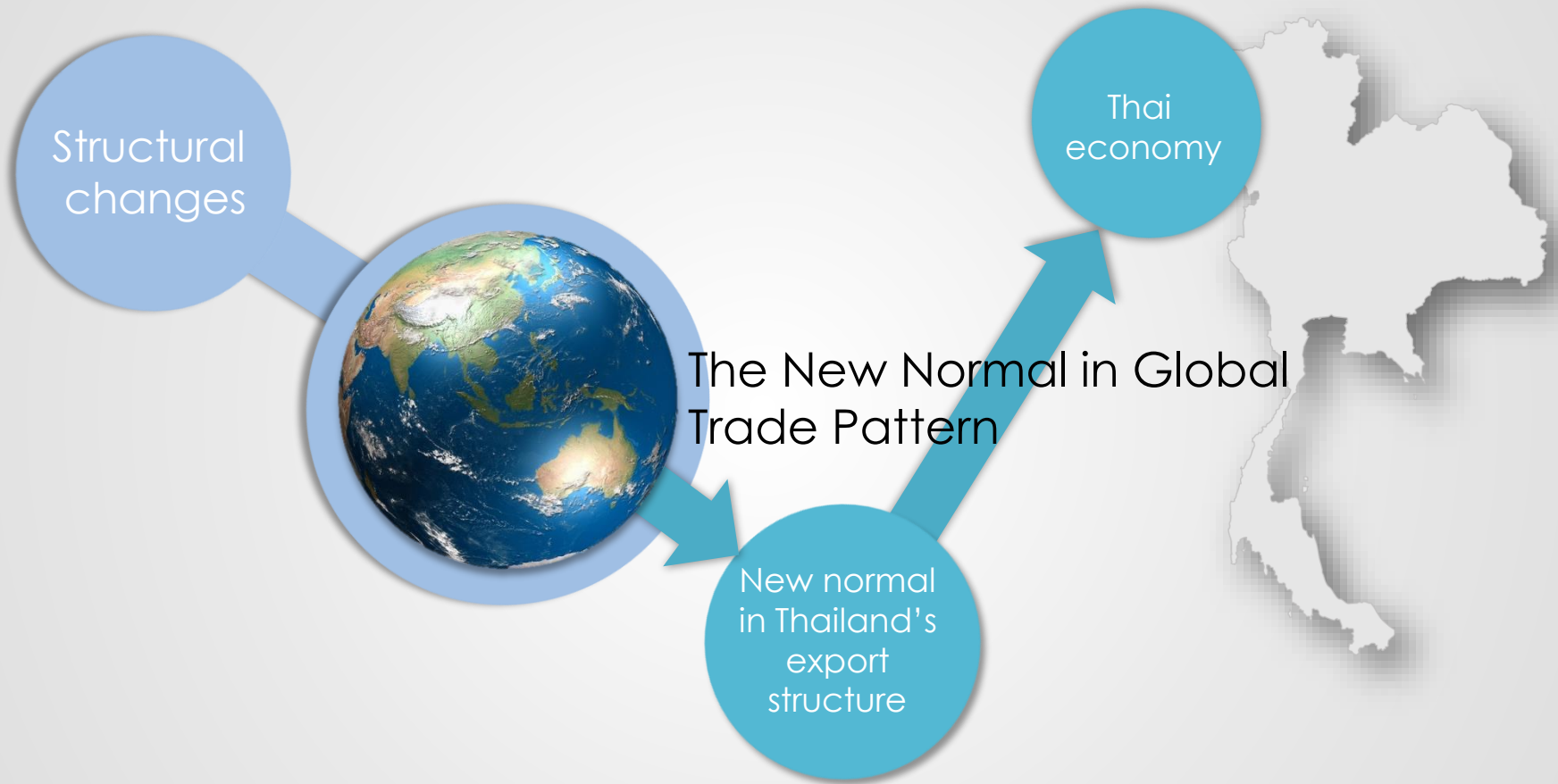




THE NEW NORMAL OF GLOBAL TRADE: THE IMPACT ON THAILAND'S EXPORT STRUCTURE AND STRUCTURAL CHANGES

Assistant Professor Kornkarun Cheewatrakoolpong, Ph.D., Assistant Professor Tanapong Potipiti, Ph.D.,
Panutat Satchachai, Ph.D., Nath Bunditwattanawong, and Arpakorn Nopparattayaporn





