

Services: The Next Globalization

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Myths and Realities of Globalization
Federal Reserve Bank of Dallas, November 3-5, 2004

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Globalization of Services: What Kind?

*Some services have been global for a long time,
others recently globalized because of technology*

- Already Global: Services associated with moving people, voice, or things
 - Cross-border: Transportation, Travel, Passenger Fares, Communications
 - Direct investment: Wholesale and retail trade establishments
- Recently More Global: Services associated with business activities and other information-based activities
 - Education, finance, insurance, leasing, information services, medical services, accounting...

Today's Focus:

- How information technology is making business and private services more globalized

Globalization of Services: Why Now?

*From non-traded to tradable
From inside the company to out-sourced to off-shored*

- Lower transactions costs:
 - Internet and information technologies; digitization
 - US-India international call drops in half (1996 to 2001)
 - PC density in China increases seven-fold (1996 to 2001)
- Functional separation & fragmentation of production
 - Codification of information:
 - 'Expert systems' reduces need for specific knowledge
 - Standardized information tools (Microsoft products, programming: C++, Java)

Implications:

- Greater international division of labor in services
- More tradable intermediate services, so-called ITES
- Fragmentation with remote management—intra-firm but off-shored

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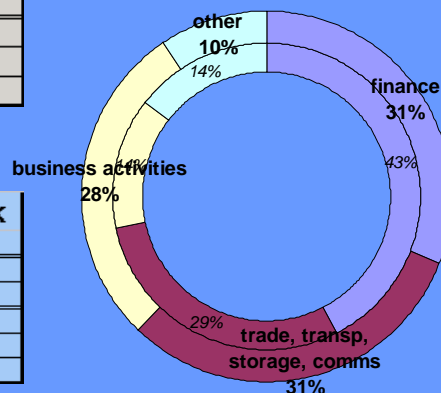
Global Perspective: International Services

*It's not just cross border activity—
trade & investment linkages are important & growing fast*

Global Services Trade	Growth 96 to 02 (in percent)
(IMF data)	
transportation, passenger, travel, govt	14
other services	36
memo: global goods trade	20

Global Inward FDI stock	1999	2000
(UNCTAD data)		
	%	%
primary	23	18
mfg	85	56
services	49	60

FDI outward stock: services
(1990: \$948 billion; 2002: \$4363 billion)



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Services in US Data

- 50% real private GDP (national accounts)
 - 60 % of PCE, 16% of investment (software)
- 84% real private GDP (industry of origin)
- 90% private employment (by occupation)
- 25% total trade (30% exports, 16% imports)

Implications?

- Output vs. spending & employment measures suggests services are embedded in goods measures
 - ⇒ so, services importance for policy may be underestimated
- Even so, the numbers are big
 - ⇒ services globalization big impact US economy & labor force

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Trade and FDI in Services: US

Measures of Global Engagement			
Millions of US\$. Details may not equal totals due to seasonal adjustment and rounding.			
	1992	latest data*	Change
Cross Border Trade (net) 1	-39,092	-577,776	-538,684
Goods	-96,897	-628,696	-531,799
Services	57,805	50,920	-6,885
other private services	25,025	47,516	22,491
Affiliate Sales (net) 2	68,998	505,125	436,127
Affiliate Sales of Services (net) 1	12,584	65,283	52,699
			Growth (%)
Cross Border Exports	616,883	1,120,740	82
Goods	439,631	786,470	79
Services	177,252	334,270	89
other private services	50,292	140,588	180
US Affiliate Sales Abroad (MOFA)	1,291,649	2,548,026	97
Affiliate Sales of Services (MOFA)	140,553	432,179	207
Cross Border Imports	655,975	1,698,516	159
Goods	536,528	1,415,166	164
Services	119,447	283,350	137
other private services	25,267	93,072	268
Foreign Affiliate Sales in US (MOUSA)	1,222,651	2,043,509	67
Affiliate Sales of Services (MOUSA)	127,969	366,896	187

- cross-border services 30% of X & 16% of M
- cross-border services grow faster than goods
- cross-border balances positive (vs. negative for goods)
- sales in foreign market through FDI larger & growing faster than trade
- 'other private services' is the key area

