

Lecture 1: Introduction

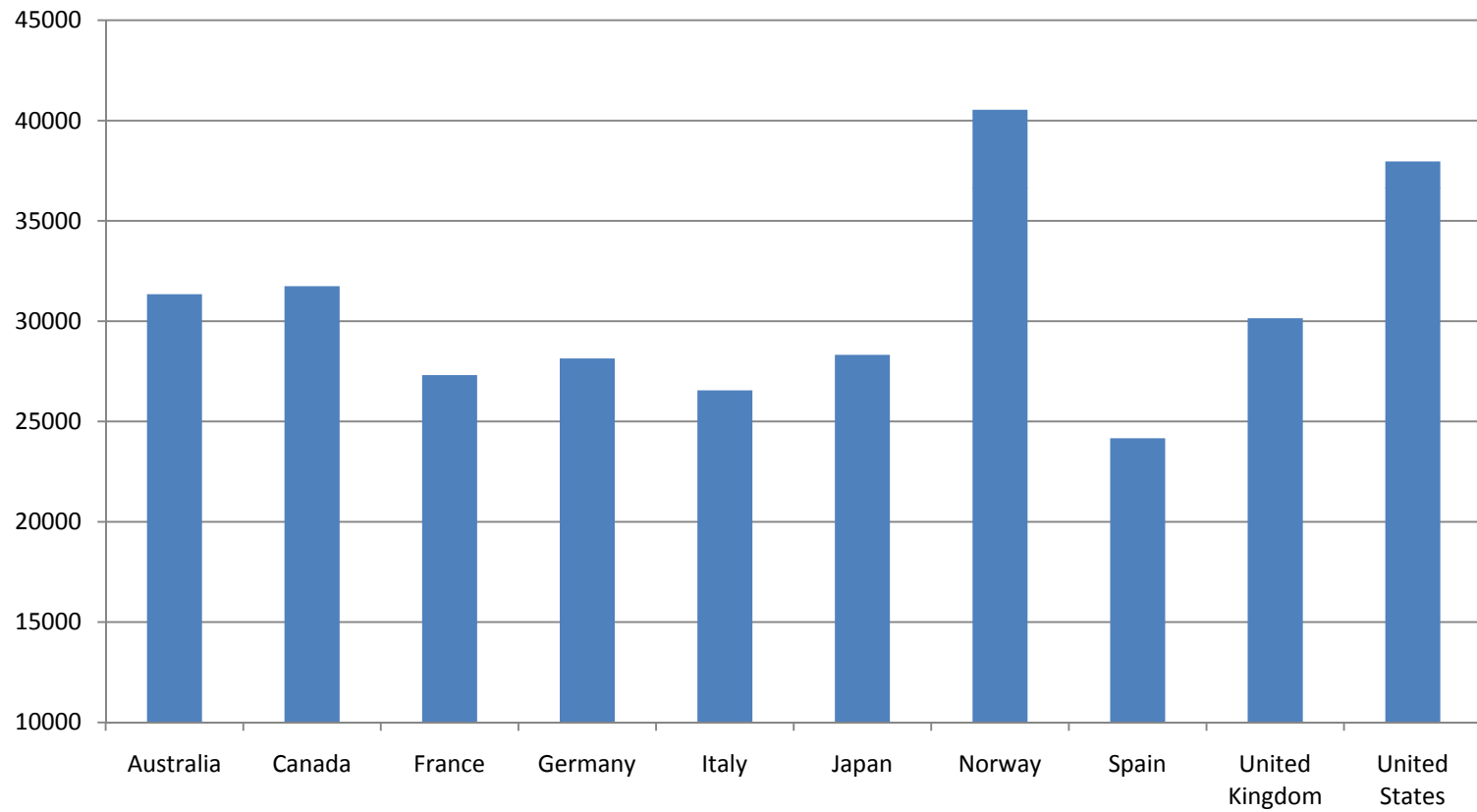
- Canada as a trading nation
- Why do nations trade?

Richard Roy (rroy@uottawa.ca)
ECO-2113, Fall 2009

Canada: A Rich Country

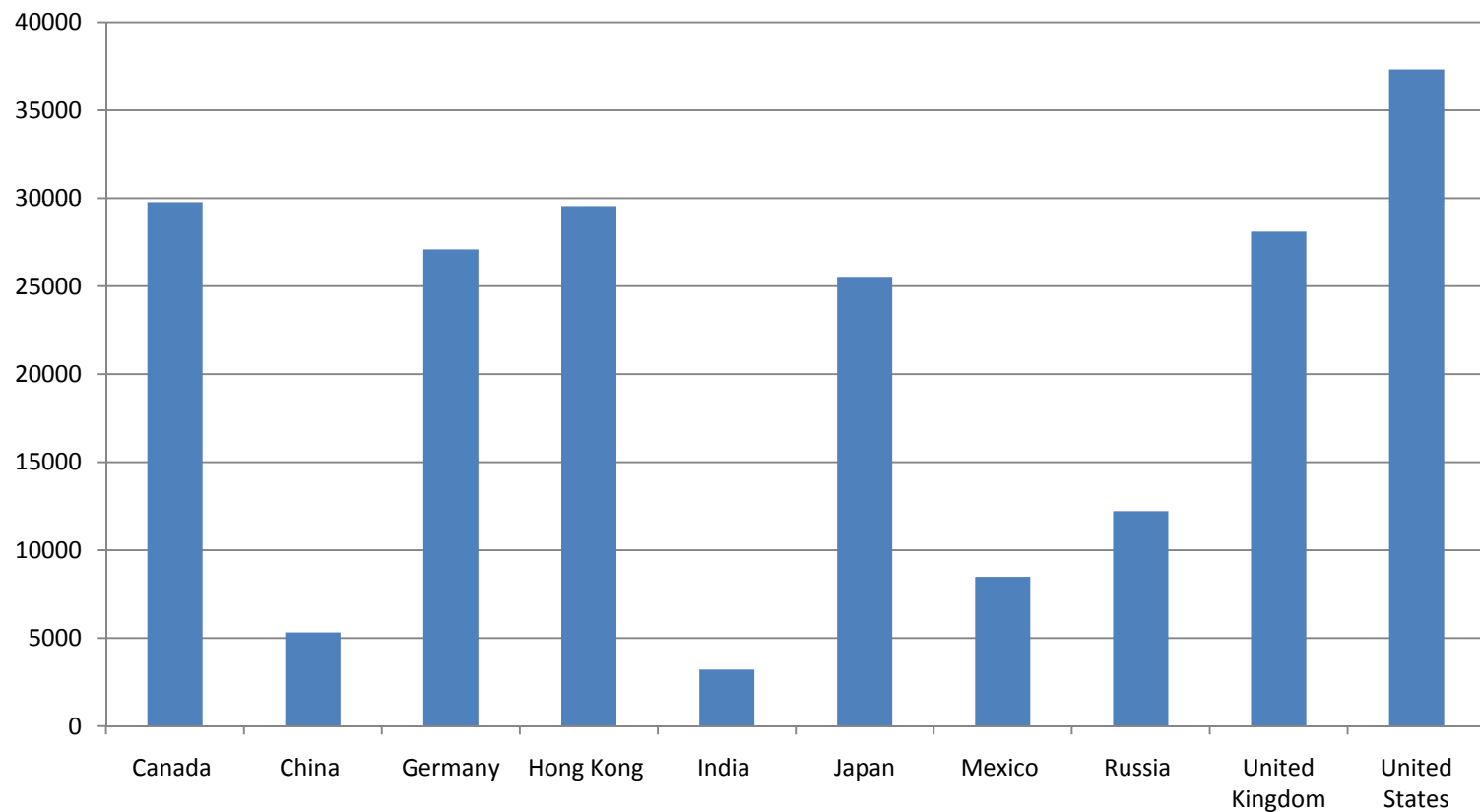
- Canada's GDP per head, a measure of living standards, is comparable to other main developed economies (OECD): 32000 U.S.\$ in 2007.
- Much higher than in China (about six times) and Mexico for example (about four times).
- Some developing economies are slowly catching up to the developed ones (level gap is closing e.g., Japan).
- Canada's real income per capita has been growing at rates similar to those registered in the U.S. (around 5.8% per year) over the past 60 years.
 - Permanent gap in levels
 - Sliding performance in recent decades
- International trade, the exchange of goods and services across countries, has been increasing rapidly in relative terms since the early 1950s.

Real GDP per capita, 2007, Selected OECD countries (US\$, base year 2000)



