

US SERVICES TRADE AND OFF-SHORING

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The Brookings Institution

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Off-Shoring

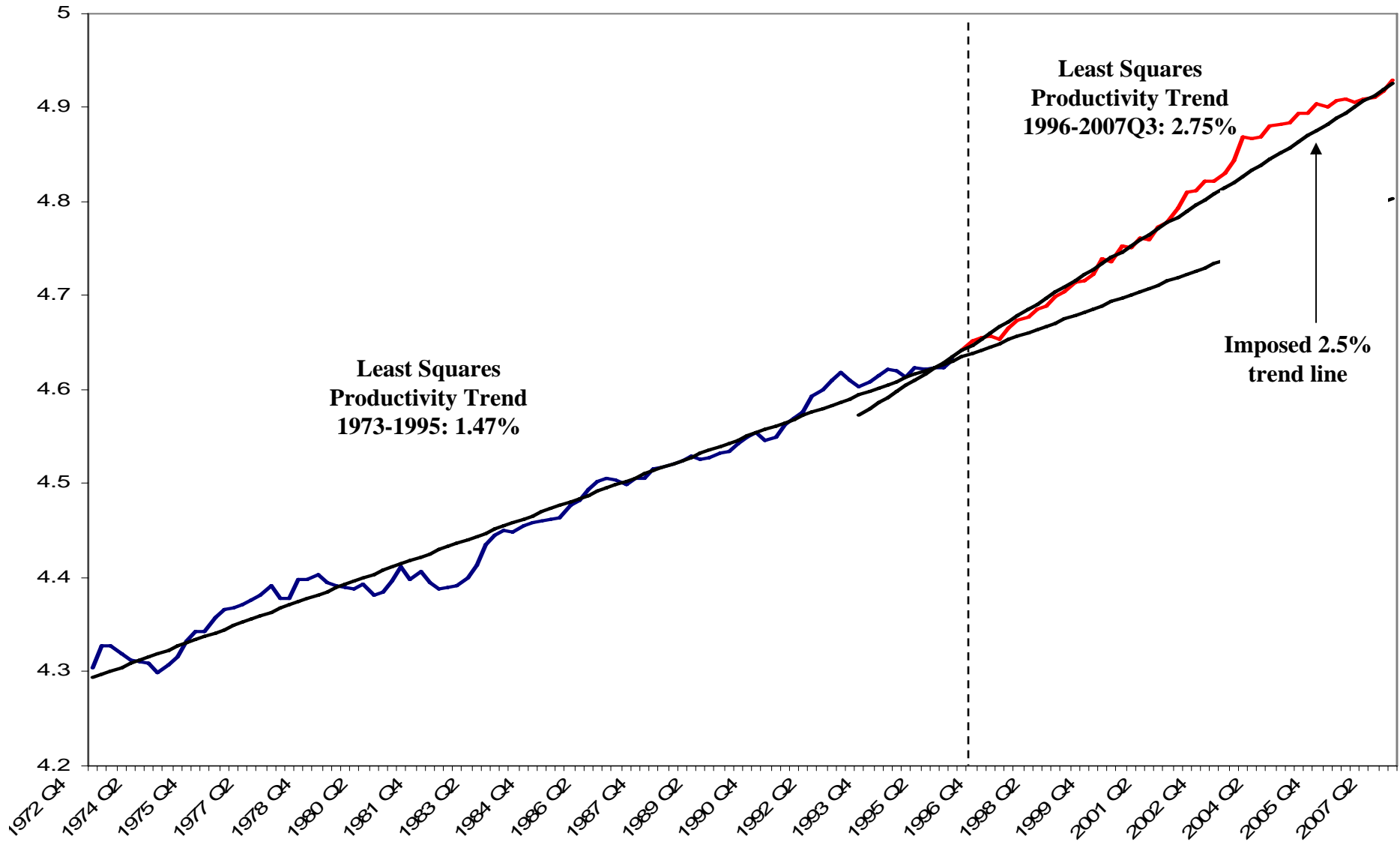
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The Broader Context: Greater Competitive Intensity

- Over the past thirty years, deregulation, new technologies and the expansion of international trade and investment have increased competitive intensity.
- Some of the changes can be traced to globalization—the entry of foreign companies in the auto industry—and some to the domestic economy--the nationwide spread of Wal*Mart in retailing; the growth of mini-mills in steel.
- The US has allowed these market forces to play out more strongly than has Europe. More benefits and perhaps more costs.

