

Global Logistics in Retrospect and Prospect A Personal View for 2015

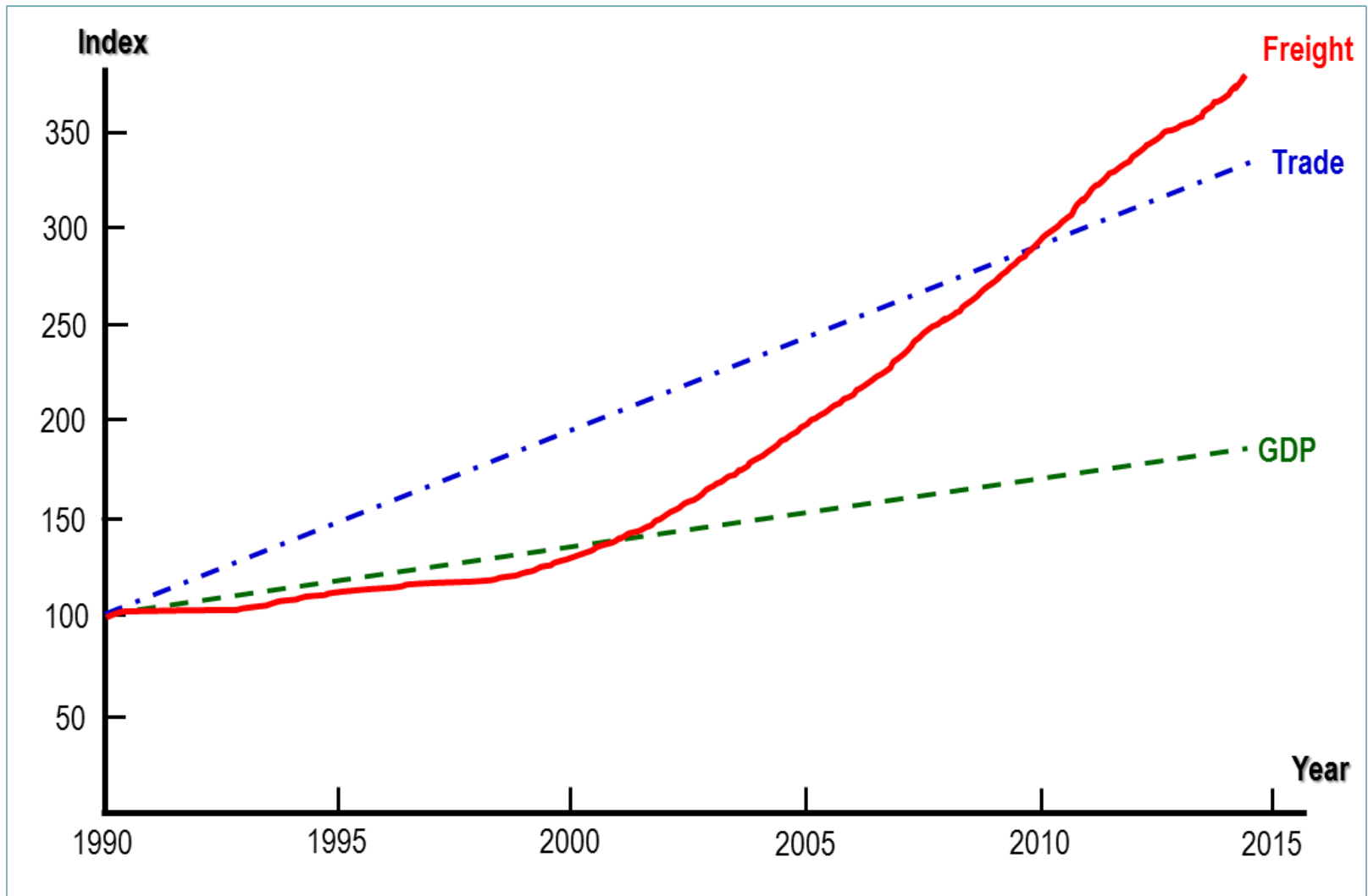
Dong-Wook Song

Professor of Transport and Logistics
Transport Research Institute
Edinburgh Napier University, UK

Discussion Points

- Globalized economies, trade and freight movement.
- Global logistics in retrospective pattern.
- Global logistics in figures.
- Global logistics in prospective development.
- Issues for consideration...

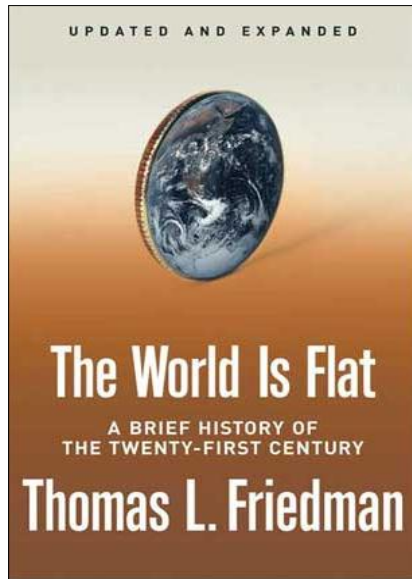
OECD GDP, Trade and Freight



Note: Estimates for 2014 & 2015

Sources: OECD and UNCTAD (2014)

Globalization....the main driver

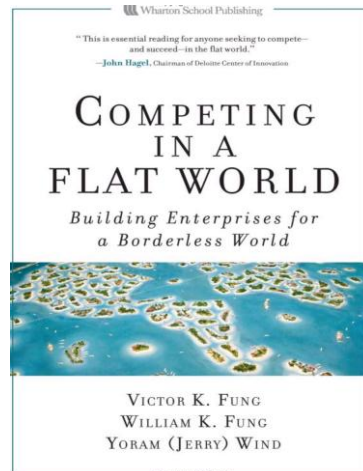


Playing field is being leveled.

Globalization 1.0 (1492-1800)
was driven about **countries**.

