



UNITED STATES
INTERNATIONAL TRADE COMMISSION

The Information Technology Agreement: An Assessment of World Trade in Information Technology Products

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Joint Symposium of U.S.-China Advanced Technology Trade
Tsinghua University
Beijing, China
October 23-24, 2009



Introduction

- *Objective:* Examine global trade flows and accession of new member countries during the 12 years of the Agreement.
- *Questions addressed:*
 - How has ITA membership changed since its inception?
 - How has ITA trade been affected by the accession of new members since 1997, particularly developing countries, including China?
 - How has the composition of ITA trade changed across product segments (e.g. computers, telecommunications, software, semiconductor related equipment, office machines, etc.)?



Outline

- Overview of Information Technology Agreement (ITA)
- Tariff elimination under ITA
- Increasing ITA membership
- Changing composition of ITA trade
- Shifting country ITA trade patterns
- Conclusions

The views and conclusions expressed in this presentation are those of the author. They are not necessarily the views of the U.S. International Trade Commission as a whole or of any individual Commissioner.



Background

- ITA eliminates tariffs on many information and technology products
- Primary goals
 - Enhancing global economic growth and welfare through diffusion of information technology,
 - Facilitating increased production and trade for information technology products.
 - Enhance market access opportunities for IT products
- The ITA began in July 1997 with 29 WTO member countries. Presently 72 members and covers 97 percent of world trade in information technology products.



ITA Product Sample

- **Computers and Computer Peripherals;** Personal computers, laptops, work stations, monitors, keyboards, hard drives, CD-ROM drives, smart cards, printers, scanners and other input/output units
- **Telecommunications Equipment;** telephone sets, cordless phones, mobile handsets, pagers, answering machines, switches, routers, hubs, modems, fiber optic cables
- **Semiconductors;** micro processors, integrated circuits, printed circuits, diodes, resistors
- **Software;** magnetic tapes, unrecorded media
- **Office Equipment;** certain photocopy machines, fax machines, cash registers, adding machines, calculators, automatic teller machines (ATM)
- **Scientific and Measuring Devices;** spectrometers, chromatographs, flow meters, gauges, optical radiation devices
- **Other;** Loudspeakers, still digital cameras, parts
- **Semiconductor manufacturing equipment (SME);** etching and stripping apparatus, vapor deposition devices, sawing and dicing machines for wafers, spinners, ion implanters, wafer transport, handling and storage machines, injection molds, optical instruments, parts and accessories



Tariff Elimination

- Tariff elimination on MFN basis; benefits all WTO members
- Binding tariff eliminated in four equal stations (original members)

	Average bound tariffs		Average applied tariffs	
	Pre-ITA	Final ITA	Pre-ITA	Final ITA
ITA Members				
Developed countries	4.9%	0%	2.7%	0%
Developing Countries				
–China	6.5%	0%	12.7%	0%
–India	66.4%	0%	36.3%	0%
–Thailand	30.9%	0%	n/a	0%
–South Korea	14.4%	0%	7.9%	0%



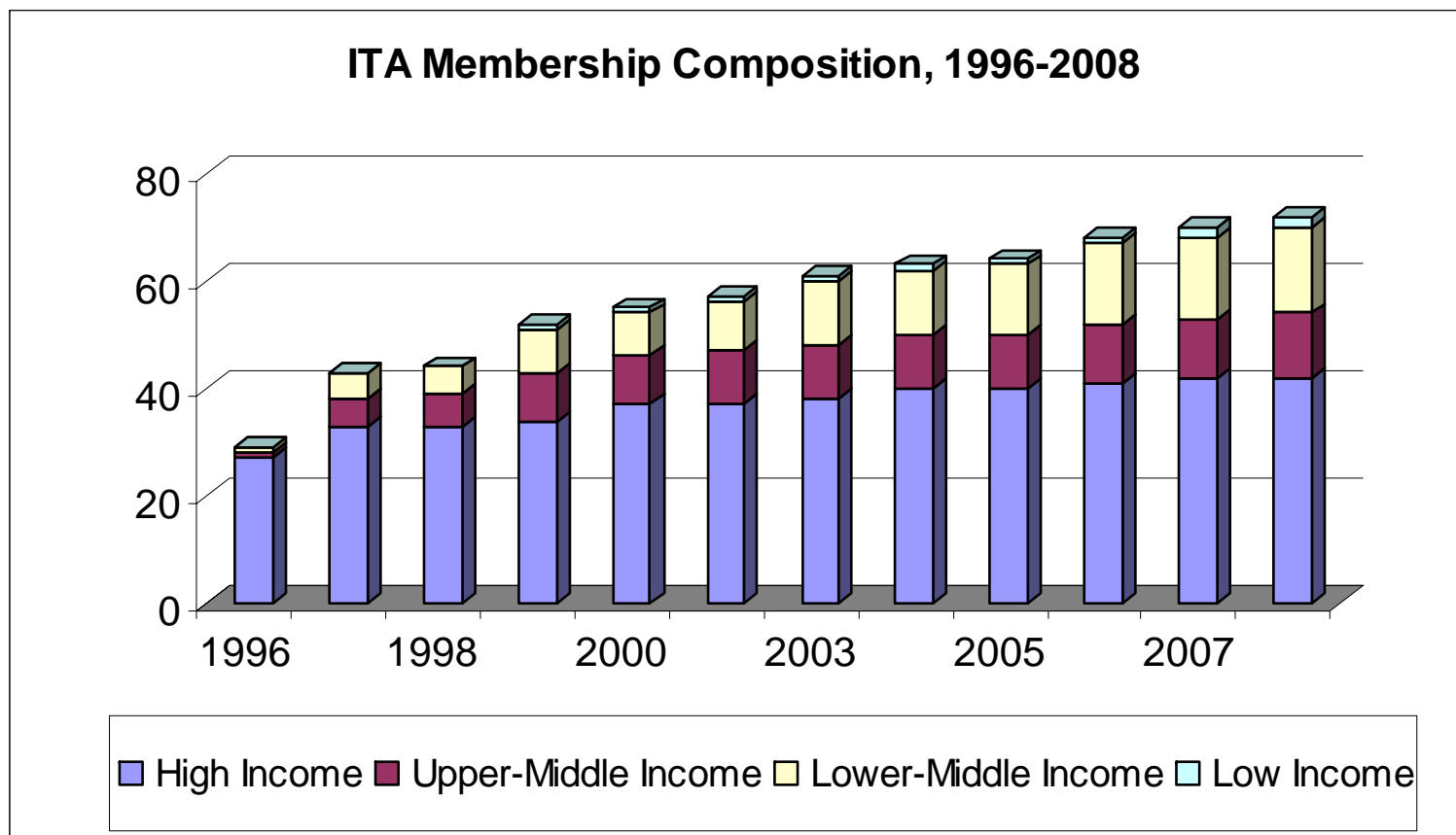
Expanding ITA Membership

- Participants increased from 29 to 72 countries
- Increasing developing country participation
 - Two members (1996) to 30 (2008)
 - Developing nations now 42% of membership
- Increasing economic and trade diversification of new members