The US Has Experienced Faster Productivity Growth Since 1995. The Acceleration in Services has been Key

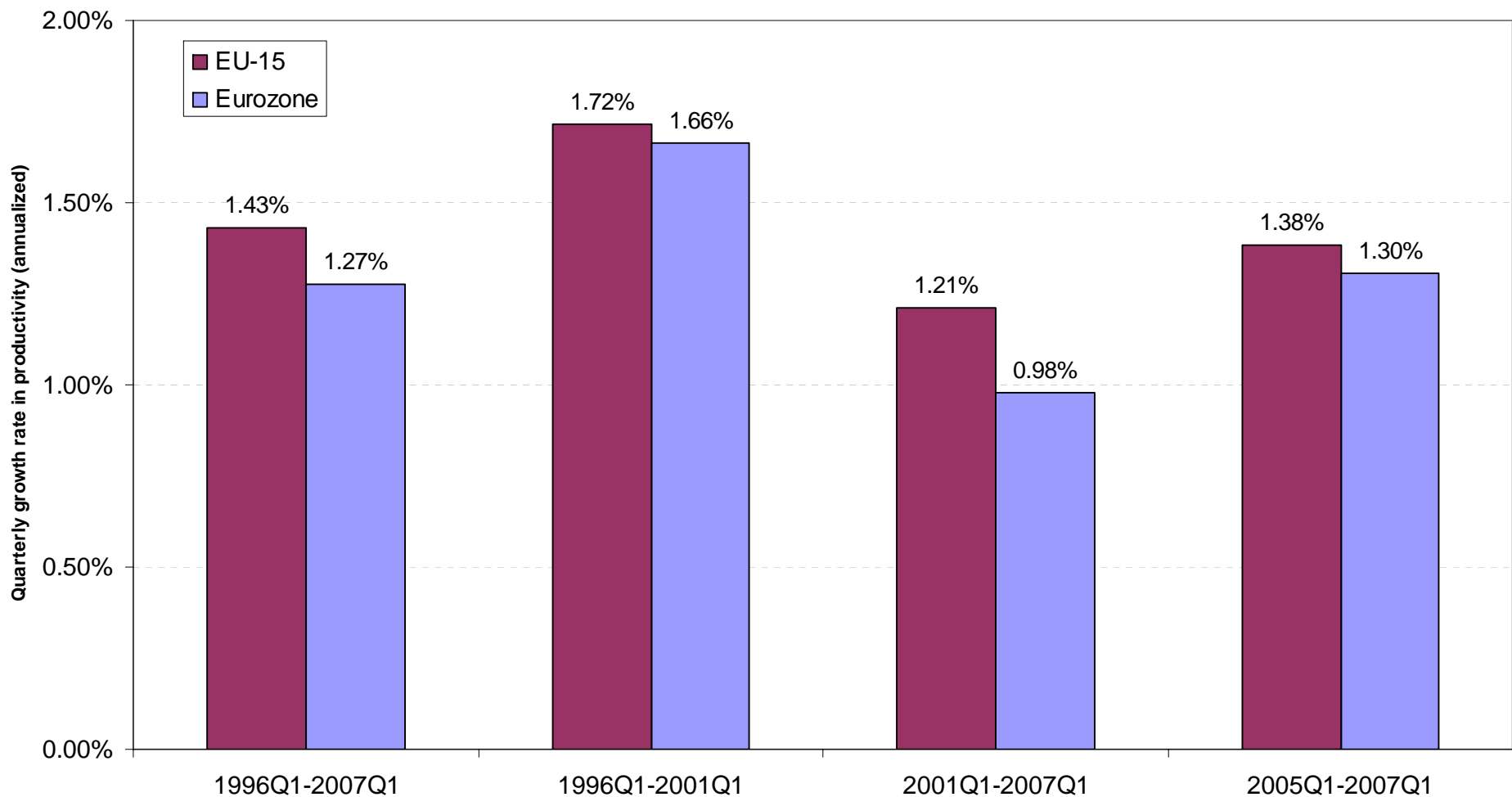
Labor Productivity (Output per Hour), Nonfarm Business; log scale