Source: OECD

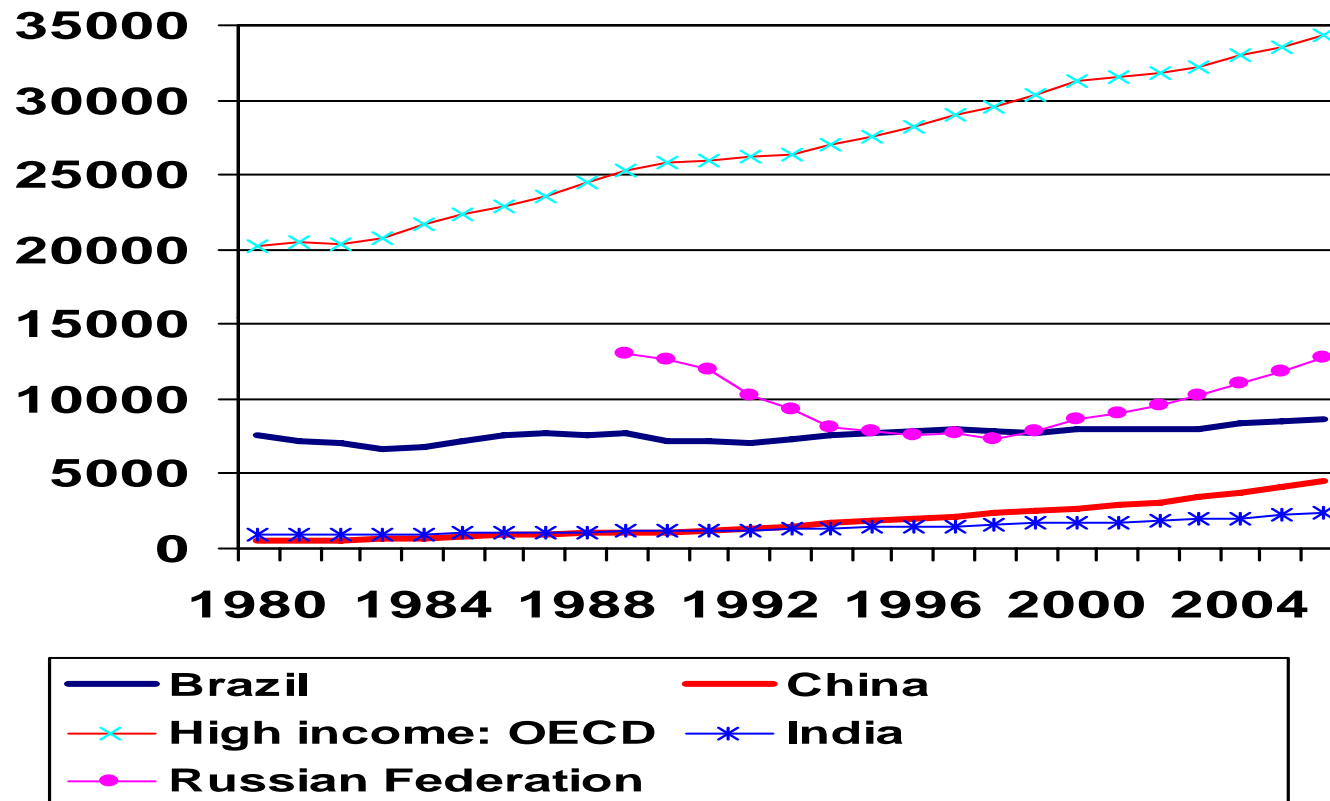
Read GDP per Capita, 2003, Selected Countries (US\$, base year 2000)



Source: Penn World Tables

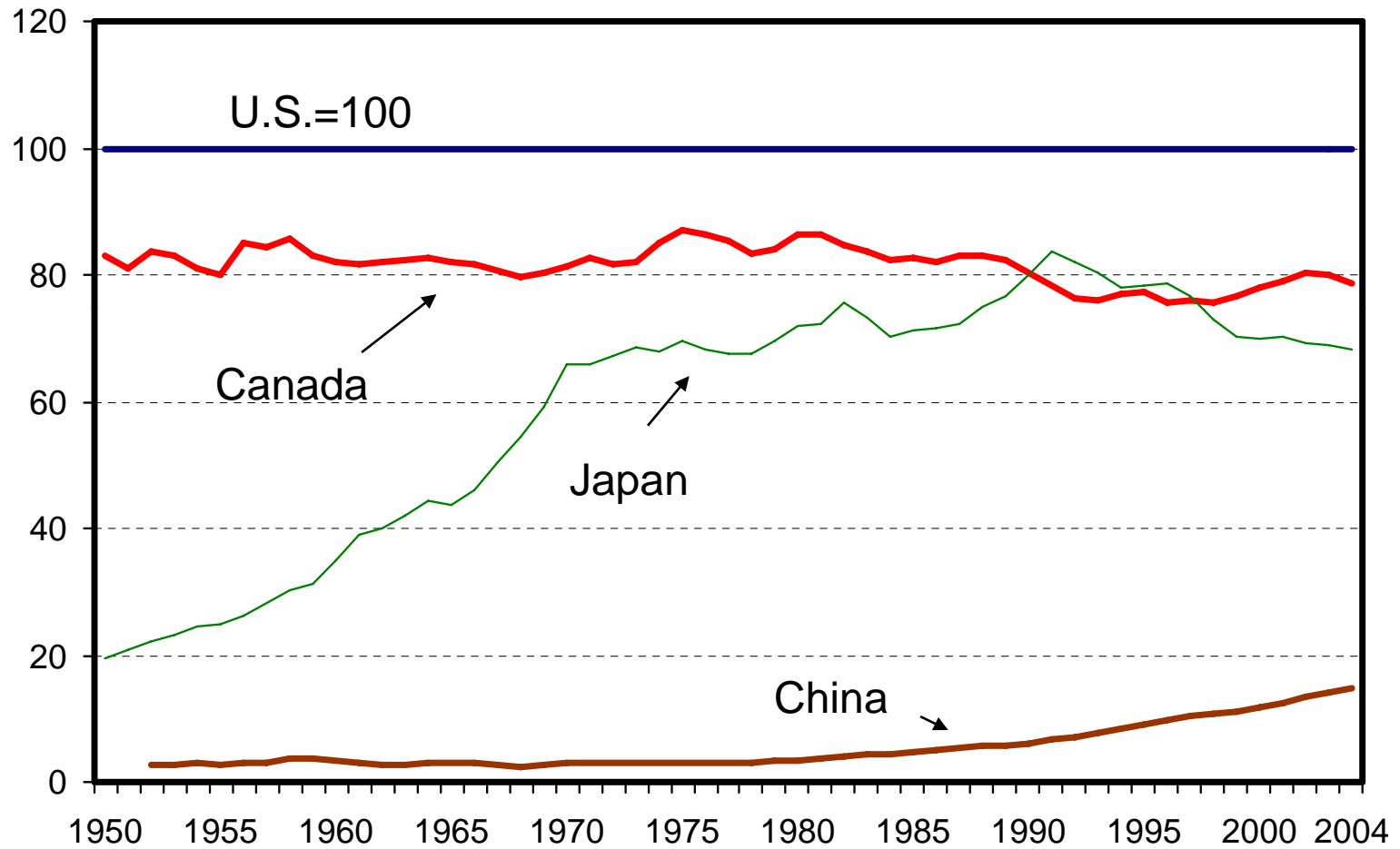
Standards of living across regions

GDP per capita
(constant 2005, international \$)



Source: World Bank

Real GDP per Capita, Canada, US and Japan, 1950 – 2004



Source: GDP per capita in chained and PPP based constant 2000 international dollar is obtained from Penn World Table 6.2.

Trade is Becoming More Intensive and More Global

- Since post WWII, trend growth in trade is stronger than for GDP
- Main Drivers:
 - The Bretton Woods Agreements/System (e.g., GATT/WTO: rules-based trade) has provided an international framework for increased trade
 - Political developments favouring trade all over the world (e.g., continental Europe, NAFTA), especially significant in developing countries (e.g., East Asian countries, including China)
 - Falling costs of transportation and communication

World merchandise exports shares by region and selected economy (percent)

	1948	1953	1963	1973	1983	1993	2003	2007
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
North America	28.1	24.8	19.9	17.3	16.8	18.0	15.8	13.6
United States	21.7	18.8	14.9	12.3	11.2	12.6	9.8	8.5
Canada	5.5	5.2	4.3	4.6	4.2	4.0	3.7	3.1
Mexico	0.9	0.7	0.6	0.4	1.4	1.4	2.2	2.0
South and Central America	11.3	9.7	6.4	4.3	4.4	3.0	3.0	3.7
Europe	35.1	39.4	47.8	50.9	43.5	45.4	45.9	42.4
Germany a	1.4	5.3	9.3	11.6	9.2	10.3	10.2	9.7
France	3.4	4.8	5.2	6.3	5.2	6.0	5.3	4.1
Italy	11.3	9.0	7.8	5.1	4.0	4.6	4.1	3.6
United Kingdom	1.8	1.8	3.2	3.8	5.0	4.9	4.1	3.2
Africa	7.3	6.5	5.7	4.8	4.5	2.5	2.4	3.1
Middle East	2.0	2.7	3.2	4.1	6.8	3.5	4.1	5.6
Asia	14.0	13.4	12.5	14.9	19.1	26.1	26.2	27.9
China	0.9	1.2	1.3	1.0	1.2	2.5	5.9	8.9
Japan	0.4	1.5	3.5	6.4	8.0	9.9	6.4	5.2
India	2.2	1.3	1.0	0.5	0.5	0.6	0.8	1.1
Six East Asian traders	3.4	3.0	2.4	3.4	5.8	9.7	9.6	9.3
Memorandum item:								
EU d	-	-	27.5	38.6	38.6	38.6	42.7	39.1
GATT/WTO Members e	62.8	69.6	75.0	84.1	78.4	89.4	94.3	94.1

a Figures refer to the Fed. Rep. of Germany from 1948 through 1983.

d Figures refer to the EEC(6) in 1963, EC(9) in 1973, EC(10) in 1983, EU(12) in 1993, and EU(25) in 2003 and 2006.

e Membership as of the year stated.

Leading exporters and importers in world merchandise trade, 2007

(billions US dollars and percent)

Rank	Exporters	Value	Share	Annual percentage change	Rank	Importers	Value	Share	Annual percentage change
1	Germany	1326.4	9.5	20	1	United States	2020.4	14.2	5
2	China	1217.8	8.7	26	2	Germany	1058.6	7.4	17
3	United States	1162.5	8.3	12	3	China	956.0	6.7	21
4	Japan	712.8	5.1	10	4	Japan	621.1	4.4	7
5	France	553.4	4.0	12	5	United Kingdom	619.6	4.4	3
6	Netherlands	551.3	4.0	19	6	France	615.2	4.3	14
7	Italy	491.5	3.5	18	7	Italy	504.5	3.5	14
8	United Kingdom	437.8	3.1	-2	8	Netherlands	491.6	3.5	18
9	Belgium	430.8	3.1	17	9	Belgium	413.2	2.9	17
10	Canada	419.0	3.0	8	10	Canada	389.6	2.7	9