Expanding ITA Membership

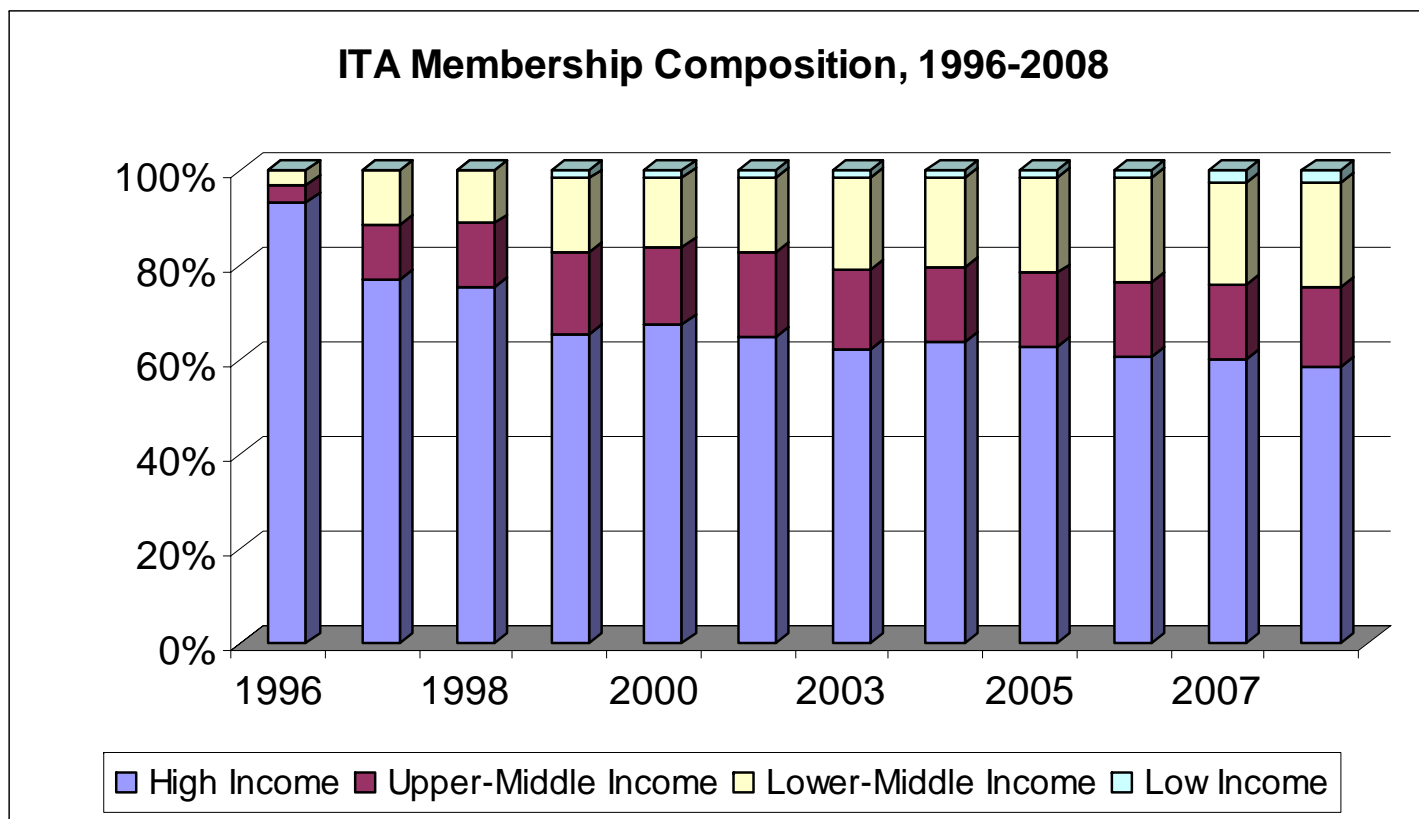
ITA members grew from 29 to 72 countries





Expanding ITA Membership

Increasing Developing country participation, 12% to 42%

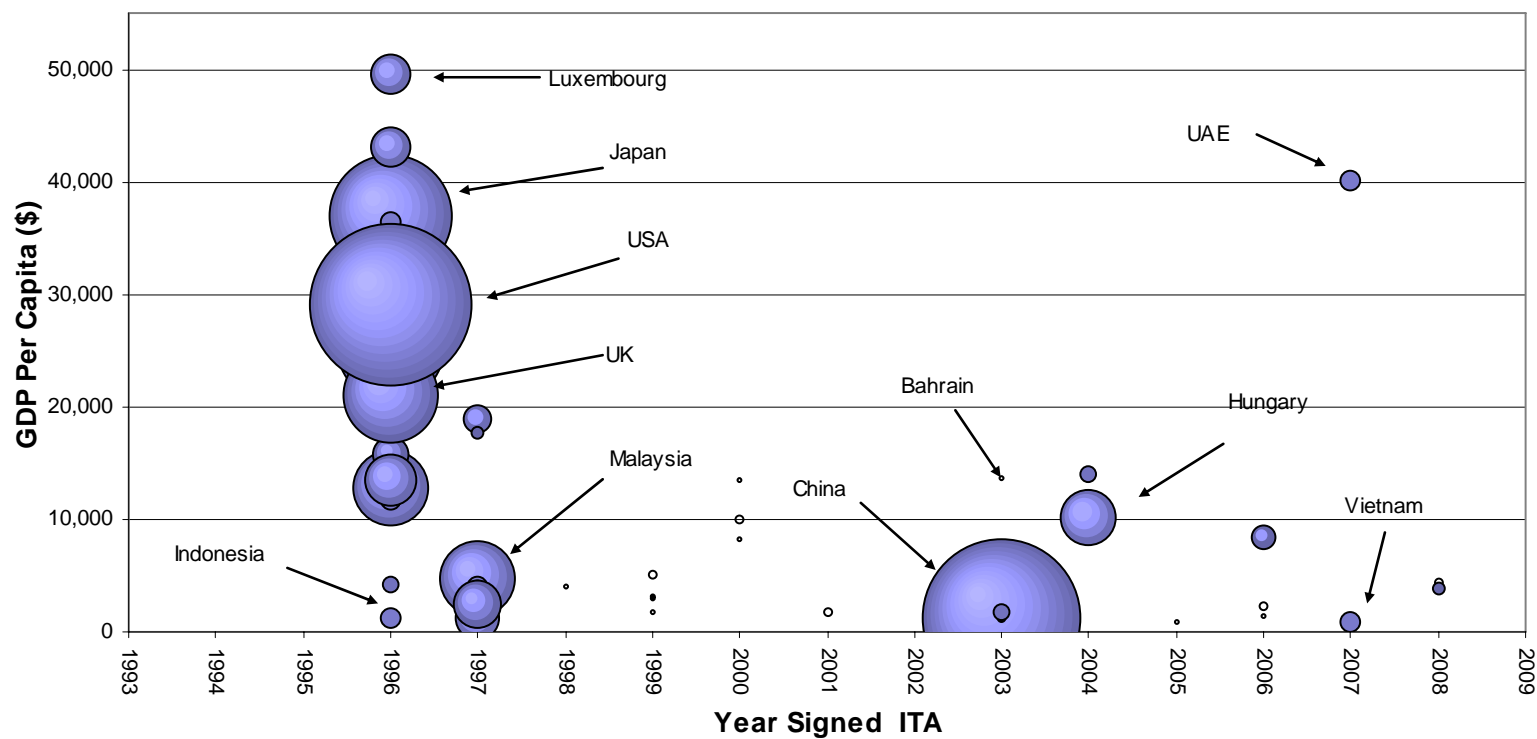




Expanding ITA Membership

Diversifying member economic and trade profiles

Profiles of ITA members, by income and trade levels



Total ITA trade represented by sphere size.