Source: BLS Major Sectors Productivity and Costs Index

Productivity Growth Has Slowed in Europe, (Unemployment has been Much Higher, Distribution of Income Much Narrower)

Productivity Growth in the Eurozone and EU-15 (GDP per hour)



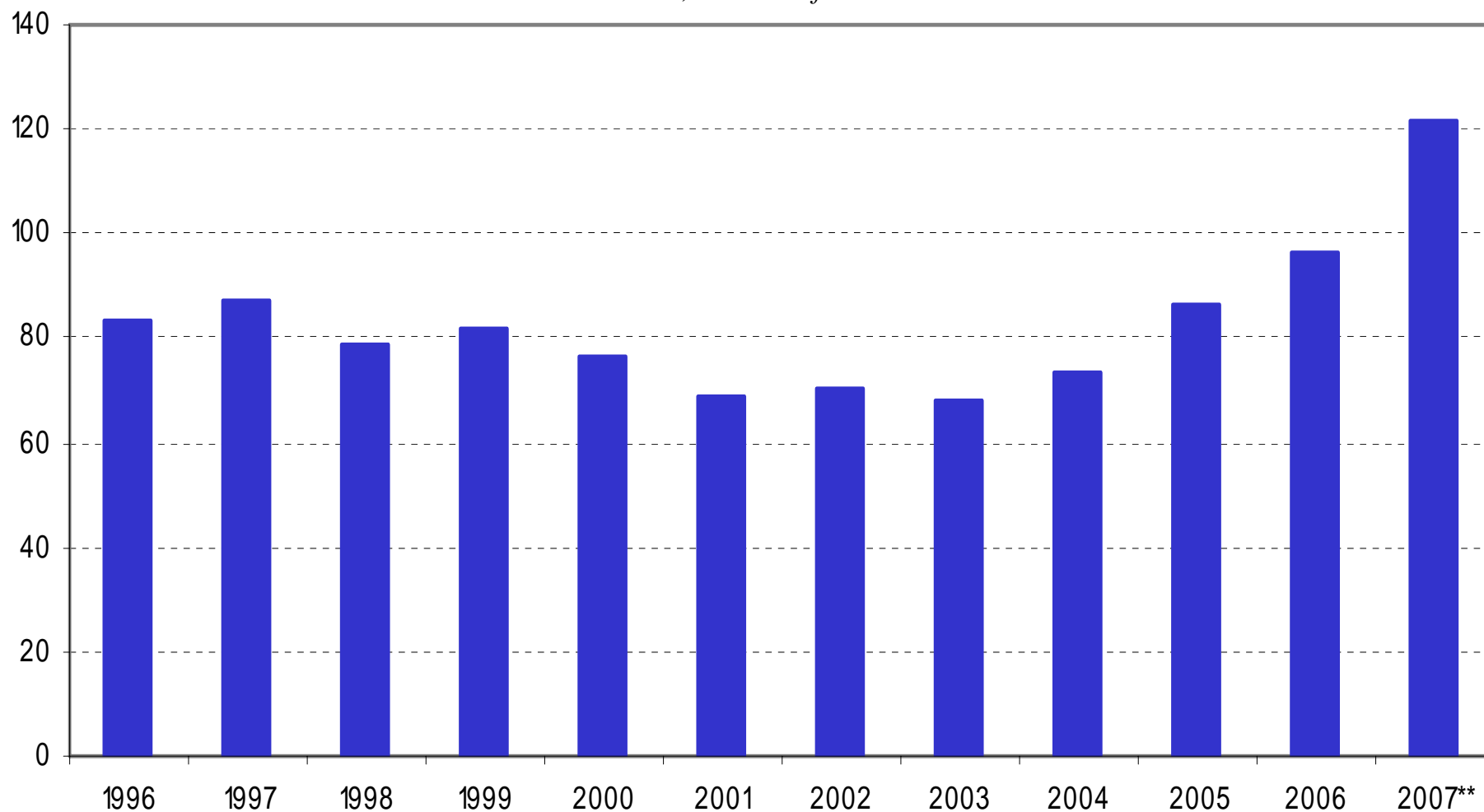
Source: European Central Bank, Groningen database, authors' calculations