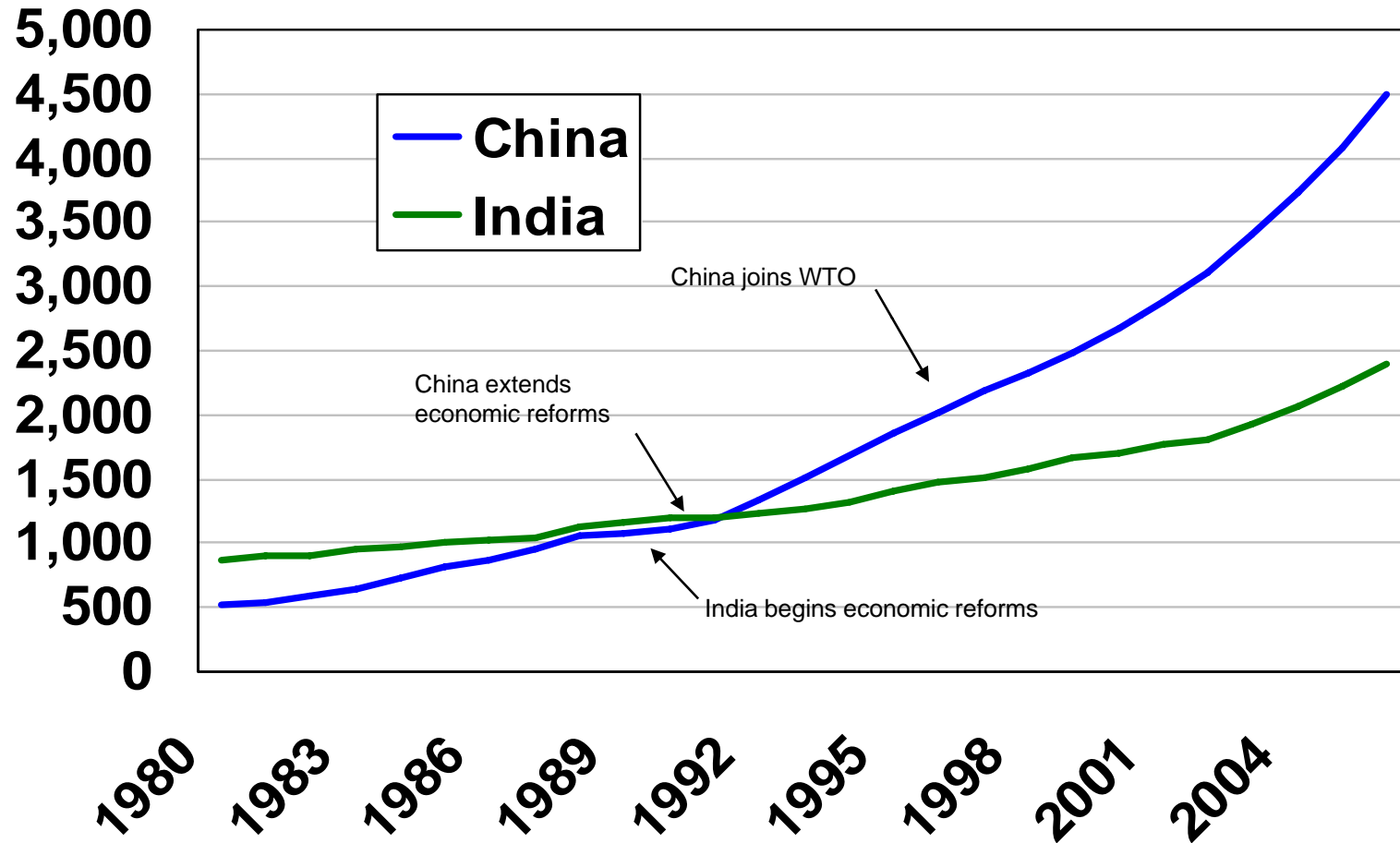
Leading exporters and importers in world trade in commercial services, 2007 (billions US dollars, percent)

Rank	Exporters	Value	Share	percentage change	Rank	Importers	Value	Share	percentage change
1	United States	456.4	13.9	15	1	United States	335.9	10.9	9
2	United Kingdom	273.0	8.3	18	2	Germany	250.5	8.1	15
3	Germany	205.8	6.3	15	3	United Kingdom	194.1	6.3	13
4	France	136.7	4.2	16	4	Japan	148.7	4.8	11
5	Spain	128.3	3.9	21	5	China	129.3	4.2	29
6	Japan	127.1	3.9	10	6	France	124.1	4.0	16
7	China	121.7	3.7	33	7	Italy	118.3	3.8	21
8	Italy	110.5	3.4	13	8	Spain	98.4	3.2	26
9	India	89.7	2.7	20	9	Ireland	94.5	3.1	20
10	Ireland	89.0	2.7	30	10	Netherlands	86.8	2.8	10

Canada: 20, Share: 1.9%

Canada:12, Share: 2.6 %

GDP per capita in China and India



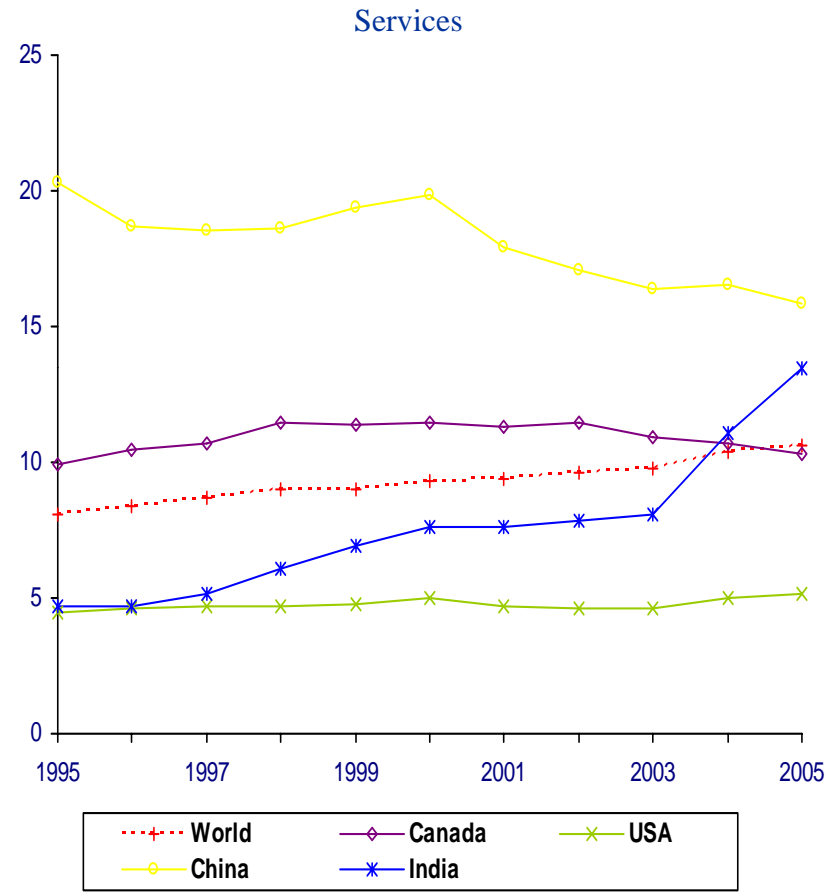
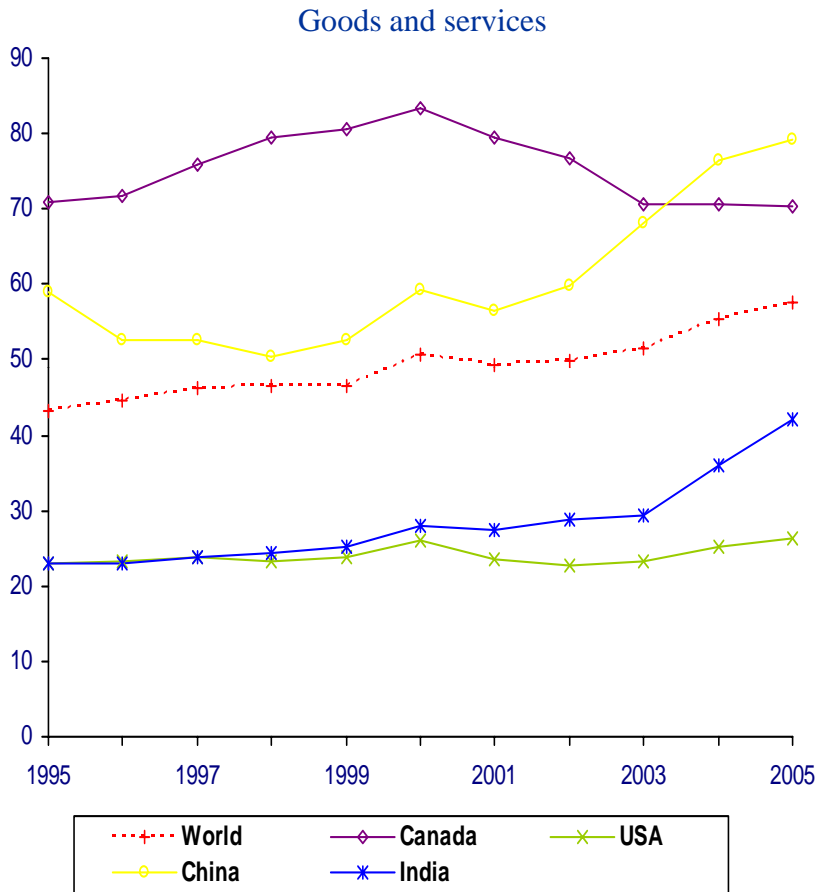
Source: World Bank

Transportation and communications costs (1930-1990)

	1930	1950	1960	1970	1990
Air transport costs per passenger mile	100	44	56	24	16
Cost of a three minute London-New York telephone call	100	22	19	13	1.4
Cost of using a satellite	n/a	n/a	n/a	100	8

Source: Acocella, N. (2005) Economic policy in the Age of Globalisation, Cambridge University Press.