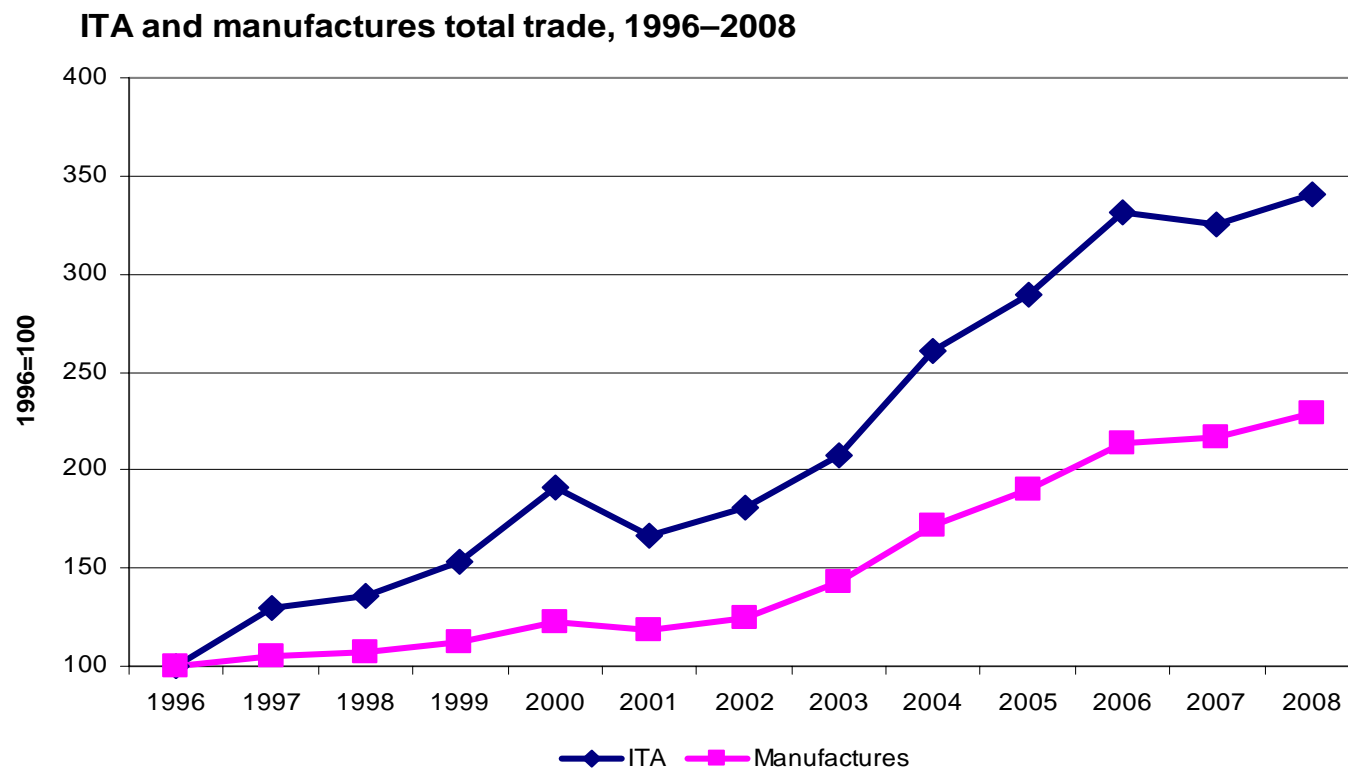
Growth in ITA Trade

- Total ITA trade increased nearly \$3 trillion; from \$1.2 trillion (1996) to \$4.0 trillion (2008)
- Growth in ITA was uneven but outpaced general manufactures trade
- Annual growth rate was 10.7% despite brief decline in 2001-02 (post-internet bubble) and beginnings of current global economic downturn
- Exports by developing countries increasing rapidly, accounted for 33% of ITA exports in 2008



Growth in ITA Trade

Robust Growth in ITA Trade

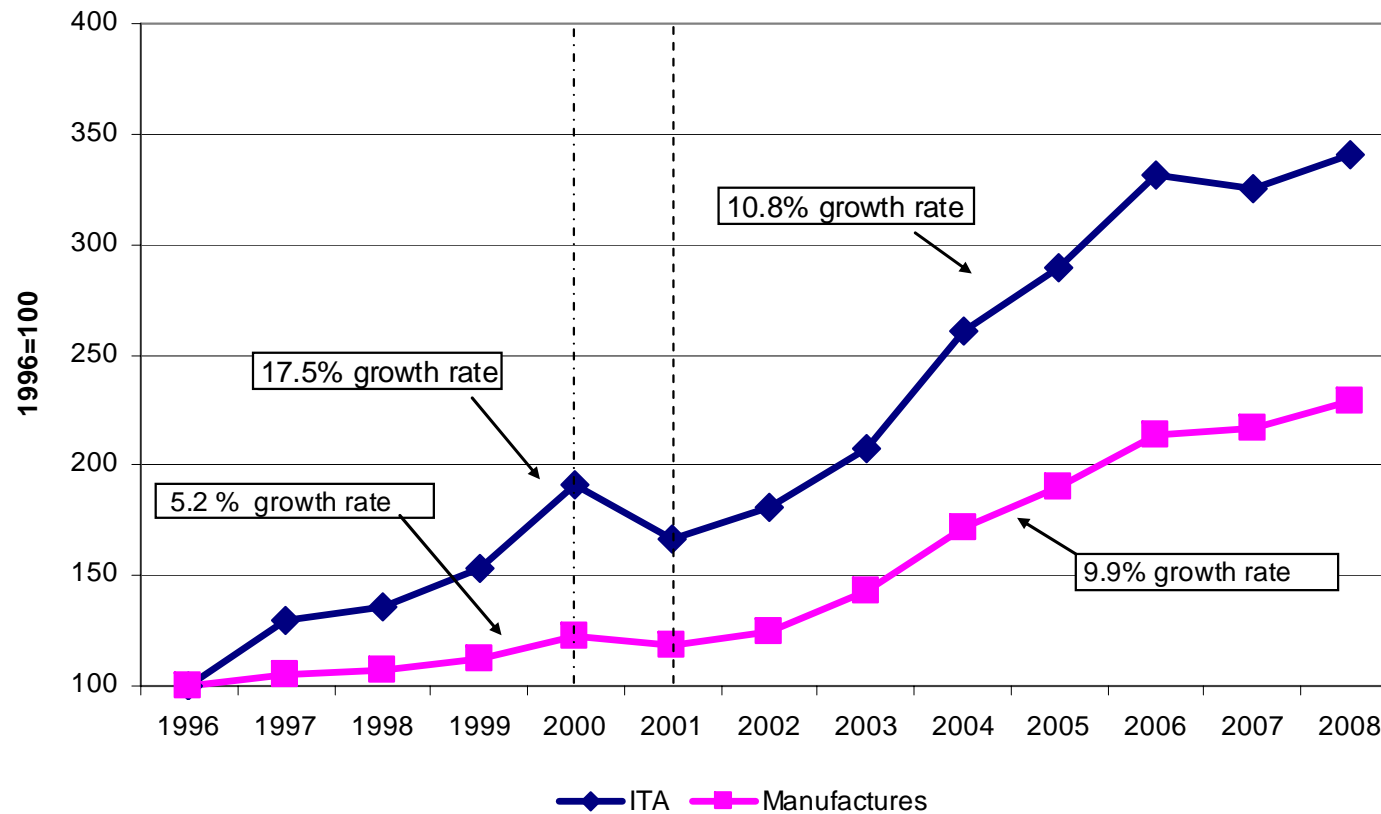


Source : Compiled by USITC staff from UN Comtrade database.