The US has a Robust Comparative Advantage in Services

- Despite an overvalued dollar (until very recently), there has been a consistent surplus in services trade.
- In a sense, services trade has generated jobs in the US on balance—although looking at this issue in terms of moving jobs to or from the US is the wrong way to think about it. It is about changing the nature of US jobs.
- The US exports a range of services and has a surplus in trade in business and professional services (which includes off-shoring).
- Services trade with India is TINY. It has grown rapidly. It was in balance in 2006.

The Rising Dollar Depressed the Services Surplus Until 2002. Since Then, Net Exports Have Grown Rapidly

Trade Balance in Private Services: 1996-2007; billions of US dollars

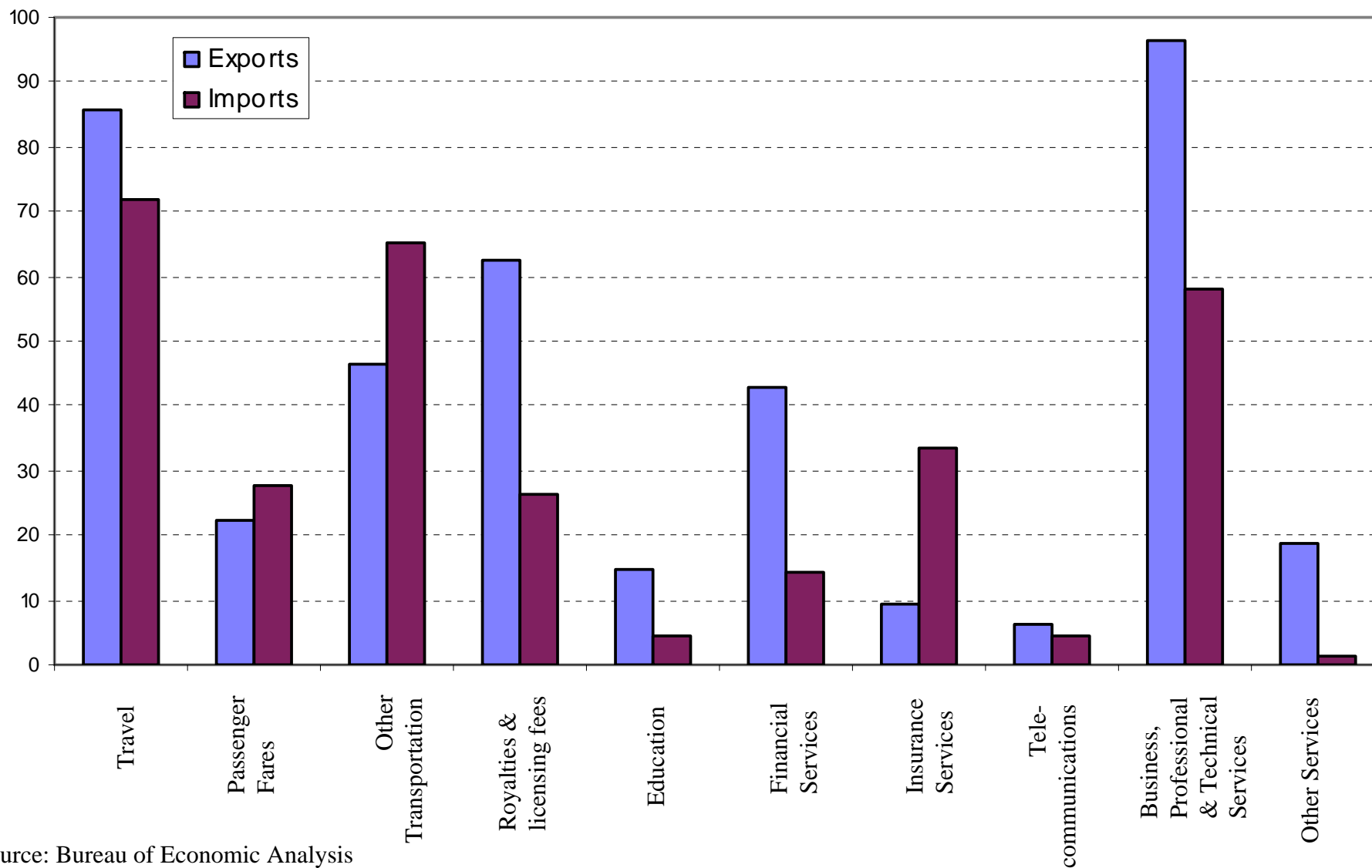


**2007 estimated based on Q1-Q3

Source: Bureau of Economic Analysis

The US Has Large Surpluses in Royalties & Licenses; Financial Services; and Business Services

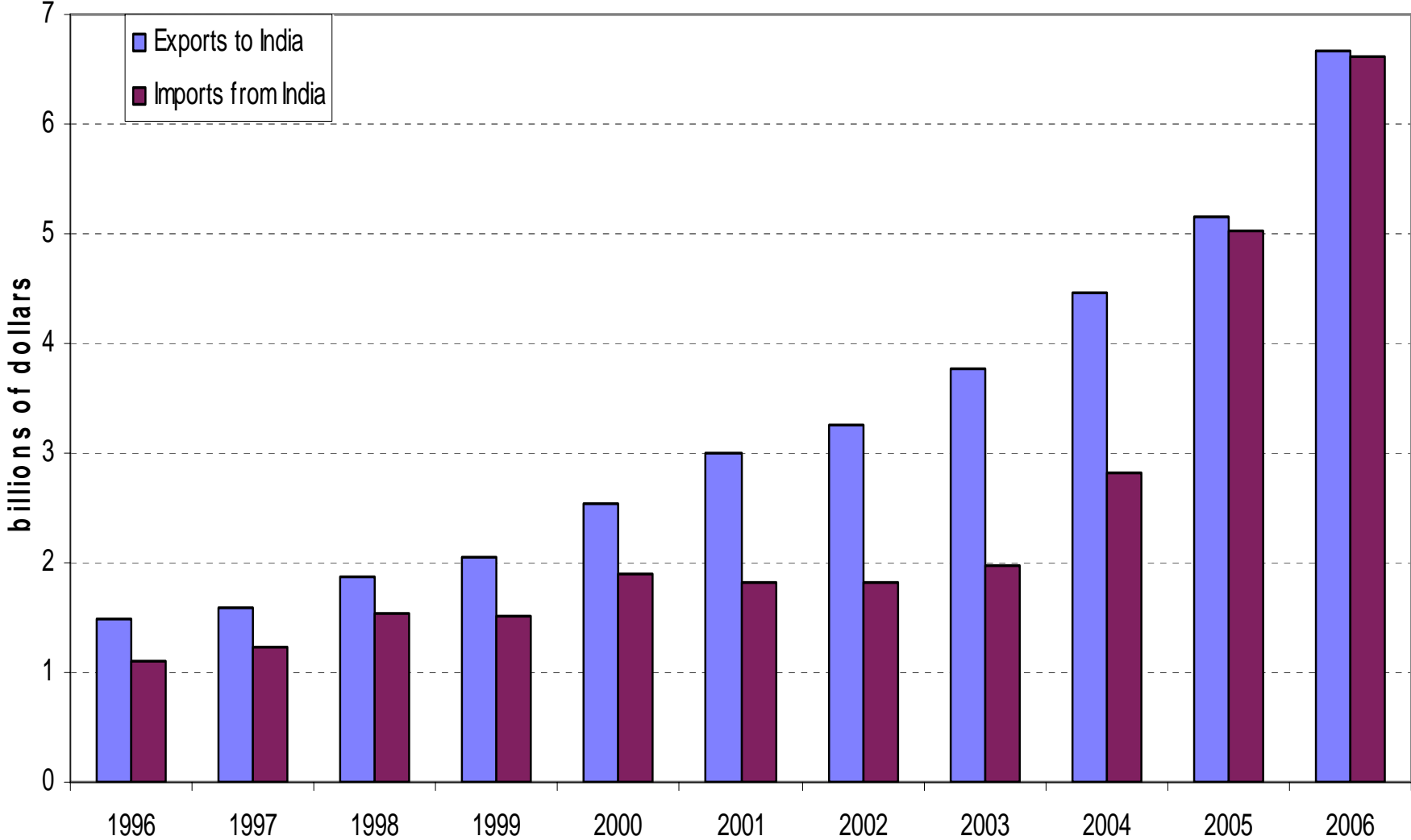
2006 - Services Exports and Imports by type; in billions of dollars