Globalization 2.0 (1800-2000)
was driven by **companies**.

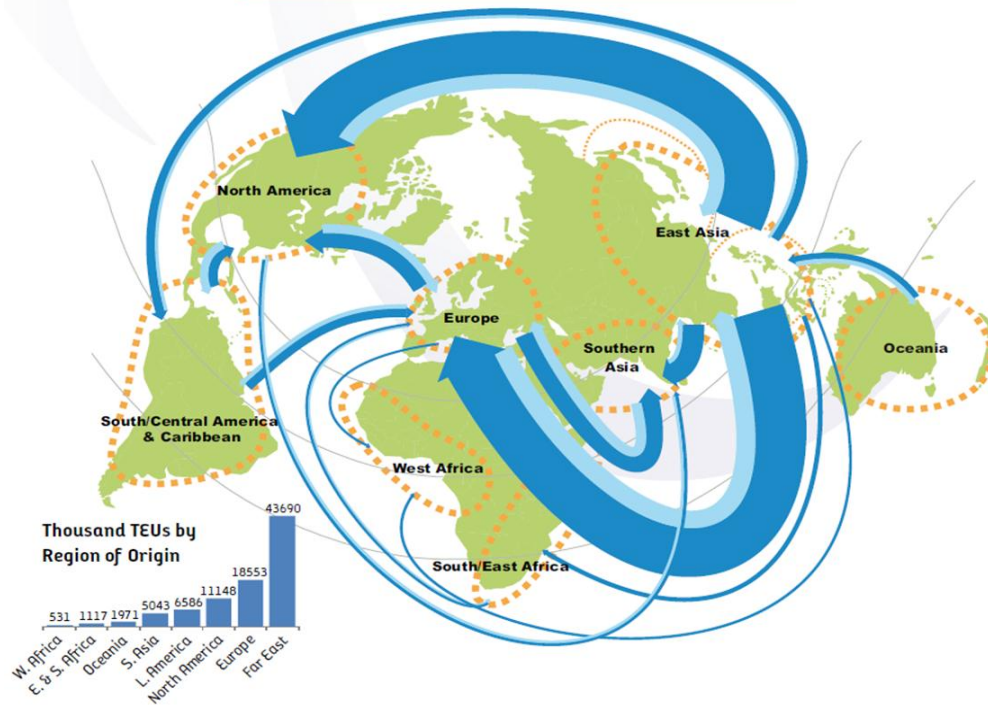
Globalization 3.0 (2000-present)
is being driven by **individuals**.



Two Major Driving Forces:
Internet and **Logistics**

Globalization...the main driver

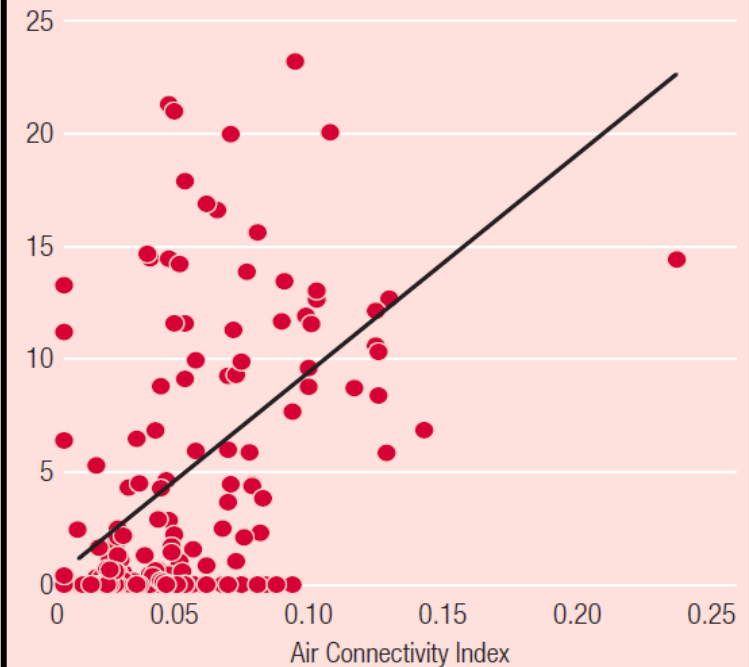
Container Movements by Region of Origin



Source: OECD/ITF (2009)