Growth in ITA Trade

ITA and manufactures total trade, 1996–2008

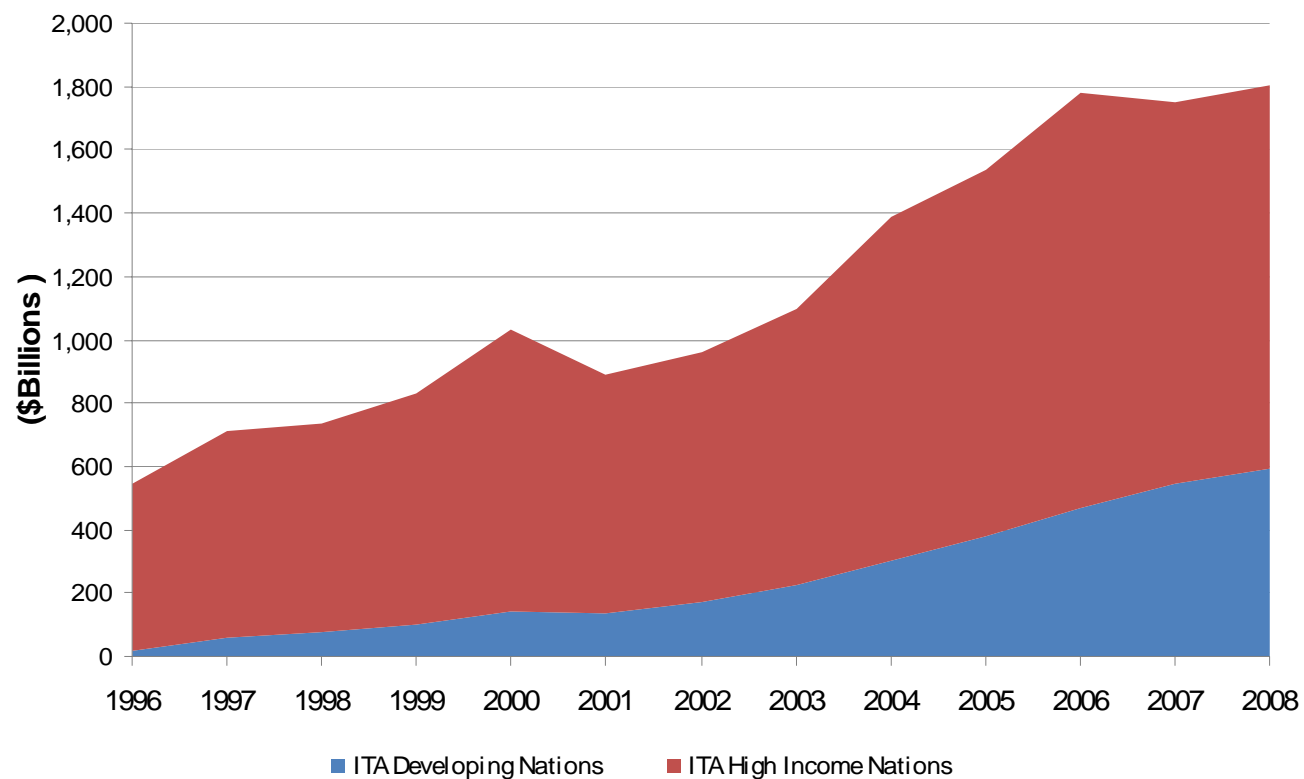




Growth in ITA Trade

Rising role of Developing Countries and diversification of ITA membership

Developing and Developed (High Income) Country ITA Exports 1996-2008





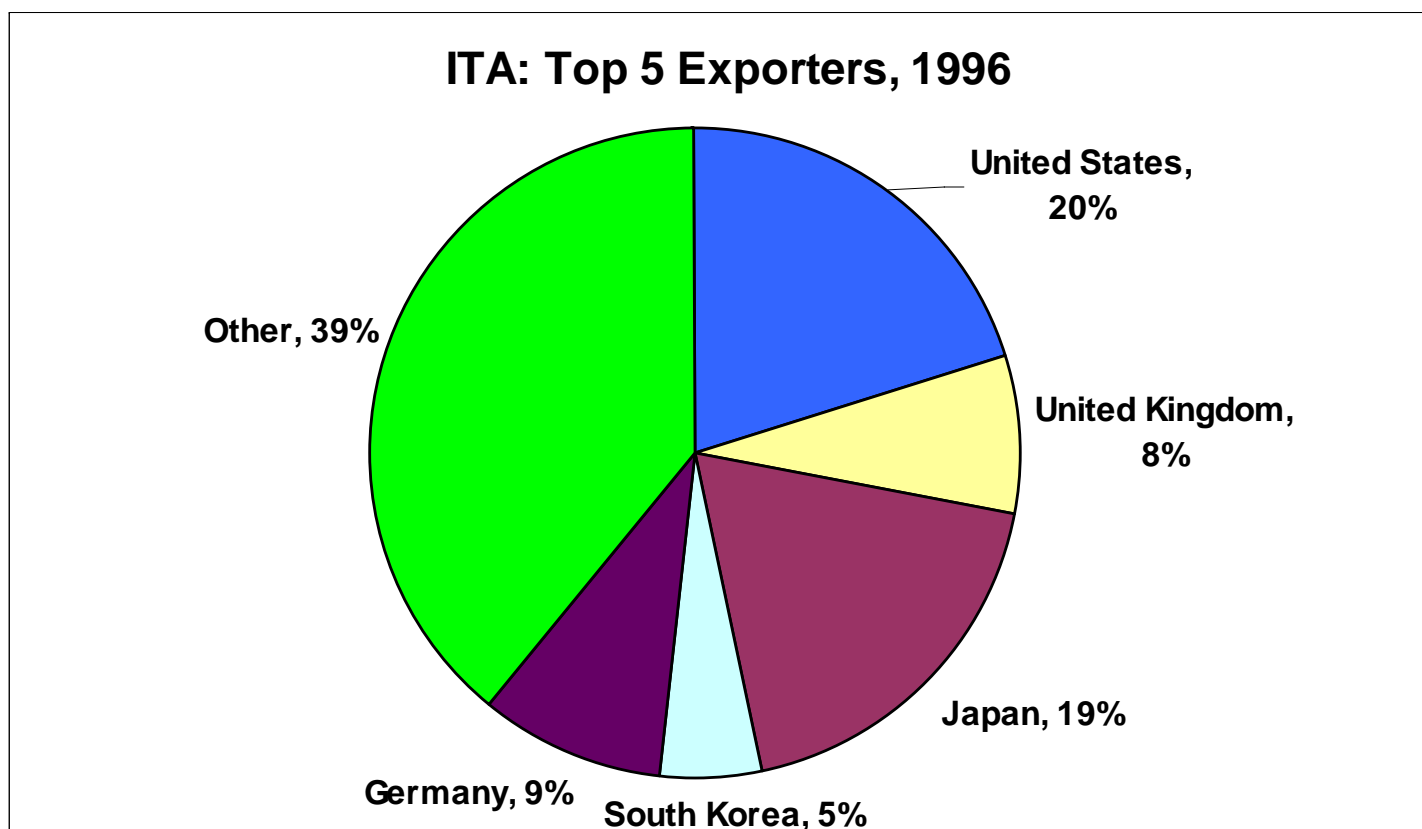
Shifting Trade Patterns

- Broadening participation of Asian countries, particularly China
- Export growth rates; China (33.5%), South Korea (13.1%), Chinese Taipei (9.8%), and Philippines (11.0)
- Rising exports by Eastern European countries since joining ITA; Hungary (27.5%), Slovak Rep. (22.9%), Czech (15.4%), and Poland (15.4%)