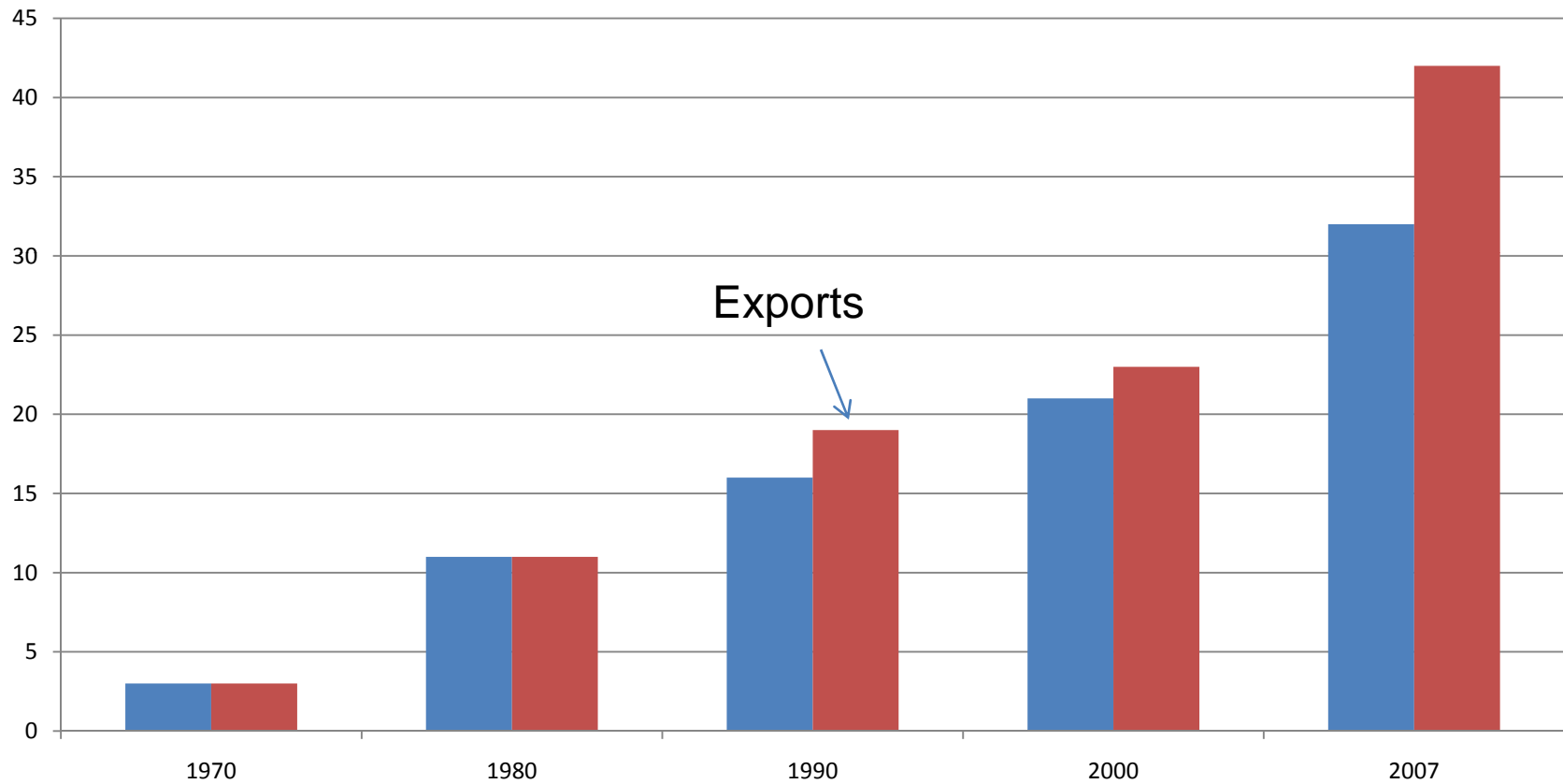
Trade to GDP Ratios: Selected Countries (1995-2005)



Trade includes exports and imports for goods and services for total economy

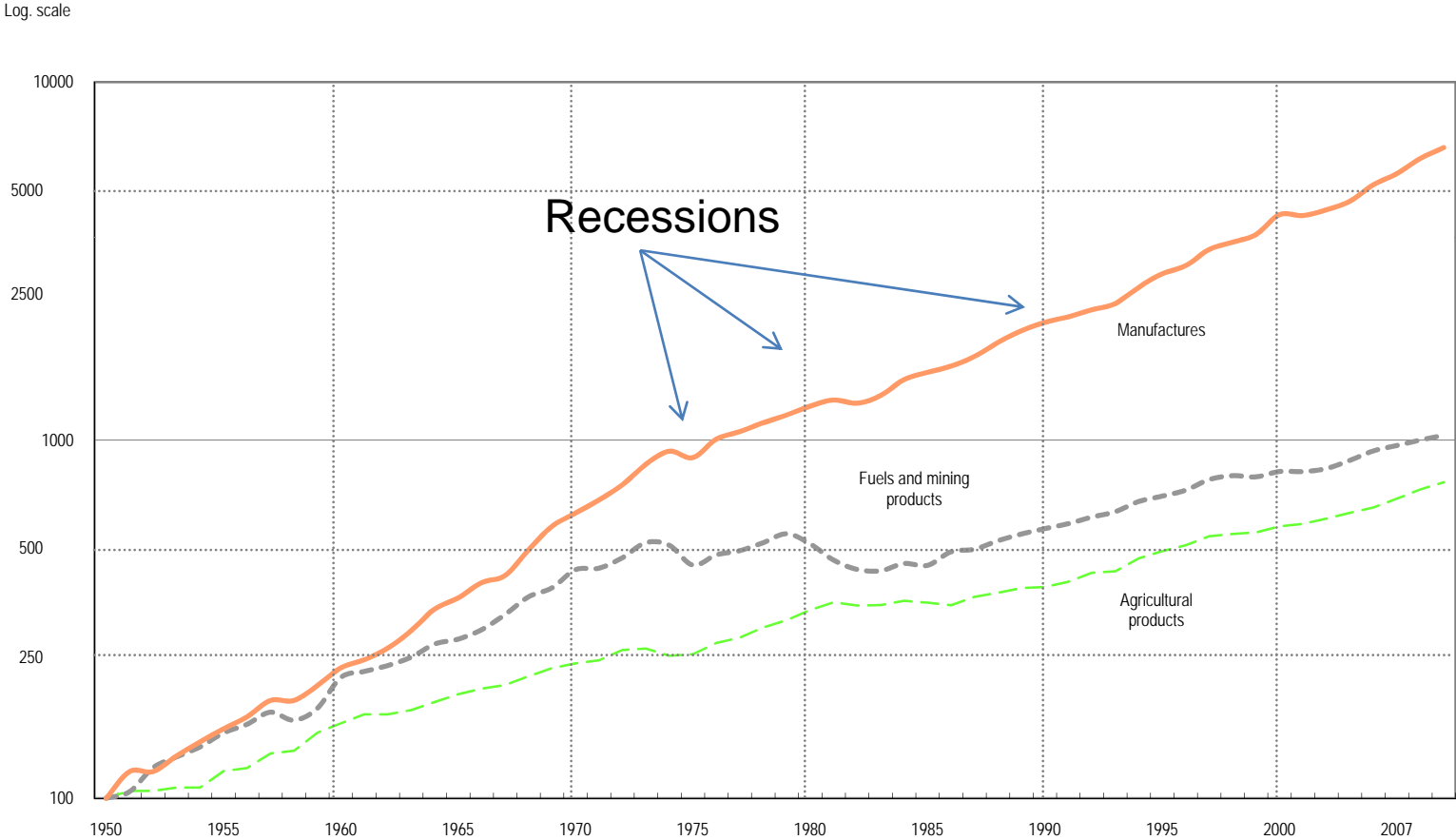
Source: World Trade Organization and World Development Indicators

China's Imports and Exports (% of GDP, 1970-2007)