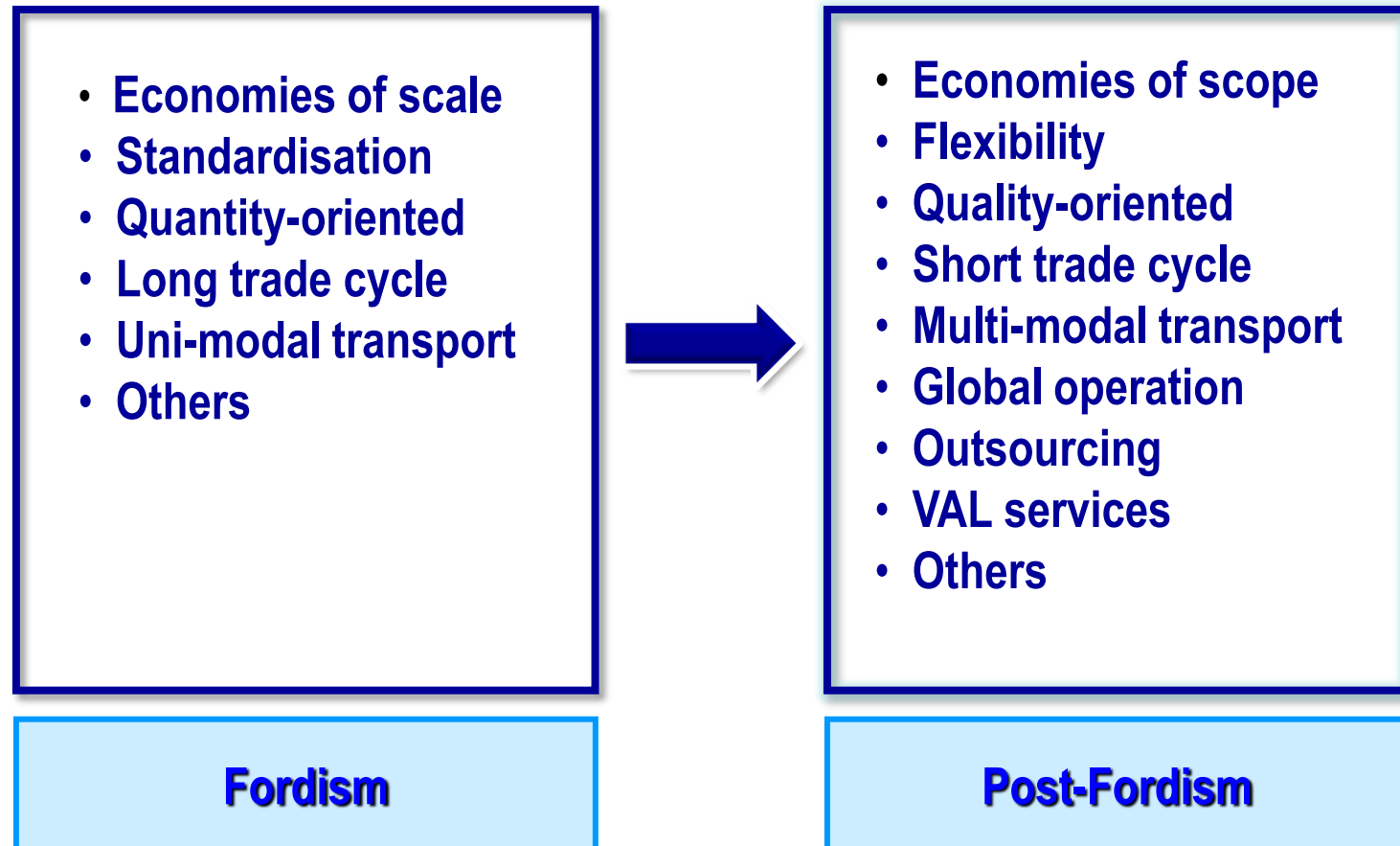
Better air connectivity increases participation in global value chains

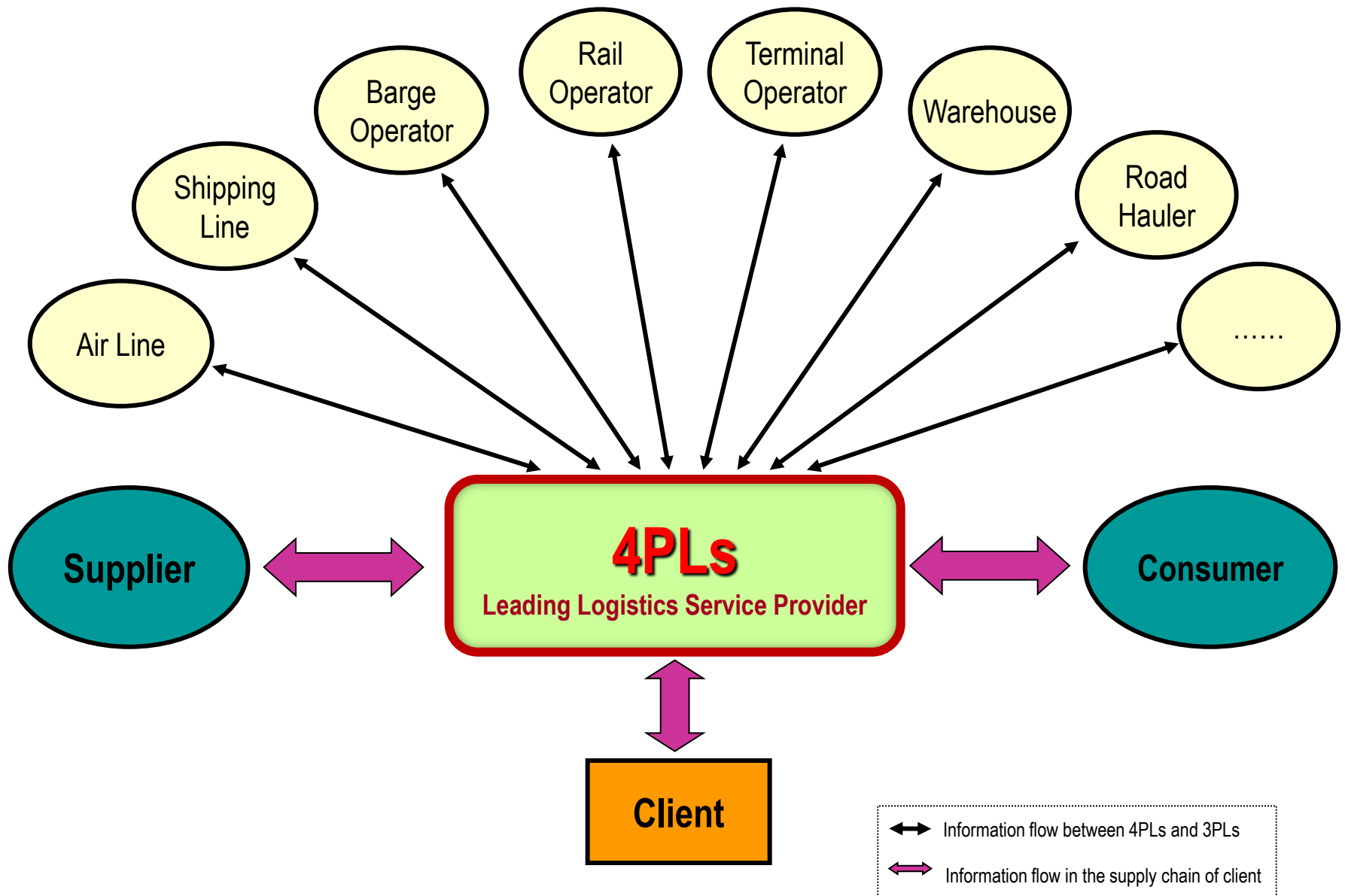
Parts and components in total exports (%)



Source: Arvis and Shepherd 2013.