Shifting Trade Patterns

U.S., EU-15, Japan Leading ITA Exporters

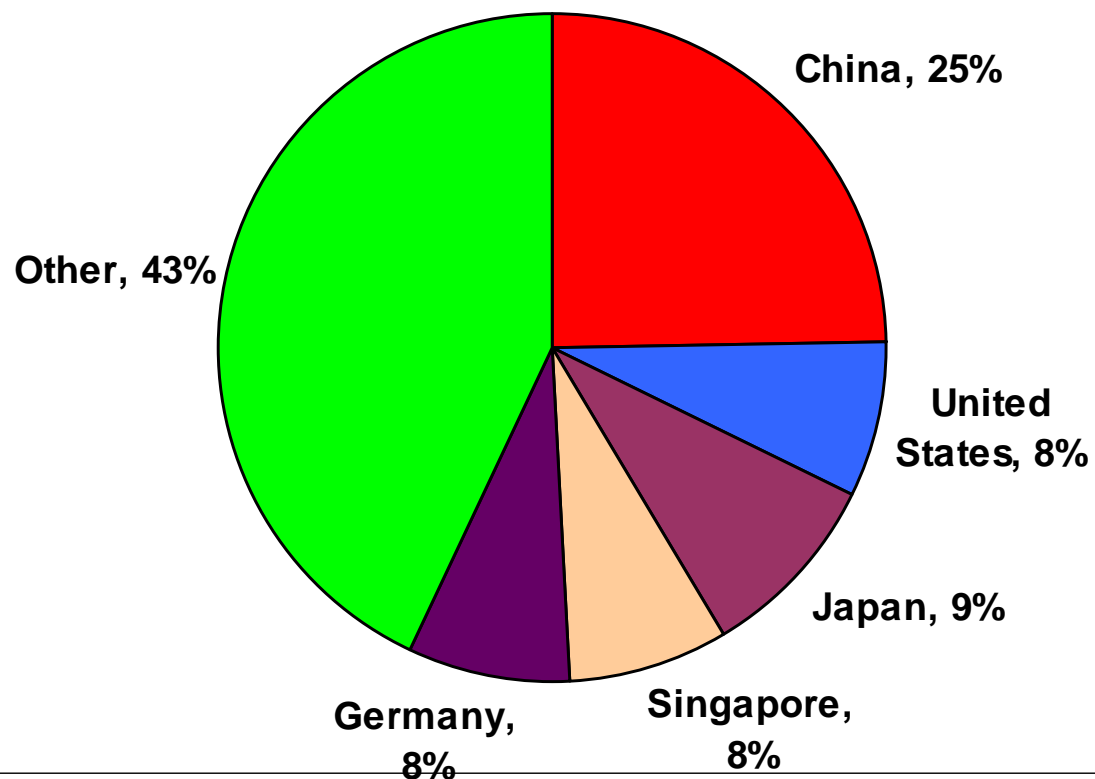




Shifting Trade Patterns

Significant Export Shift to China, Asia

ITA: Top 5 Exporters, 2008





Shifting Trade Patterns

China's Emerging Role in ITA Trade

- China's share of total ITA trade 19% (2008) compared with 3% (1996); propelled by a remarkable 29% annual growth rate
- China's now largest exporter and second largest importer; surpassing U.S. and EU in 2005
- China's ITA trade accelerated after joining the WTO (2001) and ITA (2003)
- ITA tariff elimination improved market access and lower cost of intermediate goods



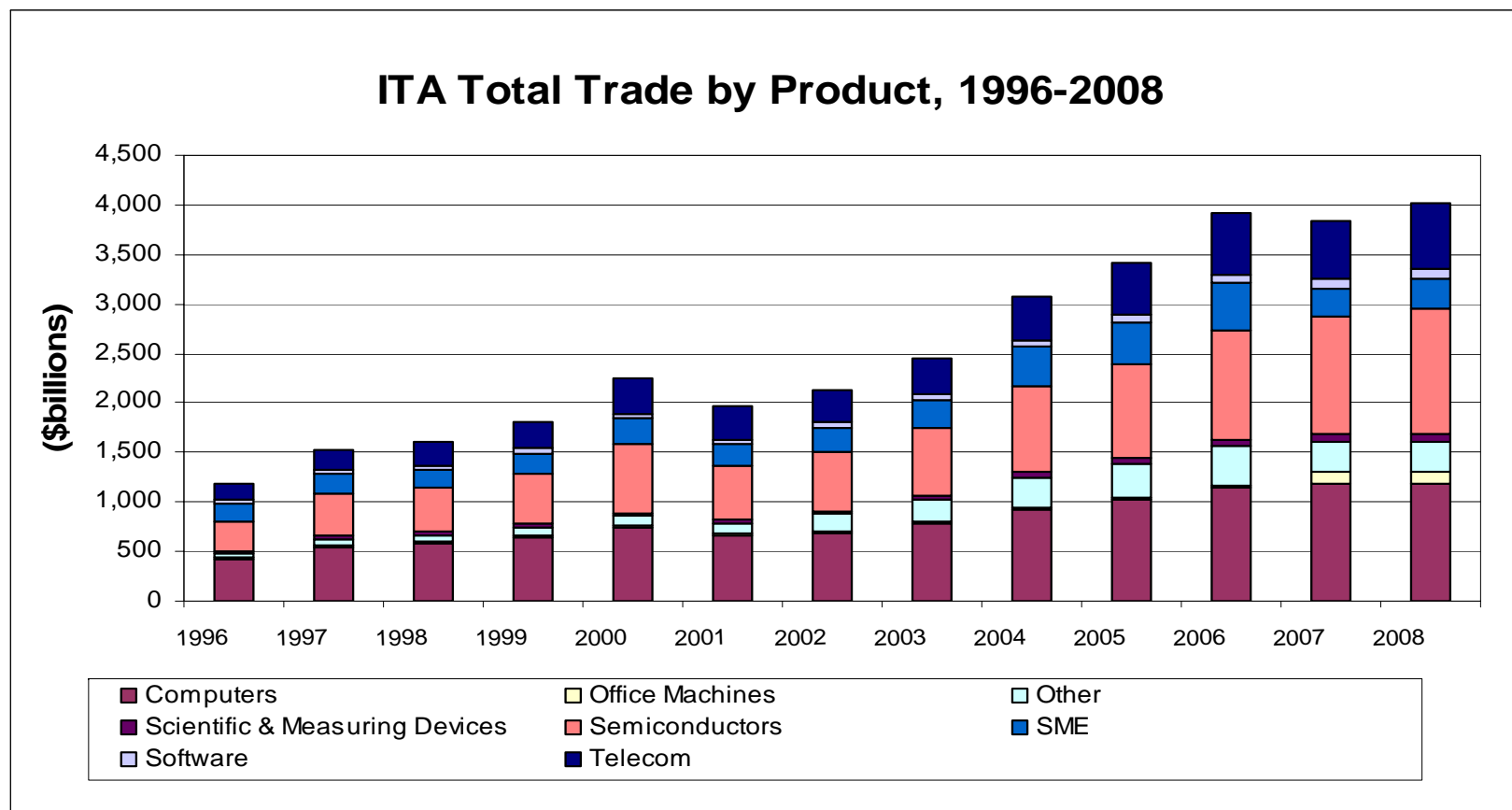
ITA Trade by Product Segment

- Computers and semiconductors lead ITA products; over 60% of total ITA trade
- The internet boom of 1990's and declining prices spurred increasing demand and trade for many ITA products, namely computers and semiconductors (*Aizcorbe, Flamm and Khurshid*)
- Telecommunications and other (including parts) segments increased share of ITA trade;
- Expanding global production networks fueled proliferation of intermediate goods and parts trade (*Athukorala 2008*)