Source: Bureau of Economic Analysis

Services Trade with India has Grown Rapidly. Services Imports from India were 0.05 percent of US GDP in 2006!

Exports and Imports of Private Services to and from India; in billions of dollars



The McKinsey Global Institute Report on Off-Shoring found the following broad conclusions.

I was one of three academic advisors to the project

- Talking about billions of new workers entering the global workforce is misleading. In 2003 there were about 33 million workers in low-wage countries capable of replacing service jobs in the US, based on education level and experience.
- Among those 33 million, only 4 million were really available. Education quality issues, language skills, and geographic location were all significant barriers. Local company demand for these workers is also strong. There is a shortage of middle-managers.
- On the demand side, based on detailed industry case studies, only 11 percent of service jobs are amenable to off-shoring. And this is a maximum level, not one likely to be reached any time soon, if ever.
- The key constraint on the pace of service sector off-shoring in practice comes from business and regulatory barriers. Off-shoring from the US estimated to be 2.3 million in 2008.

McKinsey Global Institute Conclusions Continued

- The case studies also found that the key constraint on the pace of service sector off-shoring in practice comes from business and regulatory barriers:
 - Organizational: unsuitability of the production process lack of sufficient scale.
 - Sector characteristics: such as lack of cost pressure or the fact that there is little or no cost advantage in moving many activities.
 - Regulation: the need for local licensing or certification, and protection of intellectual property.
- There are positive and negative effects of off-shoring. The Net is Positive.
 - Positive: 1. Increases productivity and US real income and hence consumption and investment demand; 2. Lowers domestic costs and makes US companies more competitive; 3. Lower costs help on inflation (we need all the help we can get in lowering US health care costs).
 - Negative: 1. Wages of some workers adversely affected. 2. Some R&D and innovation may move off-shore. 3. Some communities could be adversely affected—jobs, taxes.