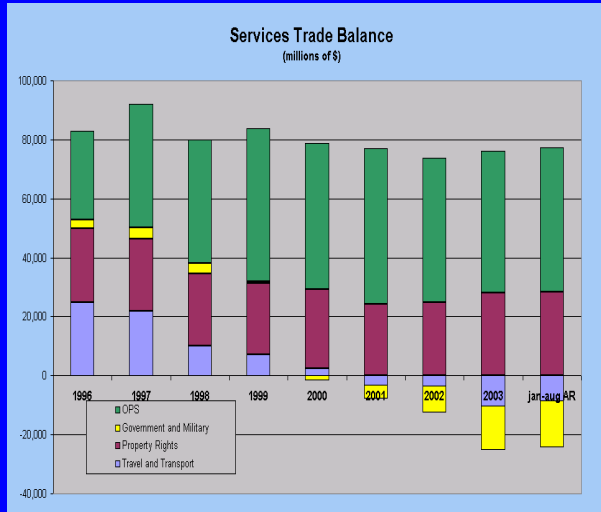
1 Latest Data is annualized from Q1 and Q2(p) 2004. Data From Bureau of Economic Analysis, International Transactions Tables 1 and 3. Available at http://www.bea.gov/bea/international/tip_web/list.cfm?anon=71®istered=0, accessed October 15th 2004
 2 Latest Available data is for year 2001. Affiliate Total Sales Abroad at <http://www.bea.doc.gov/bea/di/1usdop.htm> and <http://www.bea.doc.gov/bea/di/1fdiop.htm>, accessed October 15th 2004. Affiliates Services Sales at <http://www.bea.doc.gov/bea/di/10>

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Trends in Overall US Services Trade

very important to disaggregate

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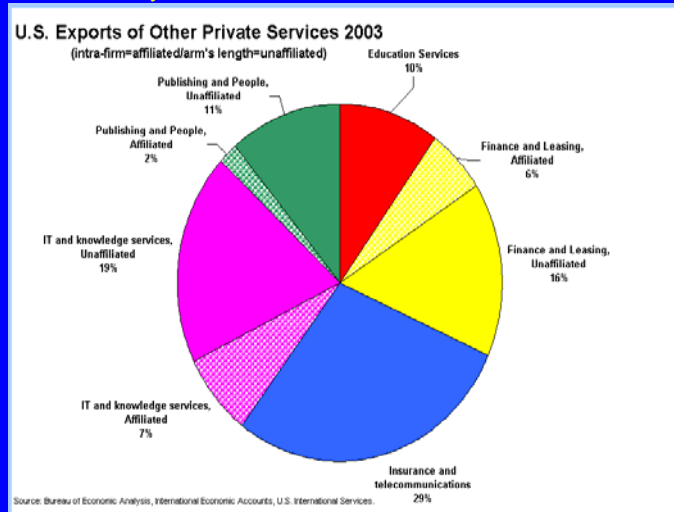
- Decline in total Services trade surplus often attributed to off-shoring.
- But, narrowed surplus not due to outsourcing of OPS, rather is
 - ⇒ Transport & /travel
 - ⇒ Govt & military
- Other Private Services net exports remains positive (despite slow growth abroad)

Composition of Other Private Services

IT-using, IT related

importance of intra-firm trade

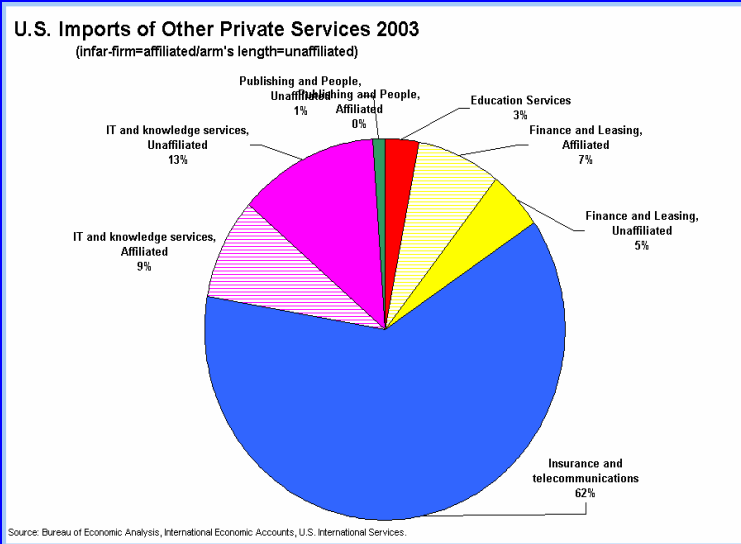
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Composition of Other Private Services