Ongoing Structural Changes in Global Logistics





4PLs

An Example of Globalized Logistics and Supply Chain

The advertisement features a silver sports car at the bottom. Above it, a large speech bubble contains various car parts, each with a label indicating its origin:

- HEADLIGHTS FROM ITALY
- WHEELS FROM AUSTRALIA
- ENGINE PARTS FROM SWITZERLAND
- WINDSHIELD FROM LOS ANGELES
- SEATBELT FROM JAPAN
- WHEELS FROM GERMANY
- WINDSHIELD WIPER FROM KOREA
- WHEELS FROM GERMANY

Below the car, the text reads: "IT TAKES AN EXPERIENCED GLOBAL LOGISTICS PROVIDER TO BRING IT ALL TOGETHER."

Putting products together with parts shipped from all points of the globe is one thing. Bringing it all together faster and more efficiently than the competition is quite another. This is what BAX Global offers you: flexible, cost-effective, customized supply chain solutions from end-to-end that deliver your products to market with the one element required to succeed in today's global marketplace: competitive advantage.

1-800-841-6464

At the bottom, there are five icons representing different logistics services:

- DISTRIBUTION
- TRANSPORTATION
- SUPPLY CHAIN
- TECHNOLOGY SOLUTIONS
- GLOBAL SOLUTIONS

BAX GLOBAL
SMART CHOICE

Global Logistics in Figures: Top Listed Logistics Co.

RANK 2013	RANK 2012	COMPANY	NET GROSS	EMPLOYEES	INDUSTRY EXPERTISE/KEY CUSTOMERS	DESCRIPTION OF SERVICES
1	1	Exel Westerville, Ohio (Deutsche Post DHL, Bonn, Germany) John Gilbert, CEO Americas  www.exel.com	\$2,500 ^(a) \$4,500	28,600	Automotive, chemicals, consumer packaged goods, energy, engineering, manufacturing, life sciences, health care, retail, computers and electronics Customers include: 7-Eleven, Bristol Myers Squibb, Chrysler, Johnson & Johnson, DuPont, Nextel, Novartis, Office Depot, Pfizer, Procter & Gamble, ThinkGeek, Unilever, Volkswagen	Warehousing and distribution, transportation management, dedicated contract carriage, supply chain consulting, order fulfillment, service parts delivery, returned goods management, manufacturing parts assembly, product packaging
2	9	J.B. Hunt Transport Services Lowell, Ark. Nasdaq: JBHT John Roberts, CEO  www.jbhunt.com	\$2,110 ^(a) \$4,607	11,918	General merchandise and specialty retail, building products, food and beverage, forest and paper products, rubber and plastic products, automotive, pharmaceuticals Customers include: Cornerstone Brands, Certainteed Corp., Jack in the Box, Home Depot, PPG, Sports Authority, Lowe's, Tacony, Goodyear, Guardian Building Products, Southern States, Whirlpool	Intermodal, dedicated contract carriage, freight brokerage, residential and commercial delivery
3	4	Ryder Supply Chain Solutions Miami (Ryder System Inc.) John Williford, President  www.ryderscs.com	\$1,945 \$2,281	13,711	Aerospace and defense, automotive, construction and building materials, consumer packaged goods, energy and utilities, food and beverage, computers and electronics, industrial manufacturing, retail Customers include: CVS/Caremark, Kraft Foods, Mazda, PepsiCo, Pilot Pen Mexico, Procter & Gamble, Stonyfield Farm, Shell	Dedicated contract carriage, transportation management, warehousing and distribution, order fulfillment, returned goods management, product assembly and packaging, freight payment and auditing, freight brokerage, cross-border services, supply chain consulting
4	3	Ceva Logistics Houston (Ceva Group PLC, Hoofddorp, The Netherlands) Marvin Schlanger, CEO  www.cevalogistics.com	\$1,825 ^(a) \$2,787	18,881	Automotive, consumer packaged goods, retail, health care, energy, industrial, computers and electronics Customers include: NA	Transportation management, warehousing and distribution, supply chain consulting, air and ocean freight forwarding, customs brokerage, freight brokerage, order fulfillment, parts assembly and product packaging, returned goods management, service parts repair and delivery, residential and commercial delivery
5	2	UPS Supply Chain Solutions Alpharetta, Ga. (UPS Inc.) Scott Davis, Chairman and CEO  www.ups-scs.com	\$1,793 \$9,147	NA	Health care, retail, industrial manufacturing, government, computers and electronics, automotive, business services Customers include: Advanced BioHealing, Embraer, Philips Healthcare, Spring, Triumph Motorcycles, Toshiba	Air and ocean freight forwarding, customs brokerage, transportation management, warehousing and distribution, supply chain consulting, dedicated contract carriage, intermodal, freight brokerage, service parts delivery and repair services, order fulfillment, returns management, financial services

Global Logistics in Figures: Top Listed Logistics Co.