ITA Total Trade by Product

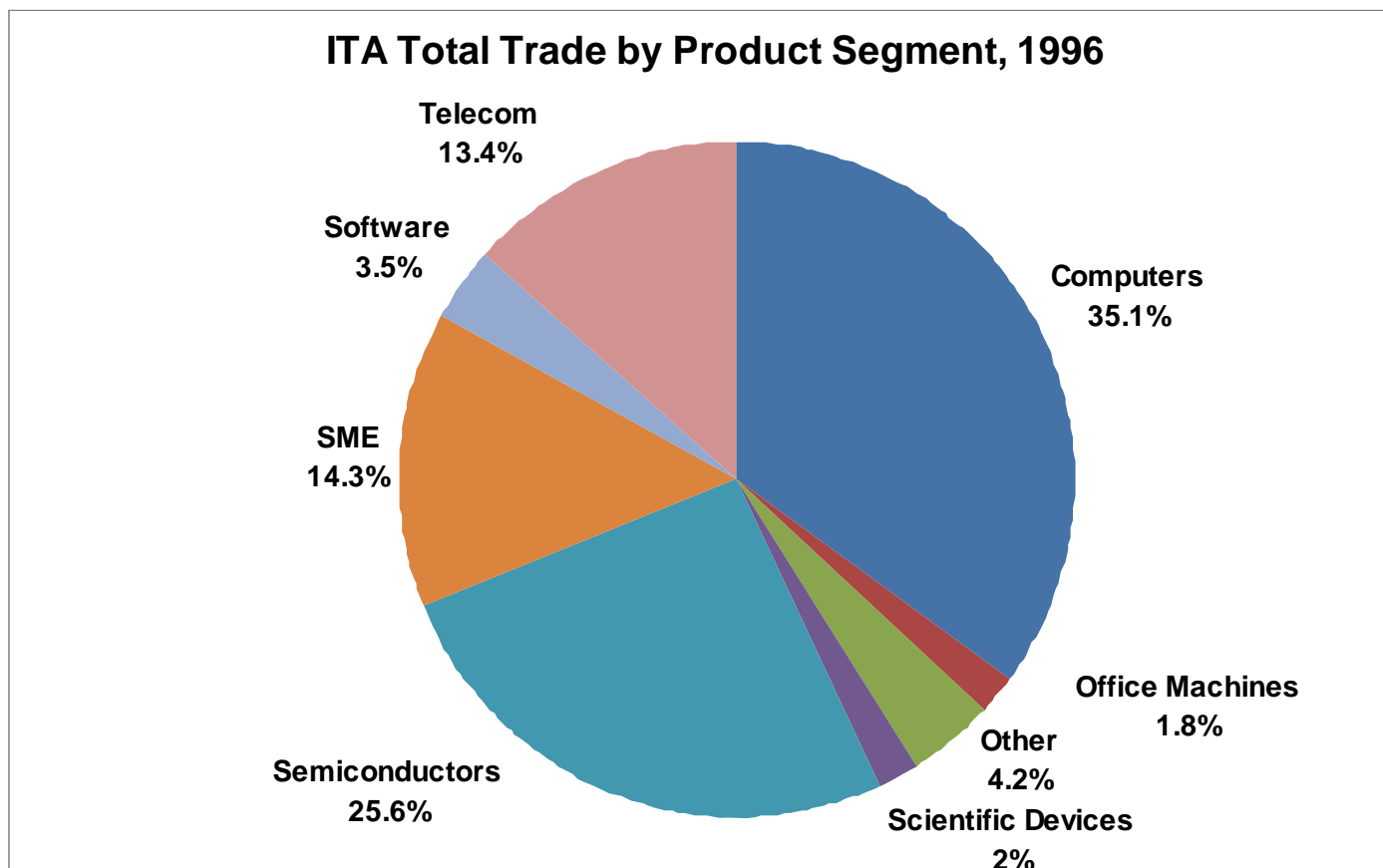
Computers and Semiconductors lead ITA trade