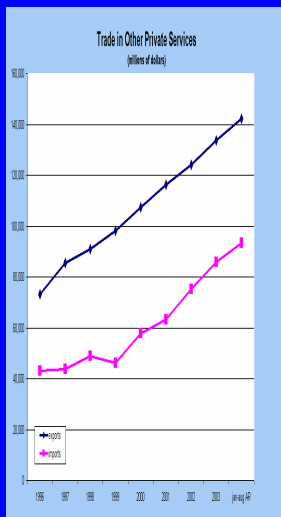
*measurement issues for insurance & telecoms
even greater importance of intra-firm trade*

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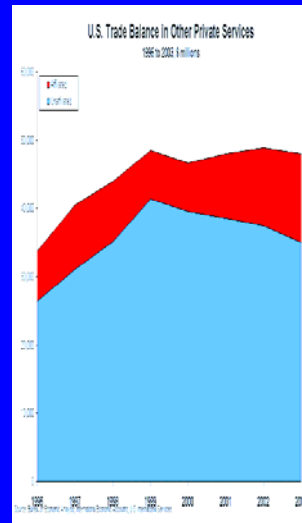


Trends in Other Private Services Trade

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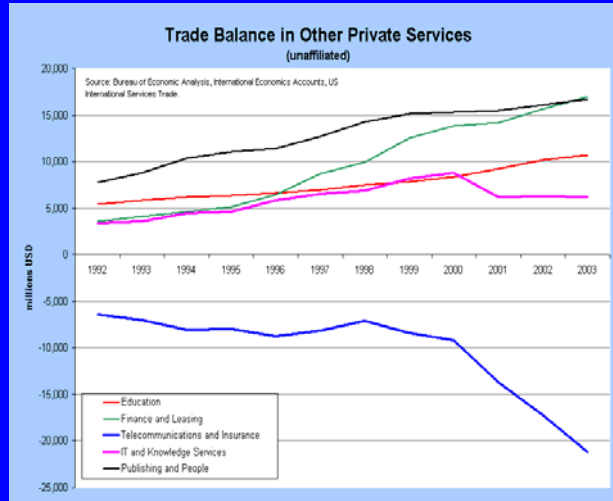


- OPS X & M both rising
M up sharply since '99
- Income elasticities
For OPS X > M;
Slow growth abroad
hurts X
disproportionately
- Rising share affiliated
Trade; falling NX in
unaffiliated trade
break in 1999



Drilling down in Unaffiliated (Arm's length) Other Private Services

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Why break in 1999?

- Telecom & insur. NX
- decline in IT surplus

• Why?

- 1: Decreasing role intra-firm trade through FDI links?
- 2: Rise of off-shore arm's length (India)?
- 3: Technology bust?

Investigating Intra-Firm Trade

FDI-Trade linkages more important for foreigners; esp in finance, IT services, other BPT, but not R&D

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	1997		2003	
	Exports	Imports	Exports	Imports
Other private services	84,113	133,818	43,567	85,829
% intra-firm	32	36	40	41
Financial services	12,543	22,737	6,147	9,836
% intra-firm	18	22	46	57
BPT	43,945	69,706	21,227	40,843
% intra-firm	51	58	70	73
of which (selected)				
Computer & info. services	5,090	7,619	1,564	5,198
% intra-firm	31	28	51	63
Management & consulting	n.a.	4,186	n.a.	3,597
% intra-firm		57		70
Research & development	n.a.	6,801	n.a.	2,885
% intra-firm		81		55
Other BPT	32,778	44,850	17,365	28,279
% intra-firm	59	62	76	77
Film & TV tape rentals	5,943	10,079	158	350
% intra-firm	41	27	3	4

Source: Bureau of Economic Analysis

Hypotheses

- 1: US export competitiveness
US exports more at arm's length bec. US services are globally competitive
- 2: X-FDI complementarity
US MNCs set up shop abroad to sell via MNC affiliates in country & X too
- 3: FDI restrictions abroad
Less US intra-firm trade bec. US FDI abroad restricted rel. to foreign FDI in US.
- 4: Future role for IT
enable more trade, FDI?