RANK 2013	RANK 2012	COMPANY	NET GROSS	EMPLOYEES	INDUSTRY EXPERTISE/KEY CUSTOMERS	DESCRIPTION OF SERVICES
6	5	 C.H. Robinson Worldwide Eden Prairie, Minn. Nasdaq: CHRW John Wiehoff, Chairman and CEO www.chrobinson.com	\$1,718 \$11,359	11,297	Food and beverage, retail, paper products, manufacturing Customers include: NA	Freight brokerage, transportation management, air and ocean freight forwarding, supply chain consulting, dedicated contract carriage, warehousing, produce sourcing; includes operations of Apreo Logistics S.A. (Poland) and Phoenix International Freight Services acquired in October and November 2012, respectively
7	Not Ranked	 AmeriCold Atlanta Jeffrey Gault, CEO www.americold.com	\$1,580 (a) NA	12,000	NA Customers include: NA	Warehousing and distribution, transportation management, assembly and packaging, freight brokerage, direct store delivery, expedited transportation, vendor management, supply chain consulting
8	7	 DB Schenker USA Freeport, N.Y. (Deutsche Bahn AG, Essen, Germany) Heiner Murmann, CEO www.dbschenkerusa.com	\$1,247 (a) \$4,034 (a)	6,000	Automotive, computers and electronics, aerospace and airlines, health care, retail, consumer goods, manufacturing, perishables Customers include: NA	Air and ocean freight forwarding, customs brokerage, transportation management, service parts delivery, product packaging, order fulfillment, warehousing and distribution, garment on hangar, project management, supply chain consulting
9	8	 Neovia Logistics Irving, Texas (Platinum Equity, Caterpillar Inc.) Jos Opdeweegh, CEO www.neovialogistics.com	\$1,170 (a) \$1,730 (a)	5,000	Industrial, automotive, mining, aerospace and defense, oil and gas, computers and electronics, manufacturing, consumer durable goods, health care Customers include: NA	Warehousing and distribution, transportation management, manufacturing parts assembly, materials management, maintenance repair and operations, order fulfillment, returned goods management, trade management, supply chain consulting, information technology
10	16	 Schneider Logistics Green Bay, Wis. (Schneider National Inc.) Mark Rourke, President, Truckload Bill Matheson, President, Intermodal www.schneiderlogistics.com	\$1,100 (a) \$3,000	NA	Automotive, consumer packaged goods, retail, electronics, energy, manufacturing, chemicals, health care, paper Customers include: NA	Dedicated contract carriage, intermodal, freight brokerage, warehousing and distribution, transloading and drayage, transportation management and supply chain consulting, domestic transportation service in China
11	10	 Kuehne + Nagel Inc. Jersey City, N.J. (Kuehne + Nagel International AG, Schindellegi, Switzerland) Detlef Trefzger, CEO www.kuehne-nagel.com	\$1,038 (a) \$4,878 (a)	NA	Automotive, aerospace, computers and electronics, retail, industrial, oil and gas, consumer packaged goods, pharmaceutical, health care, beverage and food service, forest products, hotel, marine, disaster response Customers include: NA	Ocean and air freight forwarding, customs brokerage, transportation management, warehousing and distribution, supply chain consulting

Global Logistics in Figures: Top Listed Logistics Co.

RANK 2013	RANK 2012	COMPANY	NET GROSS	EMPLOYEES	INDUSTRY EXPERTISE/KEY CUSTOMERS	DESCRIPTION OF SERVICES
12 	6	Genco Pittsburgh Todd Peters, CEO <i>www.genco.com</i>	\$1,009 \$1,476	10,310	Retail, computers and electronics, consumer packaged goods, government, health care, industrial Customers include: Amazon.com, AT&T, Becton Dickinson, Department of Defense, GlaxoSmithKline, Johnson & Johnson, Kohl's, Sears, Target, The Home Depot	Warehousing and distribution, returned goods management, asset recovery, transportation management, freight brokerage, order fulfillment, electronics repair and testing, supply chain consulting, parcel management, damaged goods research and facilities engineering
13 	15	APL Logistics Scottsdale, Ariz. (NOL Group, Singapore) Jim McAdam, President <i>www.apllogistics.com</i>	\$955 (M) \$1,600	5,800	Automotive and industrial, chemicals, consumer packaged goods, retail and fashion, computers and electronics Customers include: American Honda Motors, Army & Air Force Exchange Service, Asics, Avon, Birds Eye Food, Dow Corning, General Motors, Kellogg, Netgear, Procter & Gamble, Samsung, Wal-Mart Stores	Air and ocean freight forwarding, customs brokerage, warehousing and distribution, dedicated contract carriage, supply chain consulting
14 	13	NFI Cherry Hill, N.J. Sidney Brown, CEO <i>www.nfiindustries.com</i>	\$925 (M) \$1,041	NA	Food and beverage, groceries, retail, consumer packaged goods, apparel and footwear, paper, automotive and aerospace Customers include: NA	Warehousing and distribution, transportation management, dedicated contract carriage, intermodal, freight brokerage, order fulfillment, supply chain consulting, air and ocean freight forwarding, trade management, parts assembly and product packaging, commercial real estate development
15 	32	Cardinal Logistics Management Concord, N.C. (Centerbridge Partners LP) Tom Hostetler, CEO <i>www.cardlog.com</i>	\$850 NA	NA	Retail, food and beverage, manufacturing, automotive Customers include: NA	Dedicated contract carriage, residential and commercial delivery, transportation management, supply chain consulting, warehousing and distribution, information technology; includes dedicated operations of Greatwide Logistics Services acquired in February
16 	14	Expeditors International Of Washington Seattle Nasdaq: EXPD Peter Rose, Chairman and CEO <i>www.expeditors.com</i>	\$833 \$1,826	5,420	Aviation and aerospace, health care, oil and gas and energy, retail Customers include: NA	Air and ocean freight forwarding, customs brokerage, transportation management, order fulfillment, warehousing and distribution, assembly and packaging, spare parts distribution, returned goods management, project cargo, cross-border services, insurance
17 	12	Werner Global Logistics Omaha, Neb. (Werner Enterprises) Derek Leathers, President <i>www.werner.com</i>	\$832 \$1,103	4,174	Retail, consumer packaged goods, apparel, food and beverage, energy, paper products, electronics, building materials Customers include: AGC Flat Glass, Anheuser-Busch, Bass Pro Shops, Dollar General, Family Dollar, General Mills, Gordmans, The Home Depot	Dedicated contract carriage, transportation management, intermodal, air and ocean freight forwarding, customs brokerage, freight brokerage, warehousing and distribution, returned goods management, produce packaging, supply chain consulting
18 	11	Swift Logistics Phoenix (Swift Transportation Co.) Jerry Moyes, CEO <i>www.swifttrans.com</i>	\$824 (M) \$1,058	NA	Food and beverage, retail, consumer packaged goods, chemicals, packaging materials, manufacturing Customers include: NA	Dedicated contract carriage, transportation management, intermodal, cross-border services, transloading and port services, air and ocean freight forwarding, project management

Global Logistics in Figures: Top Listed Logistics Co.