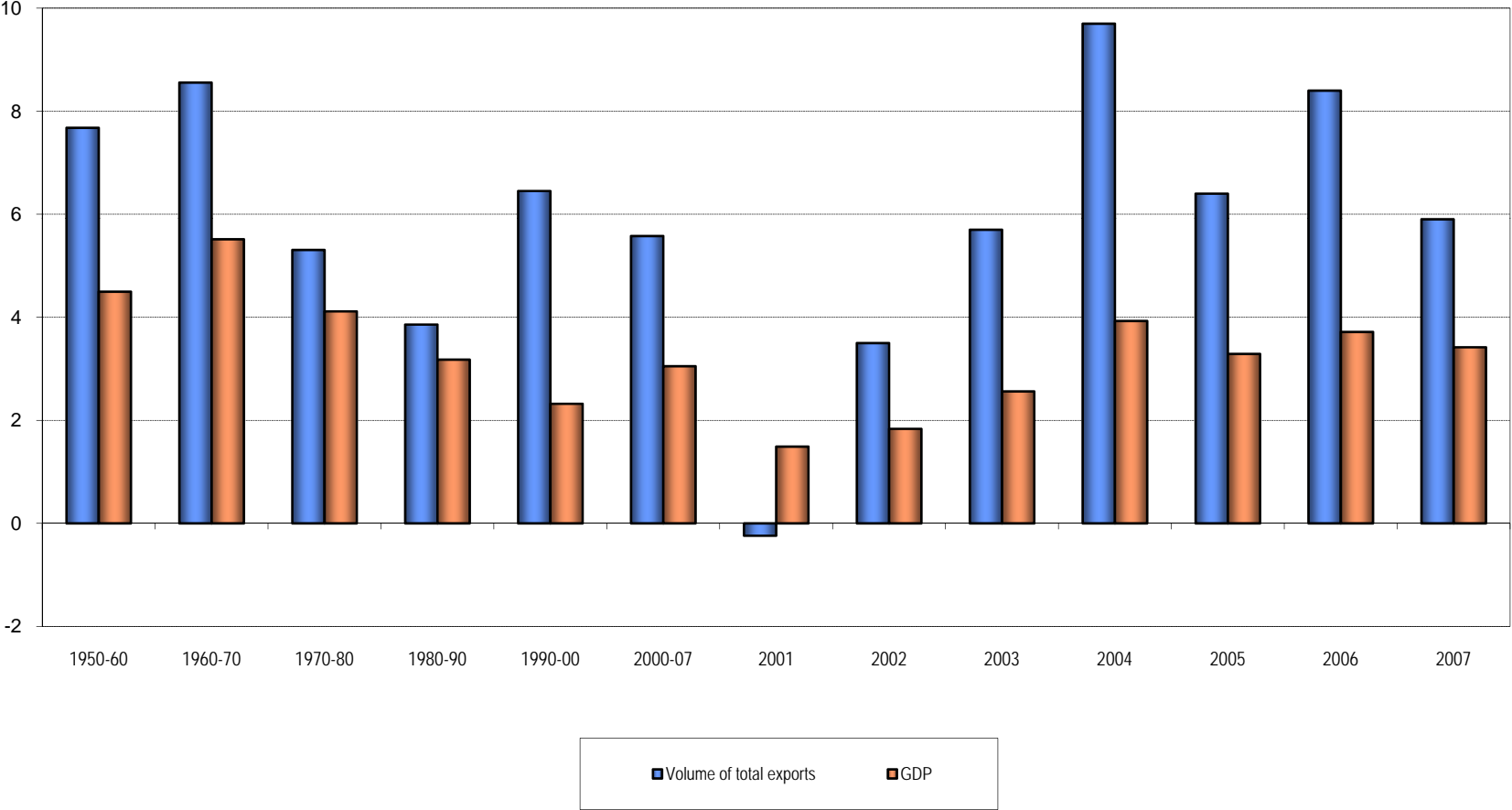


Source: World Bank-WDI

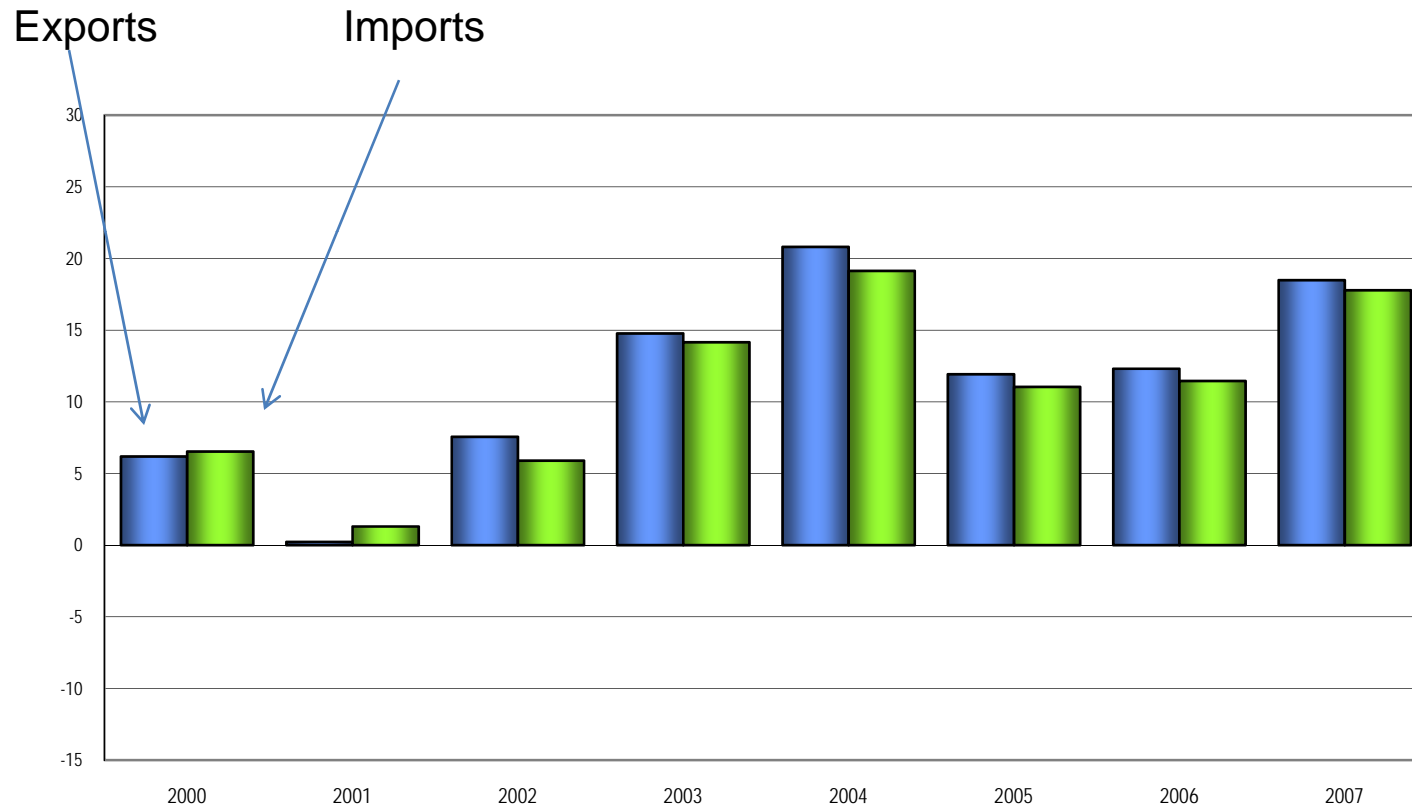
World merchandise trade volume by major product group: (1950-2007, 1950=100)



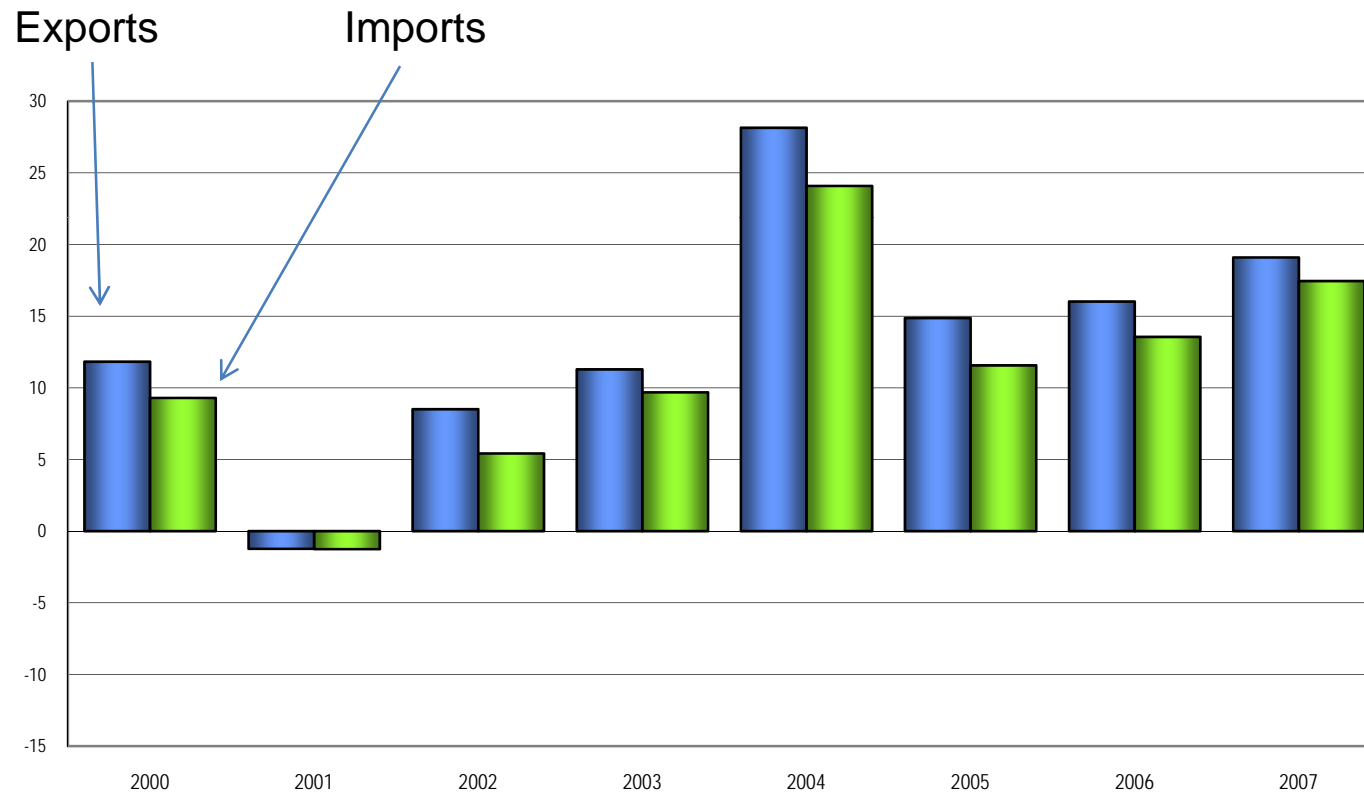
Growth in real world merchandise exports and gross domestic product. (1950-2007)