Focus on Information Technology

*Fast pace of change; synergies btw. tech. change & outsourcing;
IT hardware as model for services/software*

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Globalization of hardware reduces prices

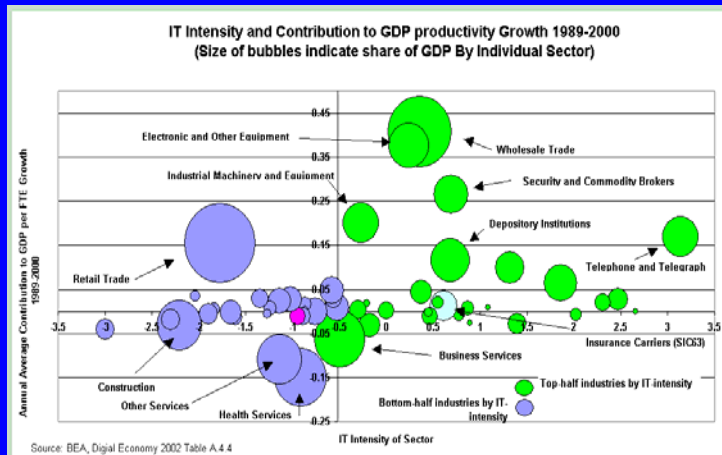
1. US innovation is key:
Technology accts for 70-90 % of price declines
2. But so too
Global engagement:
10-30 % more price decline from global production & global markets
How important 10-30% More price decline?

Yields macroeconomic gains

- IT price declines overall
*Diffused IT investment through US
Price elasticity of demand > 1.0*
- IT investment => transform
*new workplace practices,
new products*
- IT-transform => productivity
*more than 1/2 of increased
productivity growth in '90s;*
- ... 10-30% more price decline?
*GDP growth 0.3 /yr higher (95-2000
adds up to more than 1/4 \$ trillion*

Macroeconomic Gains of the 1990s *Masks Uneven IT Diffusion and Productivity Performance*

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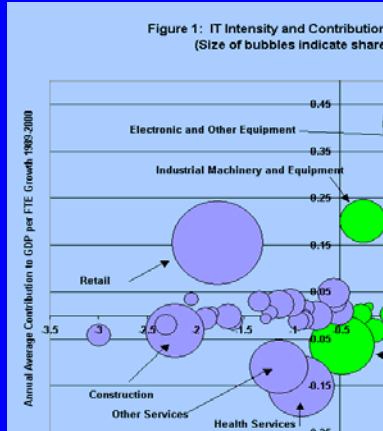


Leading Sectors: More IT investment, higher productivity growth
Also: Employ more IT professionals; Run balance of trade surplus

What about the 'lagging' sectors?

Potential gains from globalization of IT services & software

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Why do some sectors lag?

- Rising relative spending on services & software vs hardware; \$1.4 per \$1 (1993) vs. \$2.2 per \$1 (2000)
- Software/services for lagging harder to do/costs more. Why?
 - => Regulation & complexity of relationships (health)
 - => SMEs need tailored applications

Offshoring software & services? Reduces costs of tailored applications yielding more investment, business transformation.

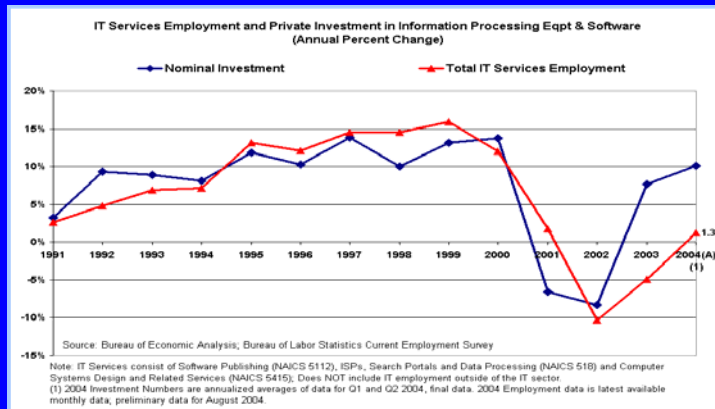
Jobs that remain? Demand domain-specific as well as IT skills

Trade, Technology and Jobs

Microcosm of cyclical & structural changes

Cyclical factors: IT jobs & IT investment are complements. Both fell with tech bust; both are rising again

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Trade, Technology, & Jobs: Structural Factors

*low-wage in real trouble; standardized high wage also at risk
but increasing high-wage jobs demanding 'integrative' skill*