RANK 2013	RANK 2012	COMPANY	NET GROSS	EMPLOYEES	INDUSTRY EXPERTISE/KEY CUSTOMERS	DESCRIPTION OF SERVICES
31 	36	FedEx Supply Chain/ FedEx Trade Networks Memphis, Tenn. (FedEx Corp.) Craig Simon, CEO, FedEx Supply Chain Manfred Schardt, CEO, FedEx Trade Networks <i>www.fedex.com</i>	\$341 ^(a) \$1,028 ^(a)	5,500	Automotive, computers and electronics, health care, retail Customers include: NA	Air and ocean freight forwarding, customs brokerage, transportation management, service parts delivery, warehousing and distribution, returned goods management, order fulfillment, trade management
40 	39	Agility Logistics Irvine, Calif. (Agility Global Integrated Logistics, Baar, Switzerland) Francesc Casamitjana, CEO, Americas <i>www.agilitylogistics.com</i>	\$238 ^(a) \$830 ^(a)	NA	Aerospace, energy, life sciences, computers and electronics, retail Customers include: ABB, Alstom, Cemex, Debenhams, Dr. Reddy's Pharmaceuticals, Emerson, Epson, Estée Lauder, Kraft Foods, Mitsubishi Fuso, Nike, Panasonic, Princess Cruises, Shell Oil, Toys R Us	Air and ocean freight forwarding, warehousing and distribution, project logistics, information technology, supply chain consulting, relocation assistance, trade show and exhibit management, fuel delivery
49 	43	Damco International Madison, N.J. (A.P. Moeller-Maersk Group, Copenhagen, Denmark) Jeremy Haycock, CEO, North America <i>www.damco.com</i>	\$154 \$813	950	Chemicals, perishables, retail, computers and electronics, industrial Customers include: JCPenney, Home Depot, Wal-Mart Stores, Williams-Sonoma	Air and ocean forwarding, customs brokerage, warehousing and distribution, transportation management, supply chain consulting

Source: Logistics Management (2014)

Global Logistics in Figures: Top Freight Forwarders

Top 25 Freight Forwarders

1 DHL Supply Chain & Global Forwarding

Gross Revenue: \$31.6 billion
Ocean Containers: 2.8 million
20-foot equivalent units
Airfreight: 2.3 million metric tons
Headquarters: Germany

2 Kuehne + Nagel International

Gross Revenue: \$22.1 billion
Ocean Containers: 3.5 million
20-foot equivalent units
Airfreight: 1.1 million metric tons
Headquarters: Switzerland

3 DB Schenker Logistics

Gross Revenue: \$19.8 billion
Ocean Containers: 3.5 million
20-foot equivalent units
Airfreight: 1.1 million metric tons
Headquarters: Germany

4 Sinotrans Limited

Gross Revenue: \$7.5 billion
Ocean Containers: 8.2 million
20-foot equivalent units
Airfreight: 417,000 metric tons
Headquarters: China

5 Panalpina Group

Gross Revenue: \$7.1 billion
Ocean Containers: 1.4 million
20-foot equivalent units
Airfreight: 801,000 metric tons
Headquarters: Switzerland

6 Nippon Express

Gross Revenue: \$20.3 billion
Ocean Containers: 719,052
20-foot equivalent units
Airfreight: 773,773 metric tons
Headquarters: Japan

7 Ceva Logistics

Gross Revenue: \$9.3 billion
Ocean Containers: 783,378
20-foot equivalent units
Airfreight: 550,000 metric tons
Headquarters: The Netherlands

8 Expeditors International of Washington

Gross Revenue: \$6 billion
Ocean Containers: 868,487
20-foot equivalent units
Airfreight: 729,527 metric tons
Headquarters: United States

9 UPS Supply Chain Solutions

Gross Revenue: \$9.1 billion
Ocean Containers: 500,000
20-foot equivalent units
Airfreight: 862,000 metric tons
Headquarters: United States

10 SDV/Bolloré Group

Gross Revenue: \$7 billion
Ocean Containers: 770,000
20-foot equivalent units
Airfreight: 510,000 metric tons
Headquarters: France

11 DSV Air & Sea

Gross Revenue: \$7.8 billion
Ocean Containers: 725,806
20-foot equivalent units
Airfreight: 259,057 metric tons
Headquarters: France

12 Kintetsu World Express

Gross Revenue: \$3.2 billion
Ocean Containers: 572,000
20-foot equivalent units
Airfreight: 1.1 million metric tons
Headquarters: Japan

13 Agility Logistics

Gross Revenue: \$4.6 billion
Ocean Containers: 500,000
20-foot equivalent units
Airfreight: 490,000 metric tons
Headquarters: Kuwait

14 Pantos Logistics

Gross Revenue: \$2.6 billion
Ocean Containers: 1.8 million
20-foot equivalent units
Airfreight: 231,000 metric tons
Headquarters: South Korea

15 C.H. Robinson Worldwide

Gross Revenue: \$11.4 billion
Ocean Containers: 500,000
20-foot equivalent units
Airfreight: 95,000 metric tons
Headquarters: United States