Technology, Trade and Off-Shoring Change the Composition of Employment

- These changes are illustrated by employment patterns in the information technology sector.
- There has been a decline in employment in the lower-paid tech occupations. While off-shoring plays some role, the real “culprit” is technology—data entry keyers, typists, switchboard operators.
- There have been declines linked to off-shoring—basic computer programming jobs and telemarketers.
- Higher wage US IT employment has grown strongly 1999-2006 (the tech boom and bust in 2000-01 was significant).

Detailed US IT-Related Occupations 1999-May 2006

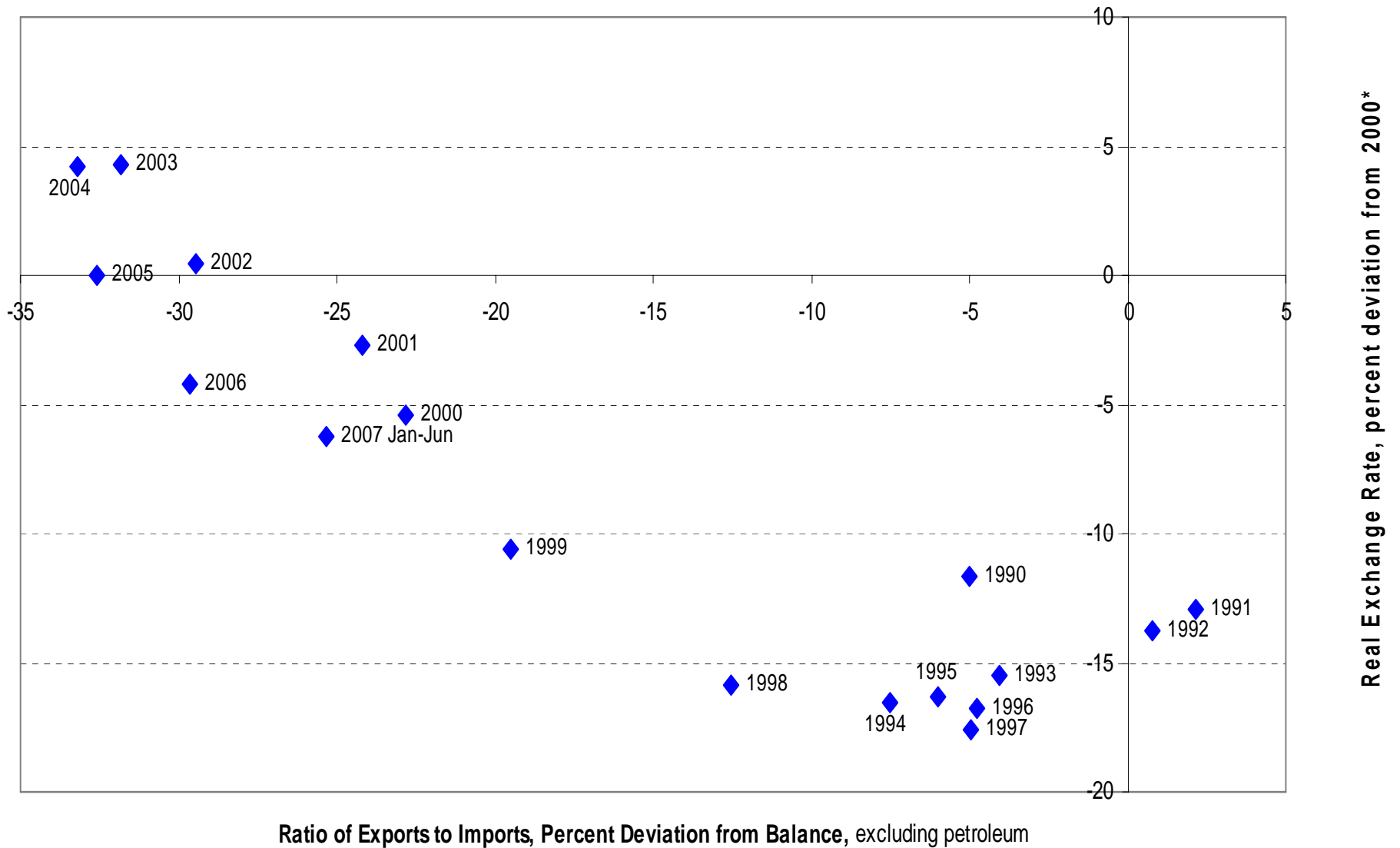
Occupations	1999	May-06	Total Change	Percentage Change	Annual Wage May 2006
Call-Center Occupations					
Telemarketers	485,650	385,700	-99,950	-20.6%	24,190
Telephone Operators	50,820	26,350	-24,470	-48.2%	32,710
Low-wage Technology Workers					
Switchboard operators, including answering service	248,570	172,060	-76,510	-30.8%	23,640
Computer operators	198,500	123,750	-74,750	-37.7%	35,010
Data entry keyers	520,220	295,650	-224,570	-43.2%	25,640
Word Processors and Typists	271,310	153,530	-117,780	-43.4%	30,540
Desktop Publishers	37,040	30,440	-6,600	-17.8%	36,120
Electrical and electronic equipment assemblers	387,430	211,460	-175,970	-45.4%	27,510
Semiconductor processors	42,110	41,520	-590	-1.4%	34,730
Total Call-Center and Low-Wage Tech. Workers	2,241,650	1,440,460	-801,190	-35.7%	\$ 27,227
Mid-Level IT Workers					
Computer Support Specialists	462,840	514,460	51,620	11.2%	44,350
High-wage Technology Workers					
Computer and information scientists, research	26,280	27,650	1,370	5.2%	96,440
Computer programmers	528,600	396,020	-132,580	-25.1%	69,500
Computer software engineers, applications	287,600	472,520	184,920	64.3%	82,000
Computer software engineers, systems software	209,030	329,060	120,030	57.4%	87,250
Computer systems analysts	428,210	446,460	18,250	4.3%	72,230
Database administrators	101,460	109,840	8,380	8.3%	67,460