01

EVOLUTION
OF GLOBAL
TRADE
PATTERN



02

FACTORS
INFLUENCING
NEW
NORMAL IN
GLOBAL
TRADE
PATTERN

- Technological change
- A change in global supply chain



03

THE IMPACT
OF NEW
NORMAL IN
GLOBAL
TRADE
PATTERN ON
THAI
ECONOMY

01 Evolution of global trade pattern

GLOBAL TRADE AND GROWTH

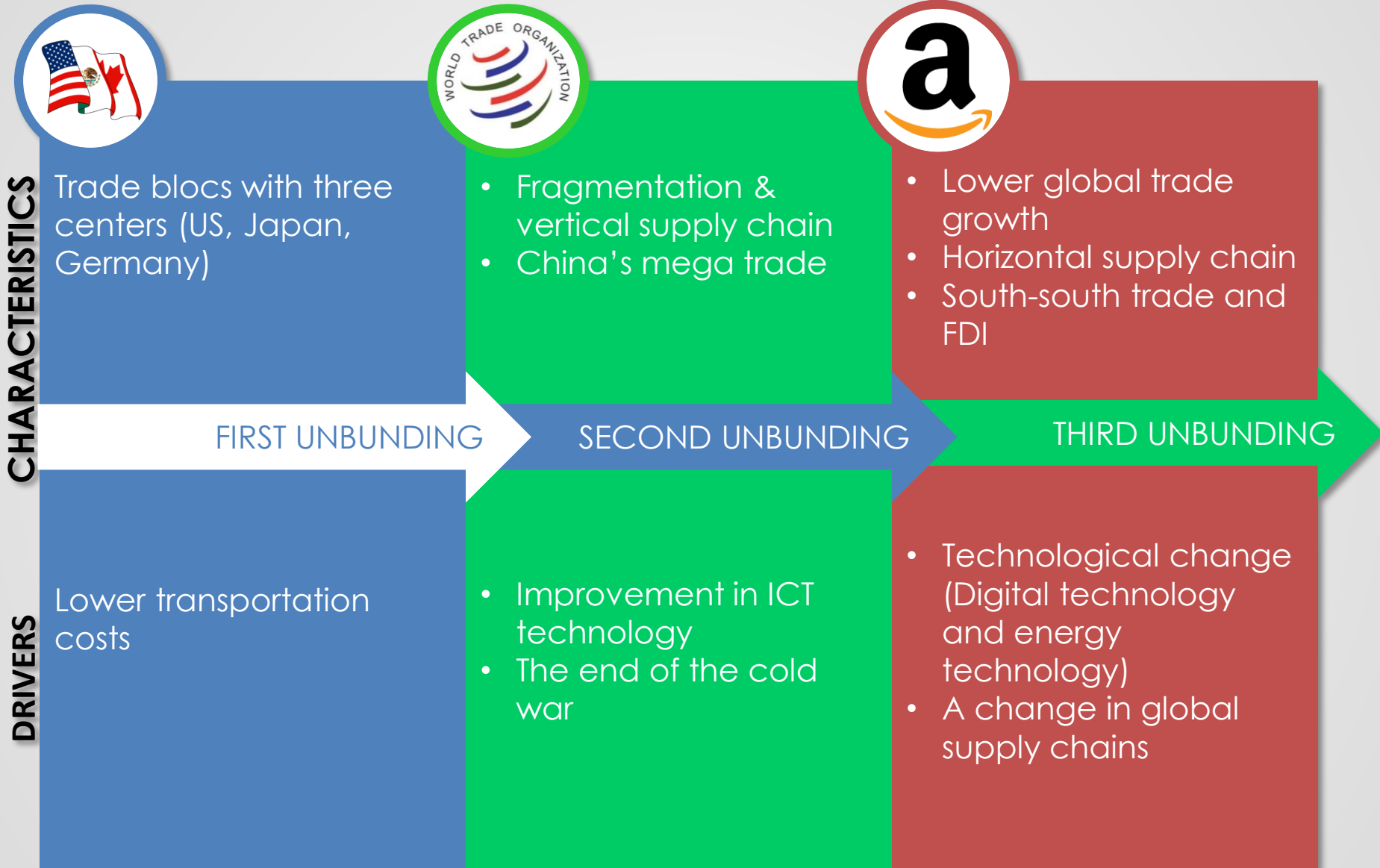
Trade growth is much stronger than GDP growth during 1995-2005. This trend is changing!