16 Hellmann Worldwide Logistics

Gross Revenue: \$3.5 billion
Ocean Containers: 672,569
20-foot equivalent units
Airfreight: 383,194 metric tons
Headquarters: Germany

17 Damco International

Gross Revenue: \$3.3 billion
Ocean Containers: 797,700
20-foot equivalent units
Airfreight: 210,600 metric tons
Headquarters: Denmark

18 Kerry Logistics

Gross Revenue: \$2.5 billion
Ocean Containers: 804,000
20-foot equivalent units
Airfreight: 289,000 metric tons
Headquarters: Hong Kong

19 UTi Worldwide

Gross Revenue: \$4.6 billion
Ocean Containers: 495,000
20-foot equivalent units
Airfreight: 360,000 metric tons
Headquarters: British Virgin Islands

20 Yusen Logistics

Gross Revenue: \$3.5 billion
Ocean Containers: 450,000
20-foot equivalent units
Airfreight: 337,130 metric tons
Headquarters: Japan

21 Toll Holdings

Gross Revenue: \$6.8 billion
Ocean Containers: 484,000
20-foot equivalent units
Airfreight: 119,000 metric tons
Headquarters: Australia

22 Geodis Wilson

Gross Revenue: \$5.9 billion
Ocean Containers: 420,000
20-foot equivalent units
Airfreight: 210,000 metric tons
Headquarters: France

23 Logwin Logistics

Gross Revenue: \$1.7 billion
Ocean Containers: 500,000
20-foot equivalent units
Airfreight: 155,000 metric tons
Headquarters: Germany

24 Sankyu Inc.

Gross Revenue: \$2.7 billion
Ocean Containers: 750,000
20-foot equivalent units
Airfreight: 18,529 metric tons
Headquarters: Japan

25 BDP International

Gross Revenue: \$1.9 billion
Ocean Containers: 117,931
20-foot equivalent units
Airfreight: 53,643 metric tons
Headquarters: United States

Source: Armstrong & Associates

Source: Armstrong & Associates (2014)

Global Logistics in Figures: Top Transport and Logistics Co.

2012 Rank	Company	HQ / Dominant Revenue Source
1	DHL	Germany / 3PL
2	UPS	US / Parcel
3	FedEx	US / Parcel
4	AP Moller-Maersk	Denmark / Ocean
5	DB Schenker	Germany / 3PL
6	NYK Group	Japan / Ocean
7	Kuehne+Nagel	Switzerland / 3PL
8	MSC	Switzerland / Ocean
...	...	
12	CMA CGM	France / Ocean
13	Nippon Express	Japan / 3PL
15	COSCO Holdings	China / Ocean
16	K Line	Japan / Ocean
25	Hanjin Shipping	Korea / Ocean
32	Hyundai Merchant Marine	Korea / Ocean
47	Agility	Switzerland / 3PL

Source: Journal of Commerce (2013)

Global Logistics in Prospect I

Source: DHL (2014)

- **Logistics Supergrid** – no speeding up, but well-orchestrated moves.



- **Big Data** is the new logistics tool.



- **3D Printing** – stop moving goods, but start printing.



Global Logistics in Prospect II

Source: DHL (2014)

Megatrends

Circular Economy & Sustainability

Increasing Risk and Disruption Intelligent Sourcing & X-Shoring
Networked Economy & Coopetition

Connected Experiences **Global Uncertainty & Volatility**

Shifting Centers of Economic Activity Crowd Funding

Omni-Channel Business Models

Resource and Energy Limitations Digitization & E-Substitution

UBERfication & On-Demand Sharing Individualization

Regional Empowerment Online / Offline Integration

Continuing Globalization Increasing Supply Chain Complexity

Demographic Changes, Urbanization

Collaborative Crowd Economy

Technology drivers

Internet Governance & Jurisdiction Security Vulnerability

Internet of Everything Embedded Technology

Social Business & Enterprise 2.0

Encryption & Cryptography Second-Screen Revolution

Consumerization of IT **Open Data & Data Sharing**

Hybrid & Cloud Computing Cloud Analytics

Cloud Factories In-Memory Computing

The Age of Context & Prediction Web Screening

Cloud Service Brokerage

Open Apps & Cloud Apps **Cloud Marketplaces**

Semantic Networks & Web 3.0

Web Fragmentation Embedded Analytics

Global Logistics in Prospect III

Source: DHL (2014)



Global Logistics in Prospect: a summary

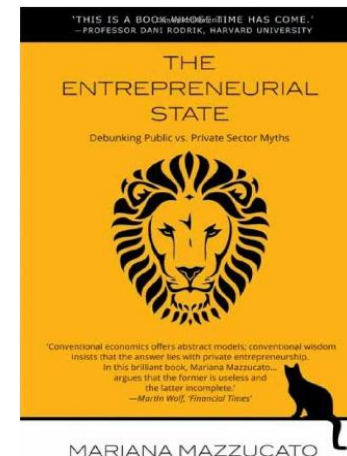
- Logistics becomes more **proactive**, rather than reactive – e.g. *anticipatory logistics*.
- **Balancing act**, in responding to vulnerable customer demands, becomes even more important for the right mix of transport modes and services – e.g. *conundrum between quality and cost*.
- **Tailor-made channel** to each single network for the greater value chain – e.g. an *omni-channel logistics network*.

Issues for consideration....