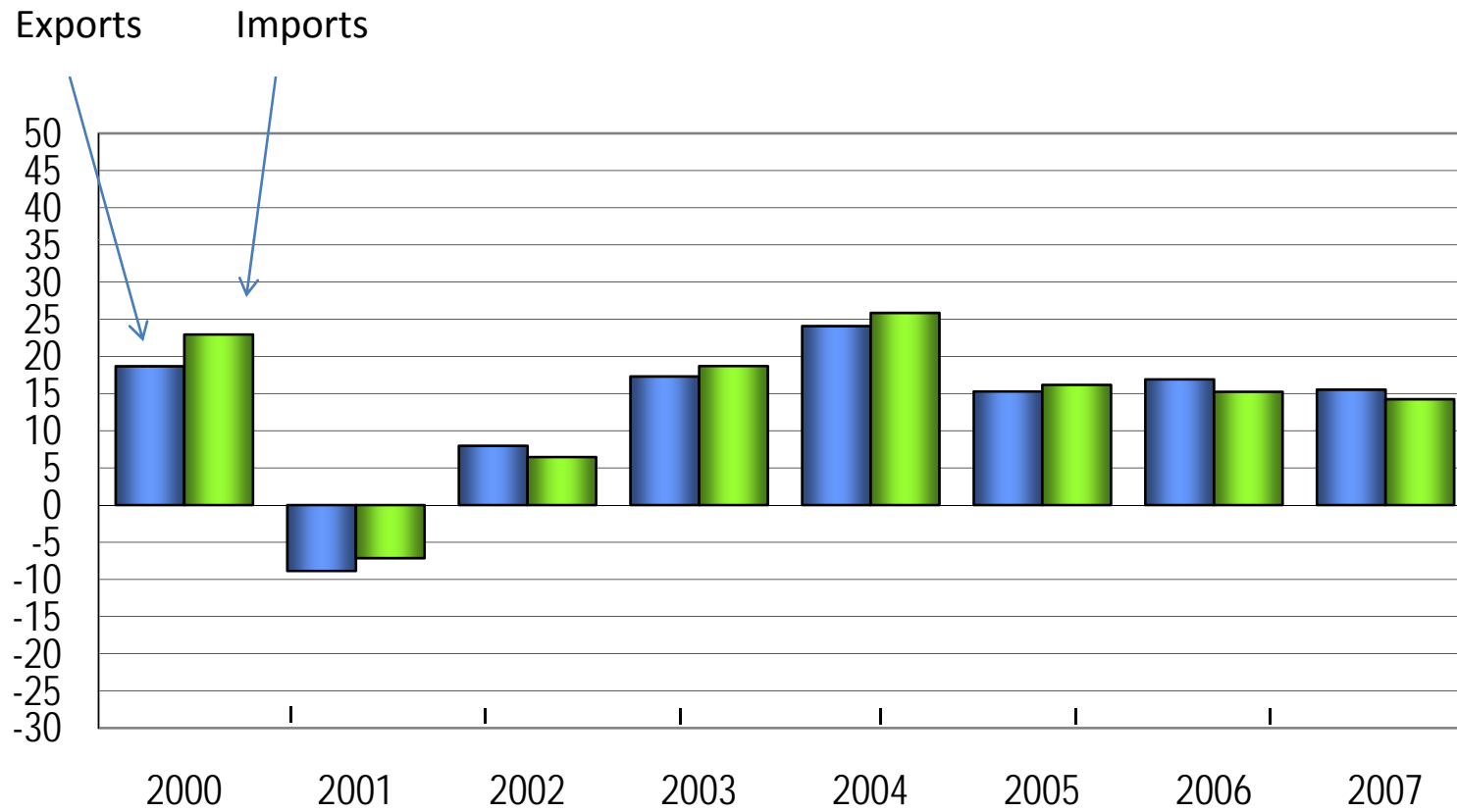
Value of Trade in Commercial Services: World 2000-07 (annual percentage change)



Value of Trade in Commercial Services: Asia 2000-07 (annual percentage change)



Value of Merchandise Trade: Asia 2000-07 (annual percentage change)



Trade in Goods and Services as a Share of GDP*: Selected OECD Countries (percent)

	1975	1985	1995	2007
Canada	23.3	27.1	35.7	33.7
USA	8.0	8.6	11.7	14.7
UK	26.1	28.1	28.3	28.0
Sweden	27.9	34.7	36.4	48.7
OECD-27	na	na	28.9	40.0
OECD	na	na	19.2	27.8

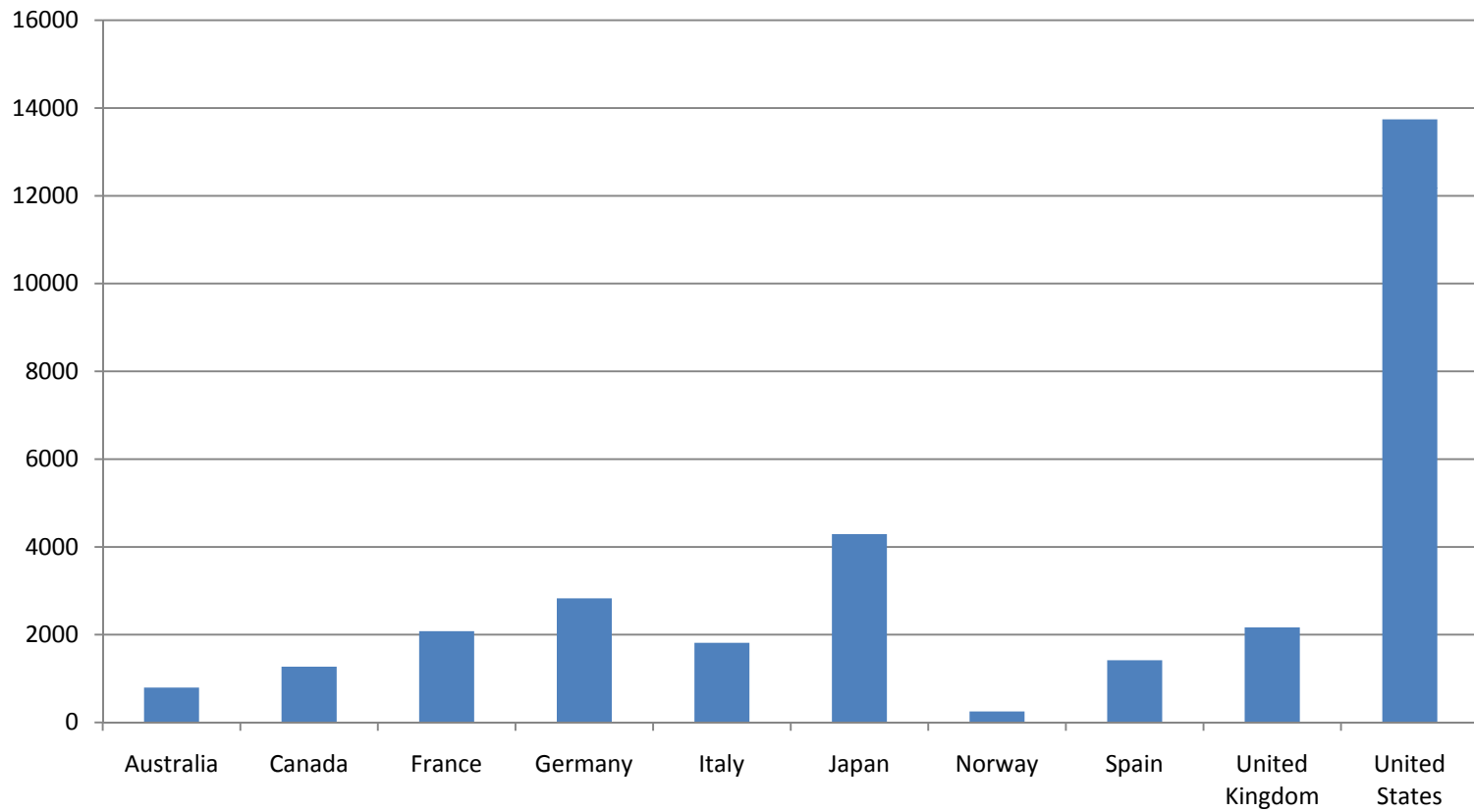
* Average of exports plus imports at current prices as a share of GDP

OECD: Country Statistical Profiles, 2009

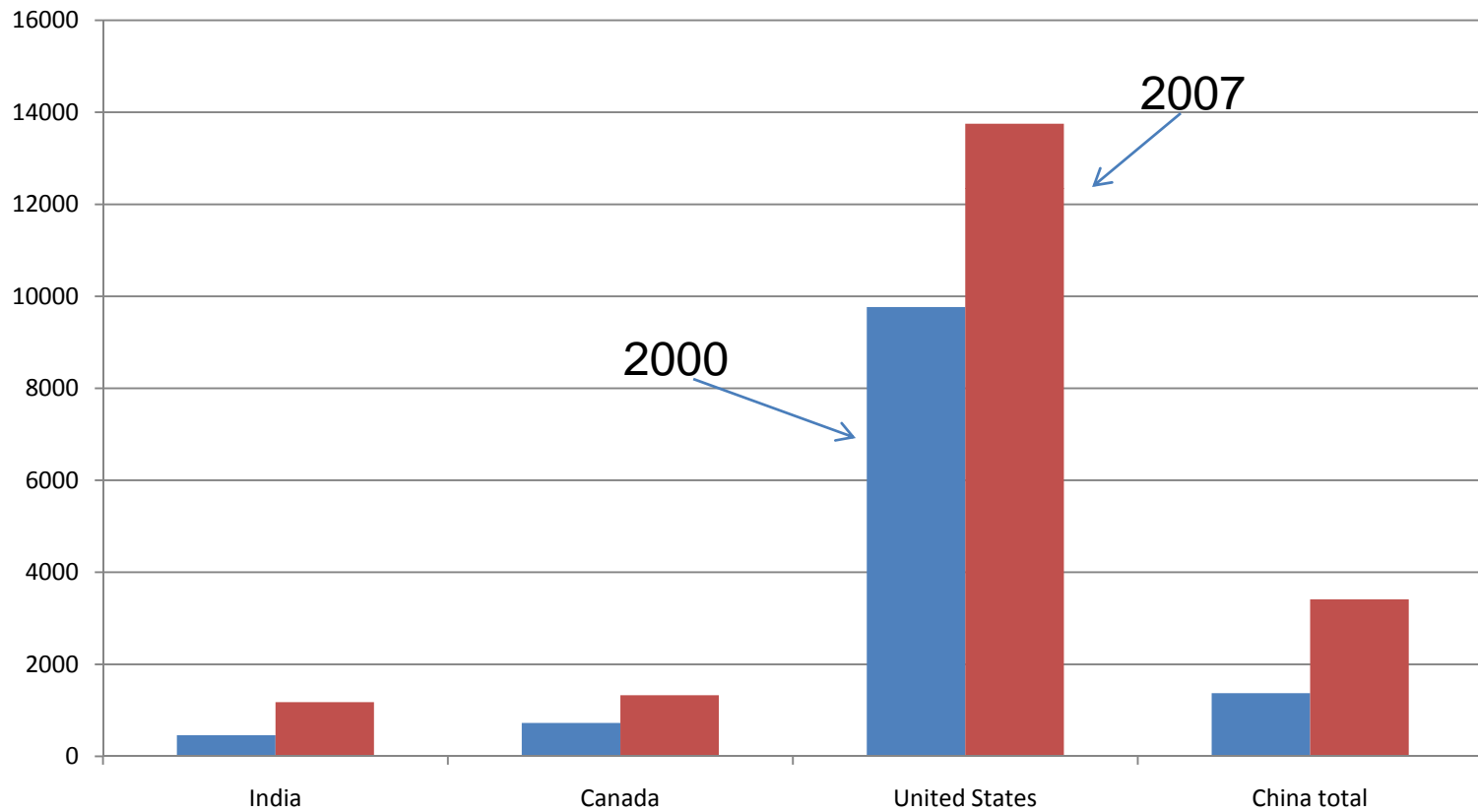
Canada: A Small Open Economy

- Gravity (empirical) model of trade:
 - $T_{ij} = A \times Y_i \times Y_j / D_{ij}$
- Canada's GDP is relatively small (10% of US GDP and 39% of China GDP)
- Canada counts for little in world merchandise trade (Canada 2.9%, the U.S. 11.3%)
- Canada is an open economy (large A in the gravity equation: pro-trade policies)
 - $(X+M)/GDP$ (Canada:67.4 %, U.S.:29.4 %)
- Canada's largest trading partner is the U.S., a large economy just besides us (73% of exports in 2008 and 62.3% of imports)
- National borders matters even with free trade (e.g., border barriers)
- There is more to international commerce than trade flows
 - Activities of multinationals
 - Factors (of production) movements (capital & labour)