ITA Product Segments

Computers and Semiconductors lead ITA trade

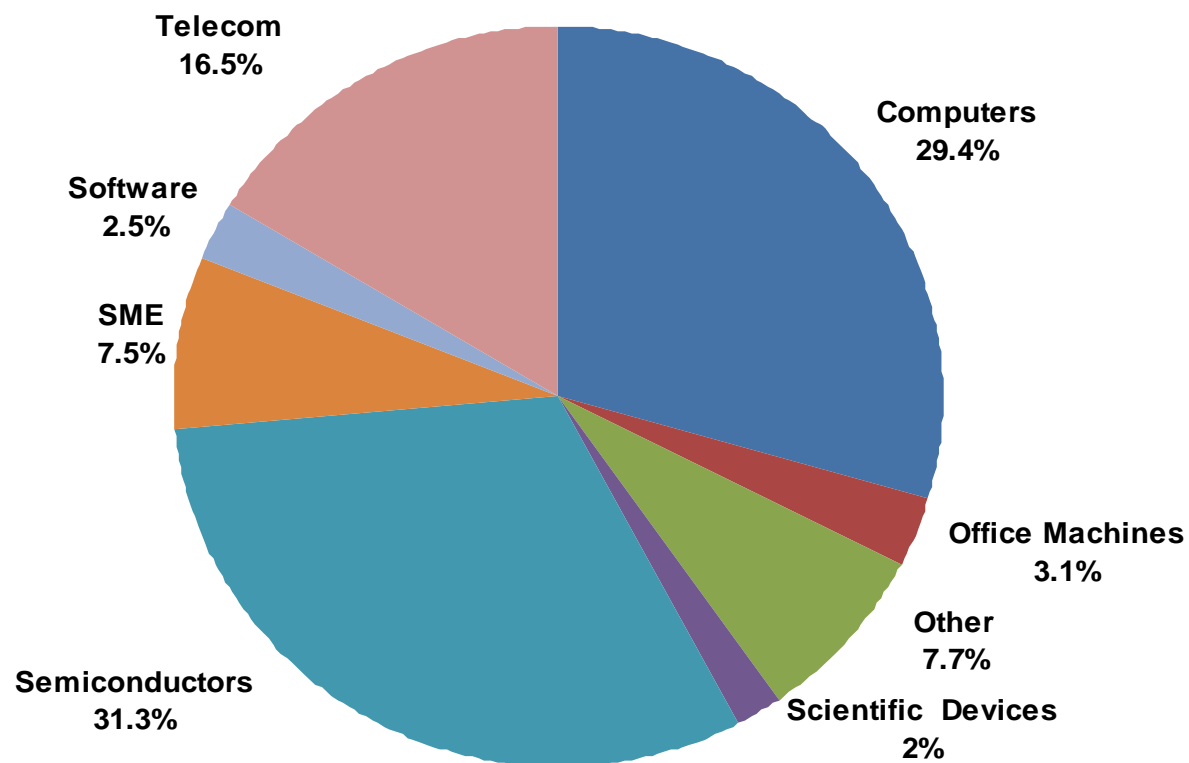




ITA Product Segments

Telecom and Other products increasing 2008

ITA Total Trade by Product Segment, 2008





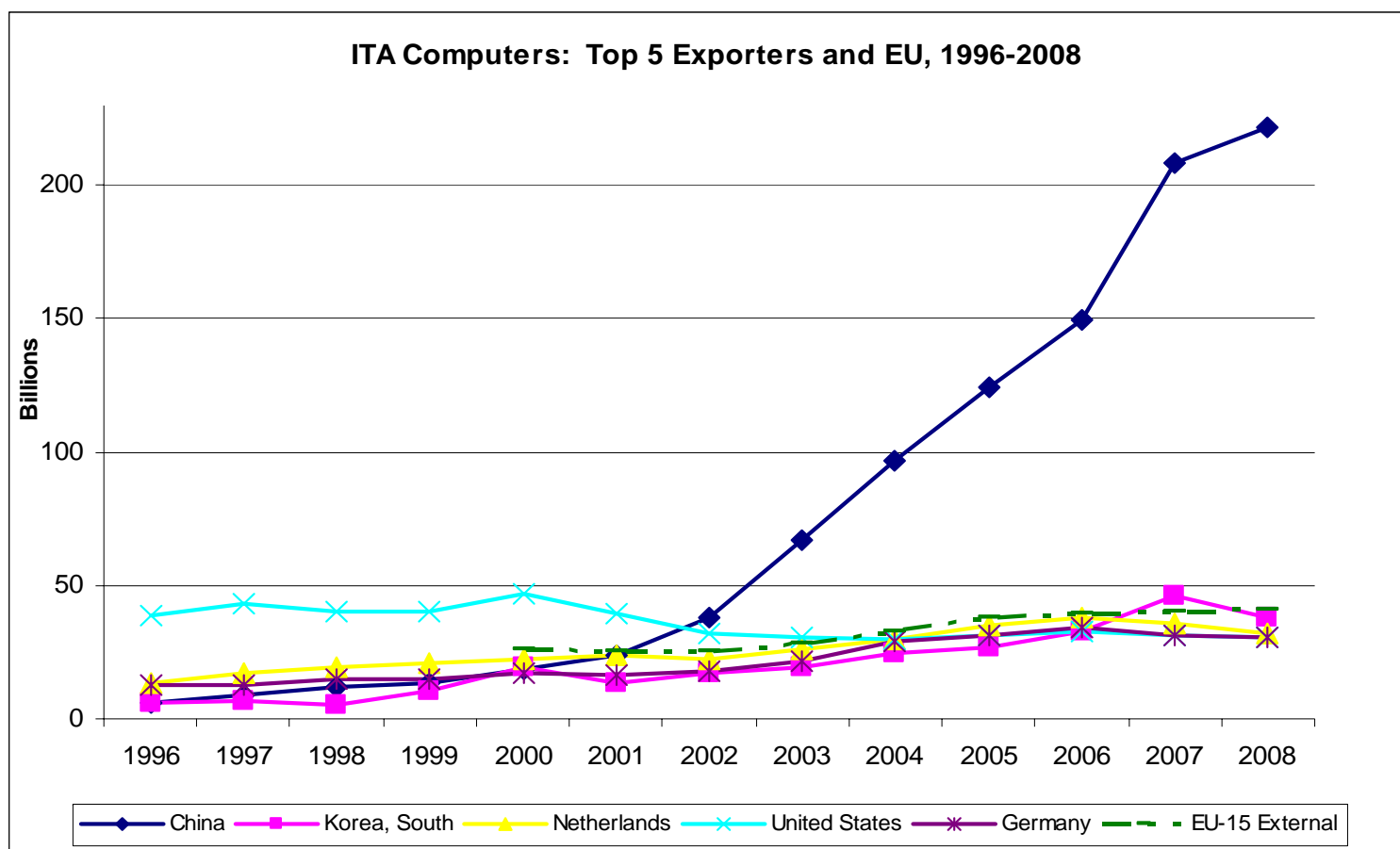
ITA Trade by Product Segment

- Shift in global trade and production patterns evident in computers and telecommunications exports
- China and South Korea have displaced U.S., Japan, and several EU countries
- Other developing members, (Malaysia and Thailand) experienced rising computer exports since joining ITA



Computers: Shifting exports

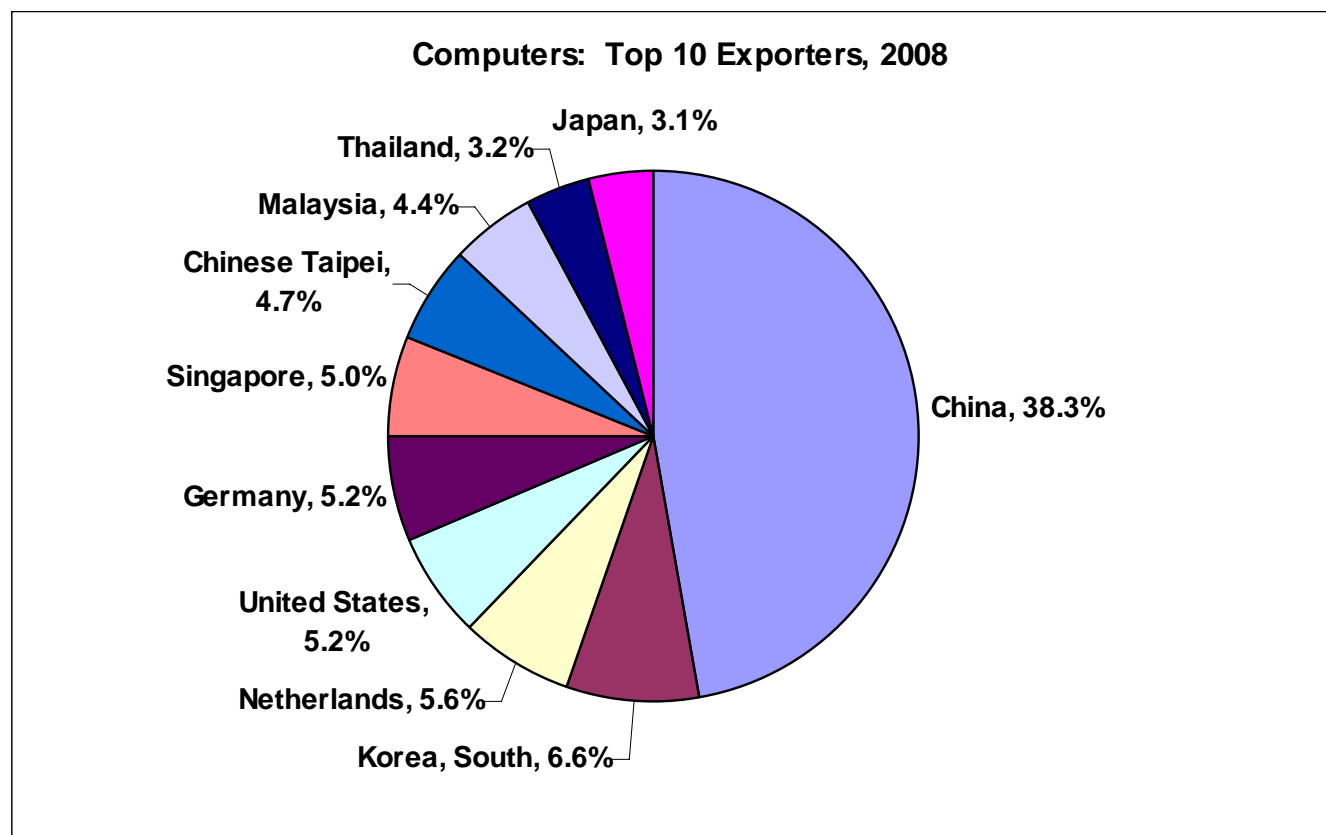
Significant Export Shift to Asia, and China