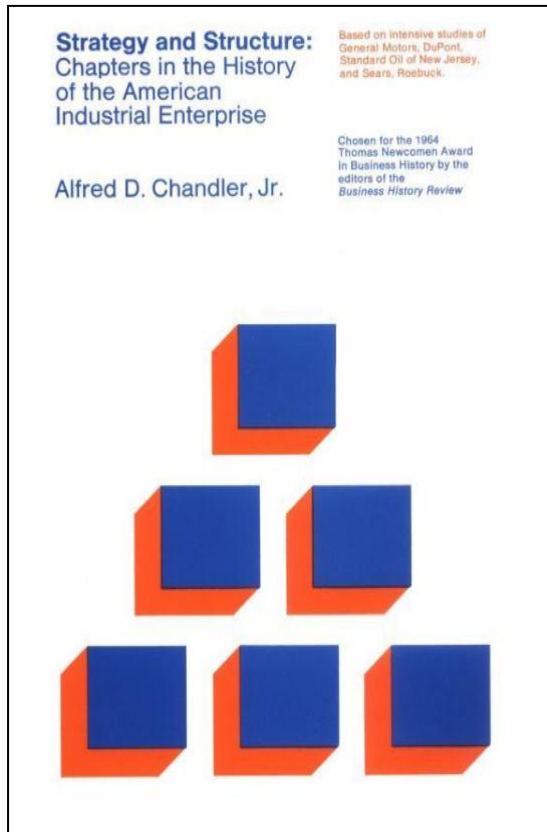
- How to build up an **internationally presentable** and **competitively sustainable** logistics company?



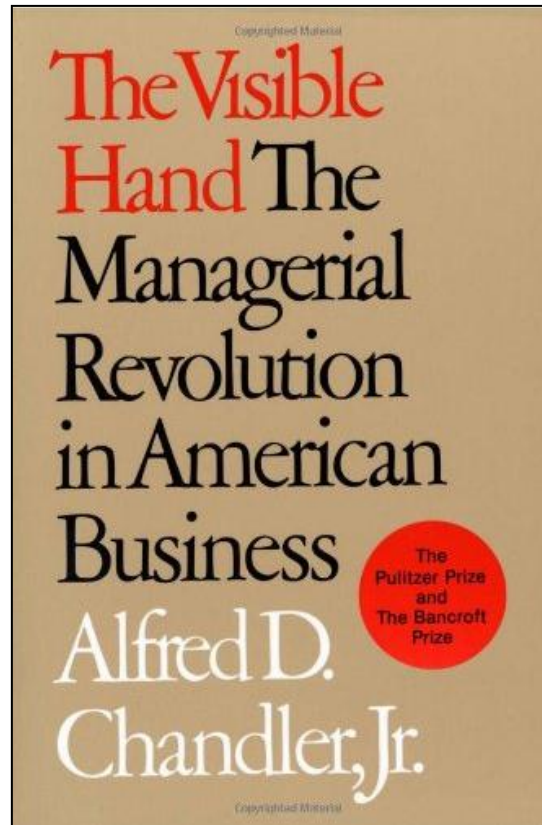
- *An in-depth case study* of Nippon Express?
- *A co-opetitive joint force* from public and private sectors.



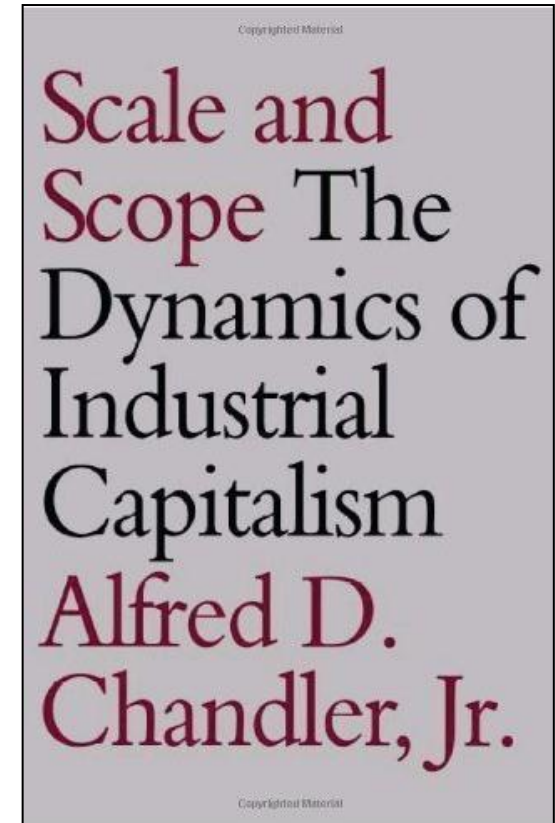
Insights from other industries....



1962

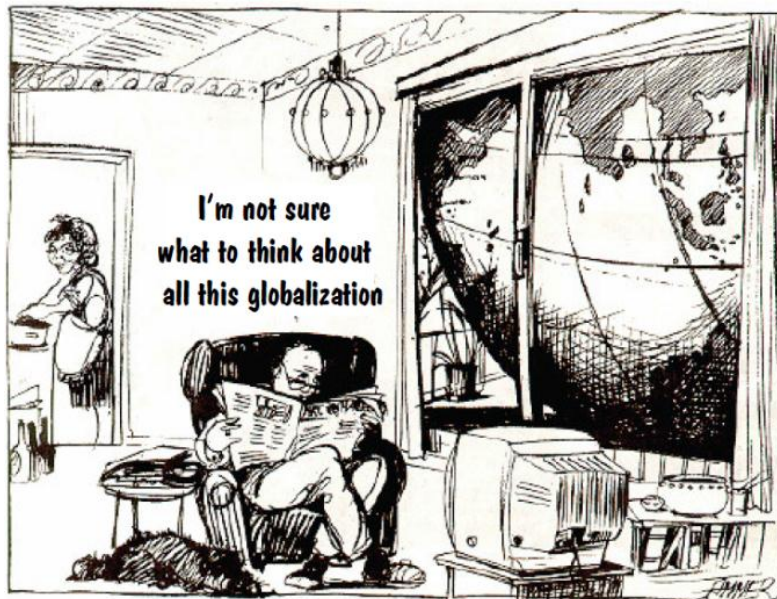


1977



1990

Q & As



Prof. Dong-Wook Song
Chair in Transport and Logistics
Transport Research Institute
Edinburgh Napier University
United Kingdom
D.Song@napier.ac.uk
www.tri.napier.ac.uk