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Selected US Technology Occupations, 1999-May2003				
	Period	1999- May2003 Percentage Change	May2003 Employment	May2003 Wages (rounded)
	1999- May2003			
	5	7	8	9
High-wage Technology Workers				
Computer programmers	-96,960	-22%	431,640	\$ 64,500
Computer software engineers, applications, systems software, analysis	237,940	24%	1,152,530	\$ 73,000
Database administrators	-570	-7%	700,990	\$ 61,000
Network and computer systems administrators, data com eng.	33,300	20%	237,960	\$ 60,600
Computer hardware engineers, electrical eng.	39,560	17%	356,020	\$ 75,000
Total High-wage Tech. Workers	249,800	10%	2,450,456	\$ 69,021
Total Call-Center and Low-Wage Tech. Workers				
Call-Center Type Occupations	-116190	-24	449460	24000
Low-wage Technology Workers				
Switchboard operators, including answering service, computer operator, data key entry	-30,870	-12%	217,700	\$ 22,230
Word Processors and Typists	-219,540	-19%	499,180	\$ 27,000
	-98,940	-9%	191,160	\$ 28,400
Total Call-Center and Low-Wage Tech. Workers	-466,540	-26%	1,357,520	\$ 24,935
Comparable: Total Establishment Survey Non-Farm Employment		-12%		

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

Research & Policy Agenda

- Services globalization redefines relationships
 - Trade—FDI—intra-firm imports from offshore;
 - Trade—FDI—intra-firm exports to support foreign sales
 - Trade-arm's length in intermediate services
- Services globalization to affect broader swath of US and foreign economies
 - External trade & investment
 - Internal domestic labor
- Greater policy imperative & more important to link external and domestic policies

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Two Pronged Policy Implication

Domestic policy

- Transition policies for permanently displaced workers
 - Wage insurance and training credits
- Entry and up-skilling policies within a career-ladder
 - Human capital investment tax credit through firms & community colleges
- Movement/flexibility policies mitigate costs of adjustment
 - Affordable health portability; pension portability
- Business climate to promote investment in IT and R&D

External policy

- Foreign macro demand & exchange rate/currency manipulation policies
 - Collapse in exports is a key problem today
- Trade negotiations
 - Negotiate reduced tariffs on capital goods exports
 - Negotiate for two-way trade and investment in services

The Human-Capital Investment Tax Credit

Invest in people for a competitive economy

- The ITC instrument fits a 'classical' economics case of market failure
- **Free-riders, spillovers, incomplete information**
 - Free-riders: firms worry about trained people leaving so do not train enough
 - Spillovers: National benefit accrues to training but not enough done
 - Incomplete information: Individuals do not know what jobs to do (and schools by themselves don't either)
- **Is the rationale for the R&D tax credit & accelerated depreciation / investment tax credit.**
- **H-ITC for incumbent workers to move up career ladder**
 - An H-ITC mitigates the firm's disincentive to train workers for fear of losing them to a rival firm that does not train
- **H-ITC for entry level workers**
 - A internship credit mitigates students' concern about technical careers and recognizes that the 'first job' may no longer be US

Services Trade Negotiations Are Key

*US gains from services liberalization through exports;
ROW gains too, but from greater efficiency inside economy*

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Estimated Gains From Trade and Investment Liberalization

Region/country	all sectors		manufacturing only		services only	
	%GDP	\$Usbn	%GDP	\$Usbn	%GDP	\$Usbn
world		\$613		\$211		\$390
USA						
USA	1.95	177.3	0.34	31.3	1.65	150
EU&EFTA	1.54	168.9	0.58	63.3	0.94	103.4
Japan	1.9	123.7	0.89	57.8	0.85	61.65
China	1.5	13.6	0.54	4.9	0.79	7.1
Korea	2.84	14.1	1.4	8	0.91	5.2
Malaysia	2.81	3.4	1.99	2.4	0.54	0.6
Chile	2.40	1.9	1.29	1	1.17	0.9
Mexico	1.84	6.5	0.32	1.1	1.49	5.2

1/ Services coverage includes construction, trade and transport, other private services & govt. services. Protection measured by excess operating profits of firms listed on stock markets. Scenario shows liberalization of implied protection of 33% for all three sectors (agriculture, manufacturing, and service).

Source: Brown, Deardorf, Stern, Table 2 pp. 25; See also Dee and Hanslow