Computers: Shifting exports

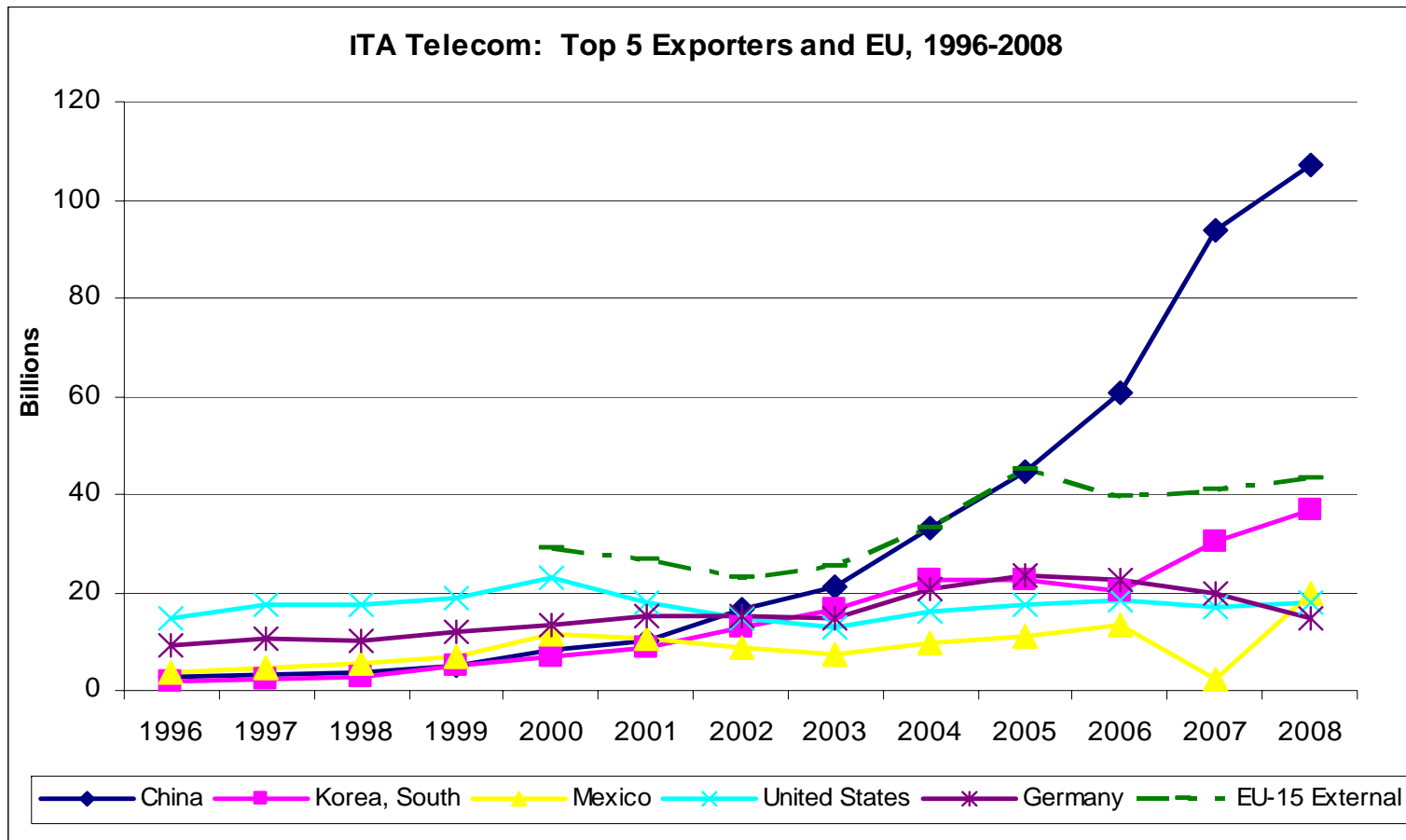
Significant Export Shift to Asia, and China





Telecommunications: Shifting exports

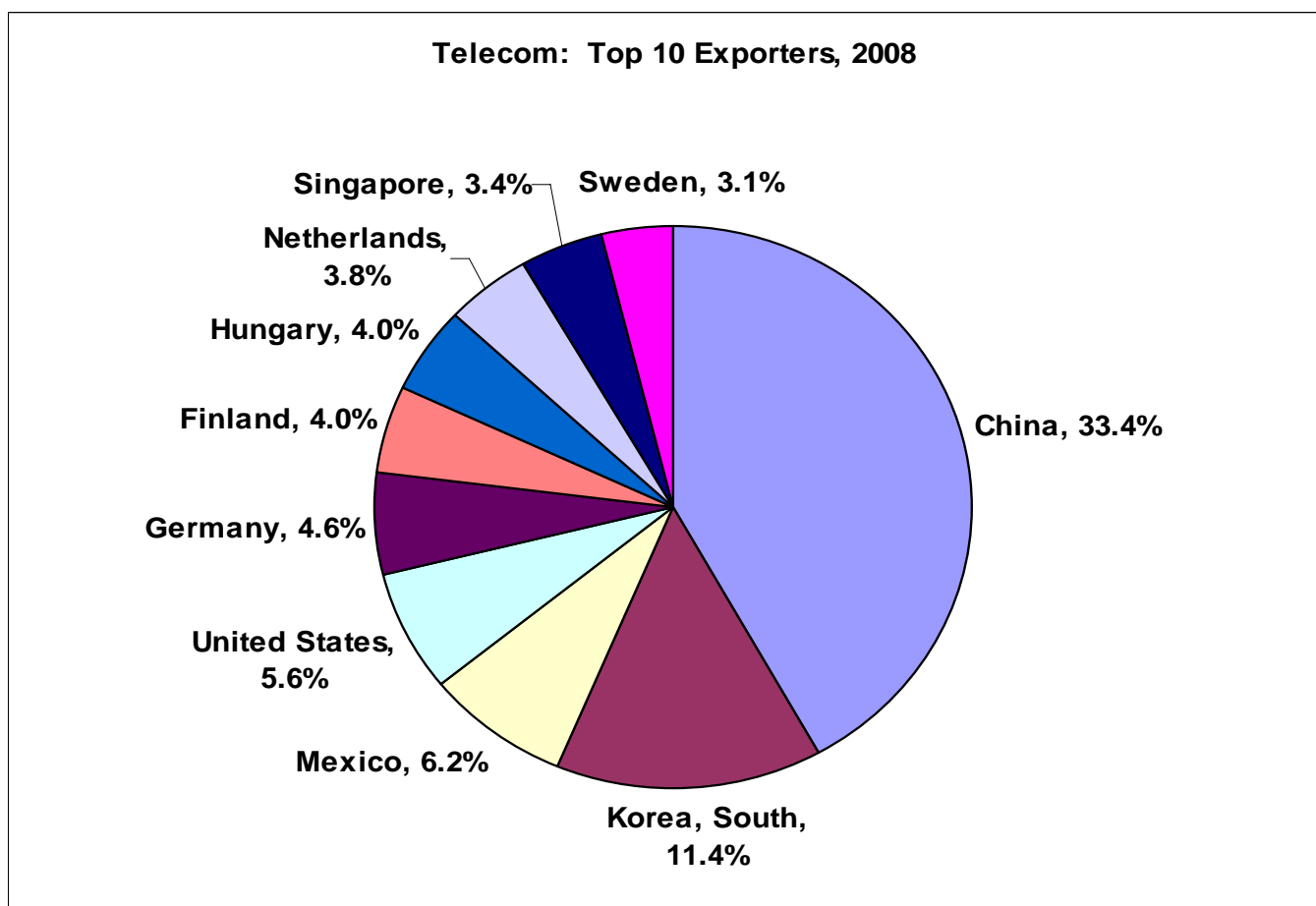
Significant Export Shift to Asia, and China





Telecommunications: Shifting exports

Significant Export Shift to Asia, and China





ITA Objectives Achieved?

- Enhancing global economic growth and welfare through diffusion of information technology,*
- Increased production and trade for IT products.*
- Enhance market access opportunities for IT products*

- Empirically estimating ITA impact on trade and technology diffusion complex and elusive.
- Data analysis suggests ITA contributed to technology diffusion and increased IT trade
- ITA tariff elimination opened opportunities, particularly for developing countries, to participate in trade and global production networks



Conclusion

- ITA tariff liberalization was a catalyst for rapidly rising trade in information technology products.
- Developing countries increasing participation in ITA trade, particularly in Asia.
- Notable shift in ITA exports and production centers from U.S., Europe, and Japan, to Asian producers punctuated by China.