Network and computer systems administrators	204,680	289,520	84,840	41.5%	65,260
Network systems and data communications analysts	98,330	203,710	105,380	107.2%	67,460
Computer hardware engineers	60,420	74,480	14,060	23.3%	91,280
Electrical engineers	149,210	147,670	-1,540	-1.0%	78,900
Electronics engineers, except computer	106,830	131,880	25,050	23.4%	82,820
Total High-wage Tech. Workers	2,200,650	2,628,810	428,160	19.5%	\$ 75,819

Source: Bureau of Labor Statistics CES Data, 1999, 2000, 2001, 2002, May 2003, November 2003, May 2004, November 2004, May 2005, and May 2006 National Occupational Employment and Wage Estimates

Conclusions

- Service sector off-shoring is important but not a huge structural change in itself. Recall that the US economy creates and destroys around 7 million jobs a quarter.
- The US has a comparative advantage in services trade and should encourage its expansion.
- Continued improvements in IT allow more services to be tradable that were previously non-tradable. This trend may be a cause for concern, but - given the current US trade surplus in services – it may be a positive thing for employment.
- The broad issue is that the working out of market forces has resulted in a widening of the income distribution, notably a “runaway top” of the very rich. Productivity growth, technological change, deregulation and globalization have all contributed.
- The tough policy issue is what to do about this. We need to preserve the benefits of a dynamic economy while making sure those benefits are spread widely. Universal health care, better access to training and education, redistribution of income are all possible approaches.
- Globalization is getting a bad rap in part because the dollar moved out of line with the ability of US tradable goods industries to compete. (See final chart).

When the Dollar is High, the Trade Deficit Explodes and Protectionist Pressure Increases



Source: Federal Reserve, BEA

*Federal Reserve Broad Real Exchange Rate Index, lagged one to three years