers and ICT Share in Output

Share of ICT manufacturing in total manufacturing value added, 2000



Share of ICT services in total business services value added, 2000⁽⁵⁾



Source: OECD estimates, based on national sources; Structural Analysis (STAN) and National Accounts databases, September 2002.

* 1999; ** 1998. 1. 2000-2001. 2. Rental of ICT goods (7123) is not available.

3. ICT Wholesale (5150) is not available.

4. Includes only part of computer related activities.

5. "Other ICT manufacturing" includes communication equipment, insulated wire and cable and precision instruments. "Other ICT service" includes wholesale and rental of ICT goods.

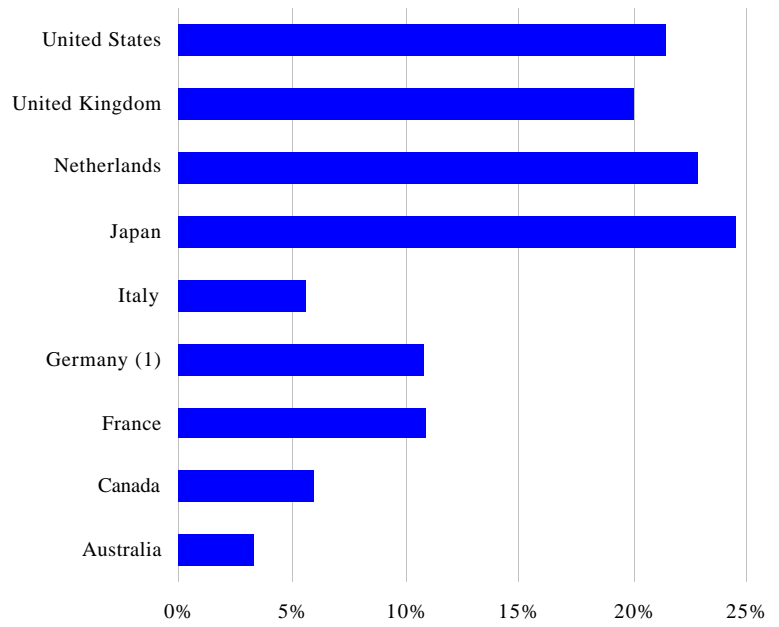
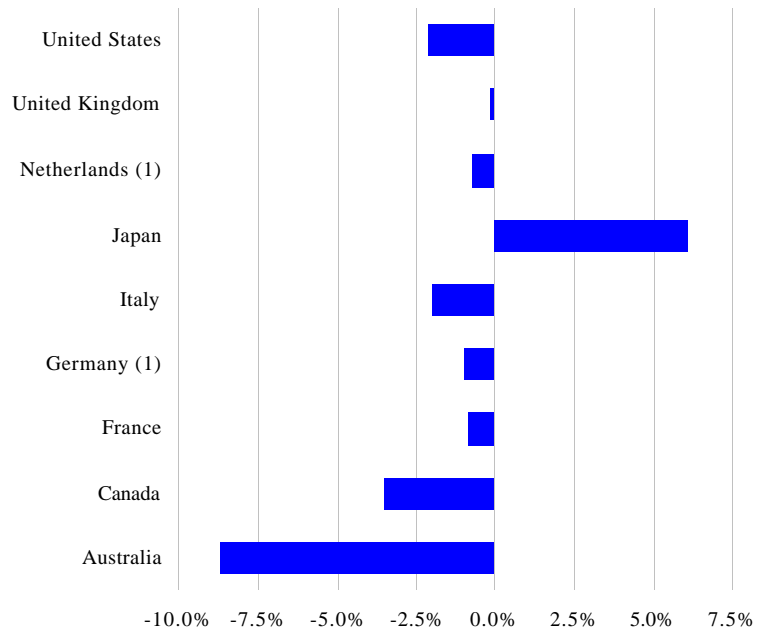


Major Sources of Differences Between the United States and Other OECD Countries

ICT in Exports and Imports

ICT sector trade balance, 2001

Share of ICT sector exports in total merchandise exports, 2001



Source: OECD, *International Trade in Commodity Statistics (ITCS)* and *Structural Analysis (STAN)* databases, August 2002.
1. 2000 data.



Major Sources of Differences Between the United States and Other OECD Countries

- **Measurement of financial services**
 - Raises U.S. nominal GDP level relative to other countries (growth impact unclear)
 - Real impact muted due to use of transactions-based extrapolator for real GDP, but may raise U.S. growth relative to other countries
- **Treatment of military expenditures as investment**
 - Lowers or raises U.S. growth relative to other countries depending on period of analysis
 - Lowers U.S. growth over the last decade



Major Sources of Differences Between the United States and Other OECD Countries

- **On major issues – hedonics, chains, software, and imports**
 - Almost a wash, with some likelihood that overseas growth would be lowered more by switch to chains (and import factor) than increases due to hedonics and software
 - Software may be the most difficult to assess
- **On military expenditures and FISM**
 - Plus to U.S. real GDP growth of 0.1 percent over the last 5 years (1997-2001)
- **OECD – bottom line, not much difference**



Questions for the Advisory Committee

- **Does this overview provide the rough answer needed on comparability?**
- **If so, should BEA publish a short article/box on comparability?**
- **Should BEA consider publishing (and updating) cross-country comparisons of growth rates?**