GDP, Selected OECD Countries (billion US\$, 2007)

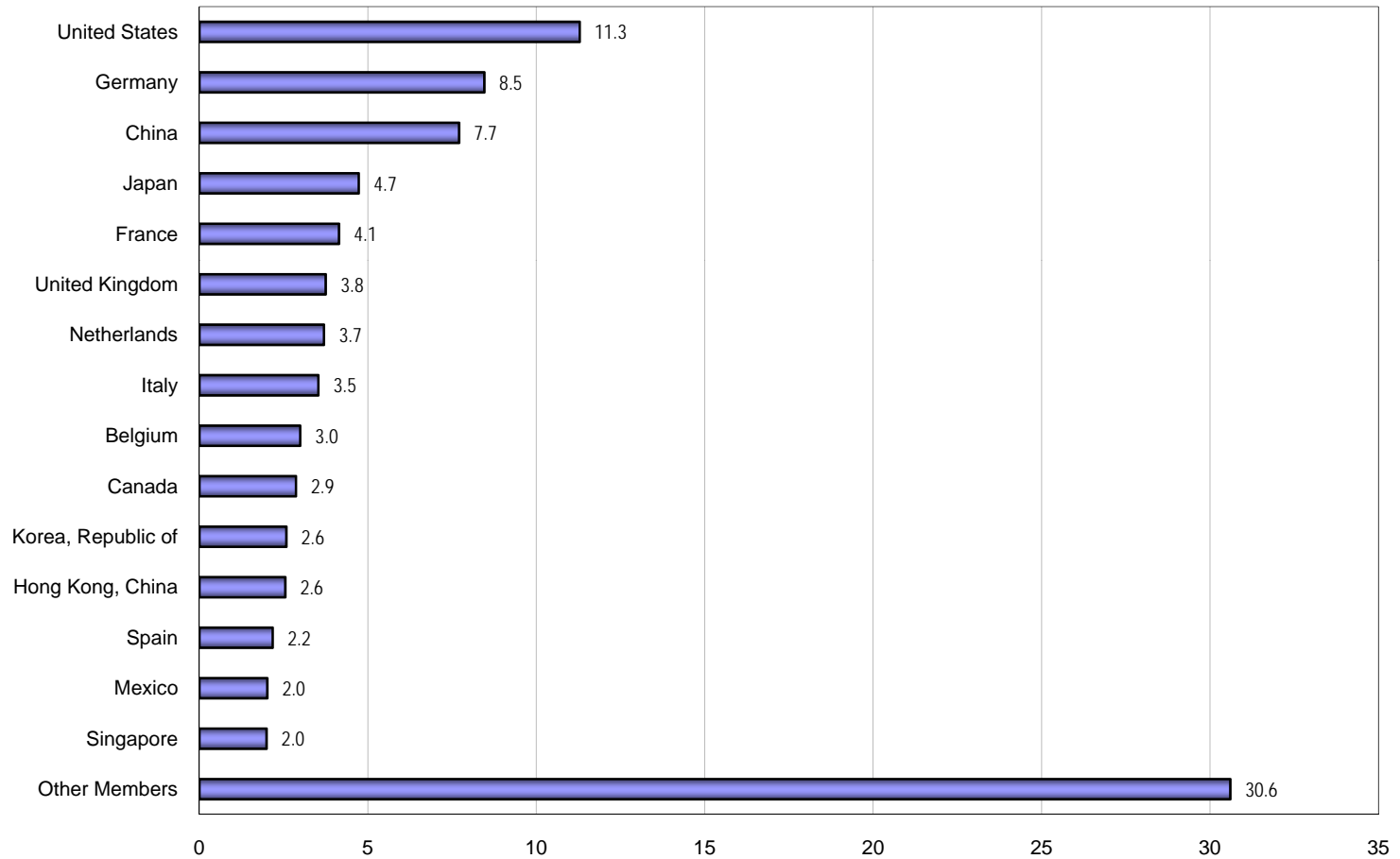


GDP, Selected Countries (billion US\$, 2000 and 2007)

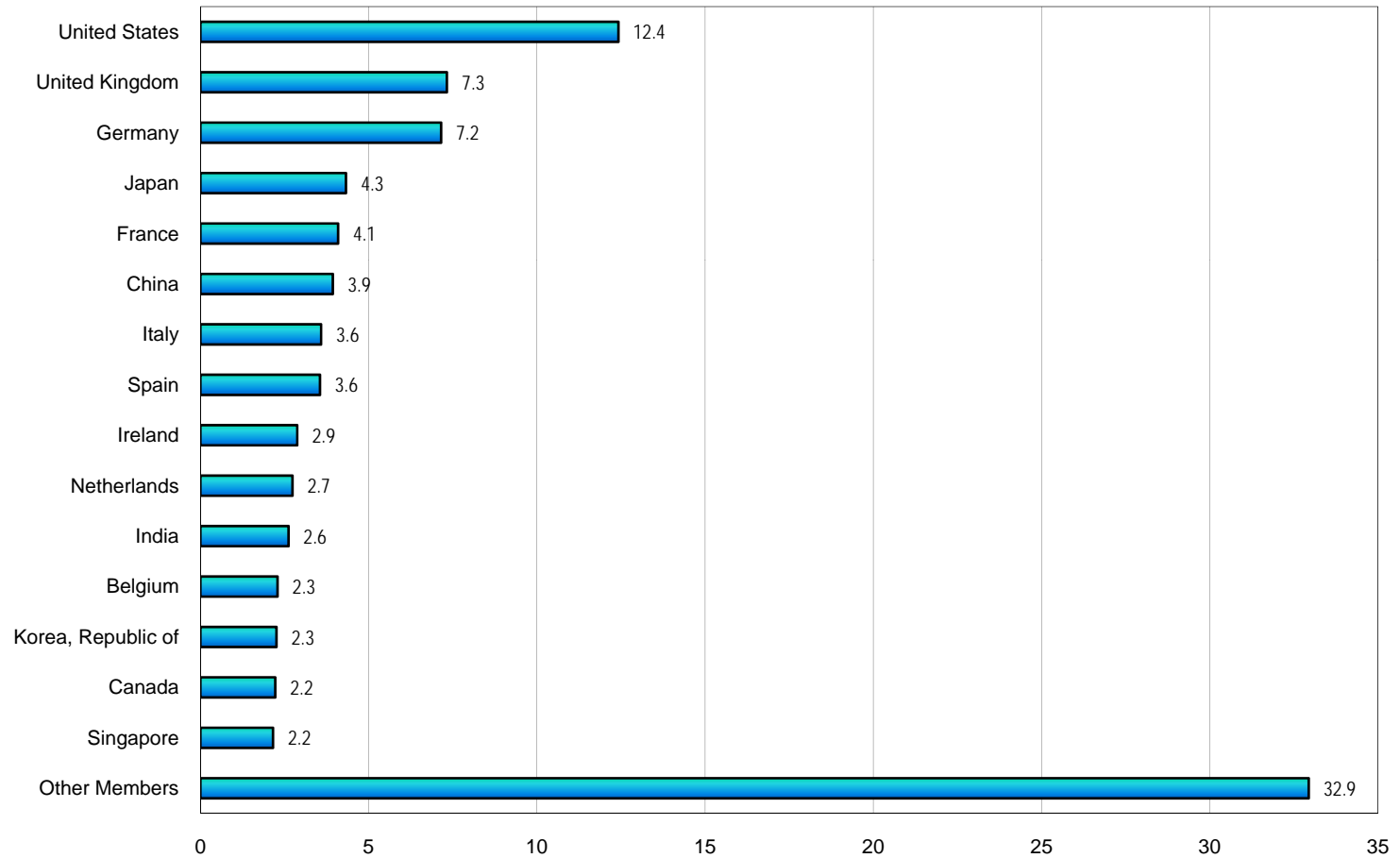


Source: World Bank- WDI

WTO Members share in world merchandise trade, 2007 (percent)



WTO Members share in world commercial services trade, 2007 (percent)

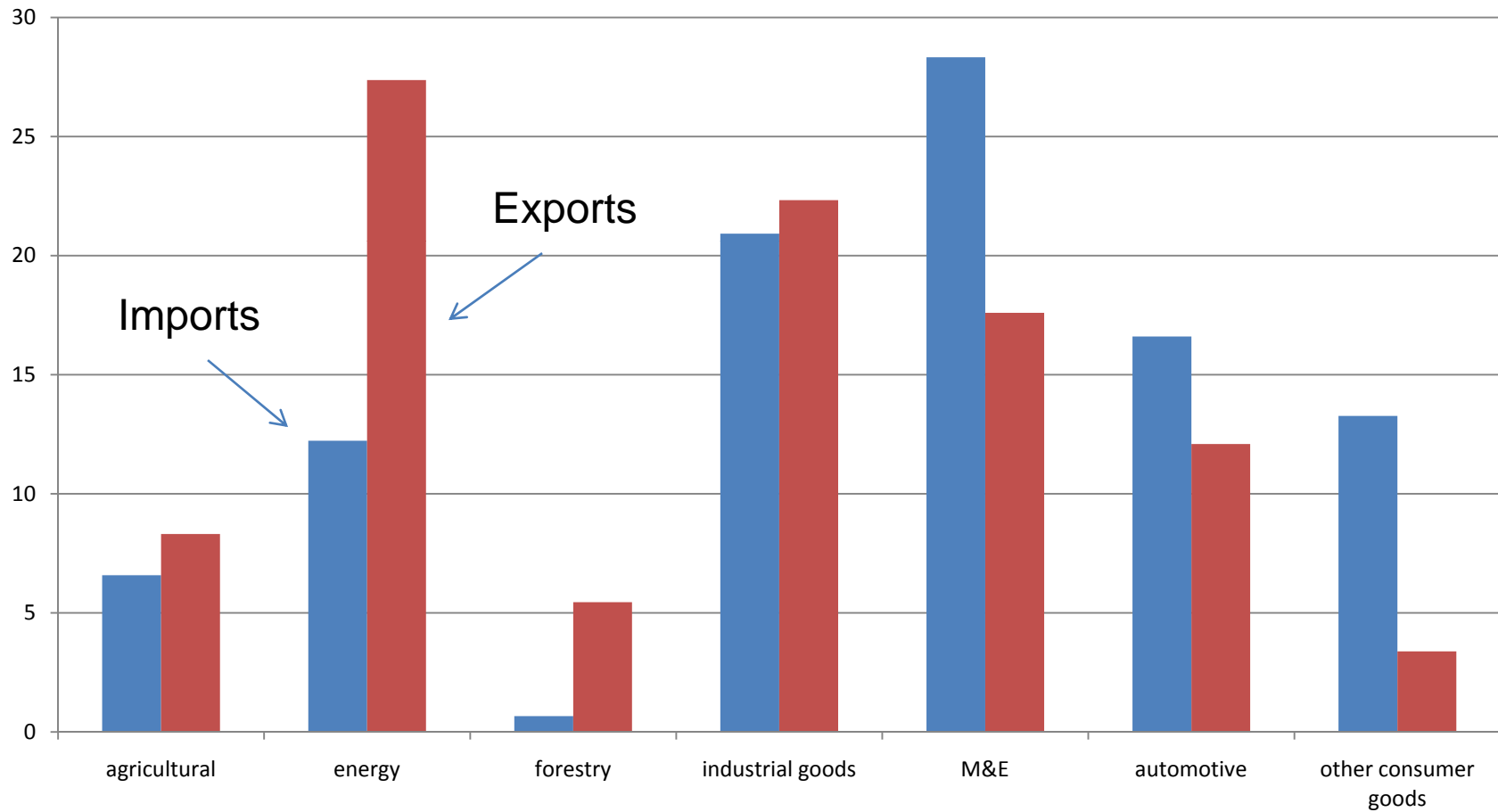


Merchandise trade of Canada by origin and destination, 2007

(billions US dollars and percent)

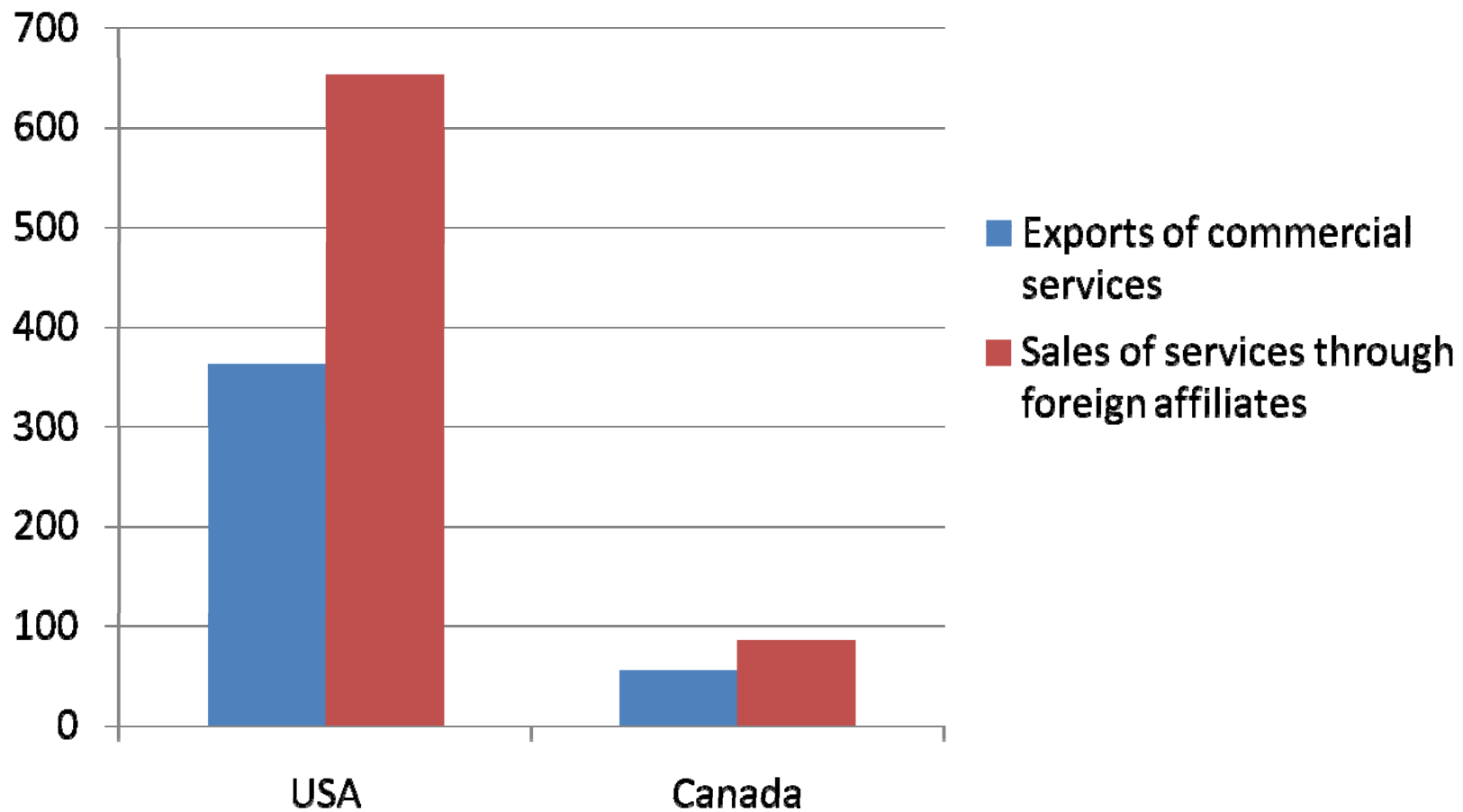
Exports						Imports					
Destination	Value	Share		Annual percentage change		Origin	Value	Share		Annual percentage change	
		2000	2007	2006	2007			2007	2000	2007	2006
World	418.5	100.0	100.0	8	8	World	389.6	100.0	100.0	12	9
United States	331.9	87.3	79.3	5	5	United States	211.2	64.4	54.2	10	8
European Union (27)	32.5	4.7	7.8	25	26	European Union (27)	47.3	10.6	12.1	17	6
China	8.7	0.9	2.1	15	28	China	36.7	3.2	9.4	28	18
Japan	8.6	2.2	2.0	10	3	Mexico	16.4	3.4	4.2	20	14
Mexico	4.6	0.5	1.1	39	20	Japan	14.8	4.7	3.8	13	7
Above 5	386.3	95.6	92.3	-	-	Above 5	326.5	86.2	83.8	-	-

Canadian Merchandise Imports and Exports by Groups of Goods (2008 shares in %)



Source: Cansim, value shares, custom basis

Exports and sales of commercial services - 2005 : Canada and USA (billion dollars)



Exchange across individuals

- Why do people trade (exchange)?
 - Voluntary exchange or trade between two people is, generally speaking, beneficial to both individuals.
 - In an exchange economy (goods are inherited), trade will be beneficial if preferences differ among individuals (rates of substitution differ, see example).
 - An allocation is (Pareto) efficient only if goods are distributed so that the MRS between any two goods is the same for all (trade would not be beneficial).

	MRS	Allocation t=0	Trade	Allocation t=1
Marc Likes C	$.5C/1B$	7 B, 1C=4.5C	-1B, +1C	6B, 2C=5C
Richard Likes B	$2C/1B$	3 B, 5C=11C	+1B, -1C	4B, 4C=12C

Adapted from Pindyck & Rubinfeld, *Microeconomics*, 2009, Chapter 16

Why Do Nations Trade: Gains from preferences?

- Why do nations trade?
 - Voluntary exchange or trade between two nations is, generally speaking, beneficial to both countries. Same basic principle of beneficial exchanges applies for trade between nations.
 - Differences in preferences is sufficient to make trade beneficial across nations as it is across individuals
 - Bordeaux can be produced in France only while Chianti can be produced in Italy only.
 - If consumers in both countries prefer variety and want to drink both types of wine, exchange would be beneficial to both nations.
- Gains from trade may also result from the fact that countries have different comparative advantages in production.
 - The opportunity cost of producing a good in one country differs from the opportunity cost of producing the same good in another country.

Why Do Nations Trade: Gains from comparative advantages?

- There are welfare gains to be realized when countries specialize in the production for which they have a comparative advantage and trade.
 - This is true even when preferences are the same across countries
 - Gains accrue from a greater global efficiency in production for the trading countries
- A similar concept apply for individuals within a country.
 - Trading allow individuals to specialize, lead to higher individual productivity and personal income/consumption
- Scale economies ($F(\lambda x) \geq \lambda F(x)$, $\lambda \geq 1$) or falling average cost of production is another reason why nations trade.
 - Making the market for your products larger allows you to benefit from scale economies
 - Hence, greater efficiency in production for the trading countries.

Conclusions

- Canada is a high-income SOE
- Trade flows have increased tremendously since WWII
- More countries are participating to trade
- Countries have increase their trading intensities
- A number of reasons motivate nations to trade
 - Gains from exchange (preferences)
 - Gains from comparative advantages or resource abundance (specialization)
 - Gains from larger markets (scale)
- There are big policy issues related to international trade
 - Actual rules regulating trade may advantage some countries
 - Different degrees of development among trading countries (e.g., NAFTA)
 - Some groups may be adversely affected despite overall gains from trade