SOURCE: UNCTADstat

01 Evolution of global trade pattern

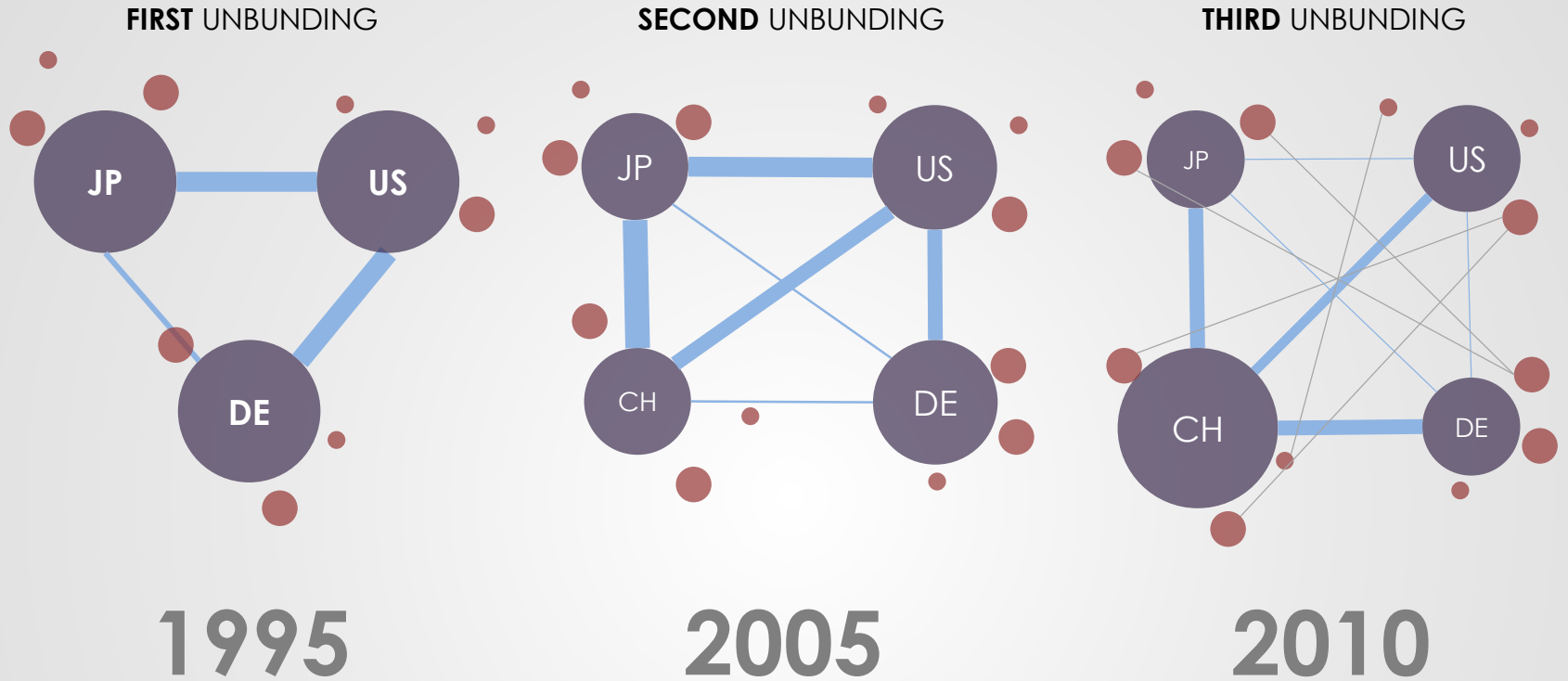
THREE ERAS OF GLOBAL TRADE



01 Evolution of global trade pattern

GLOBAL TRADE NETWORK

NOTE: For illustration purpose

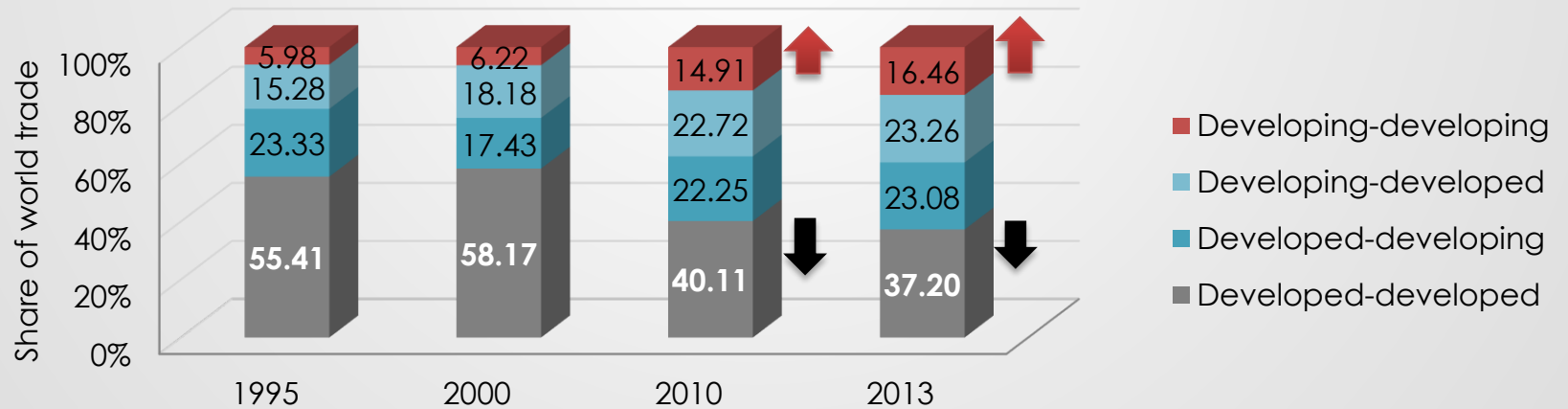
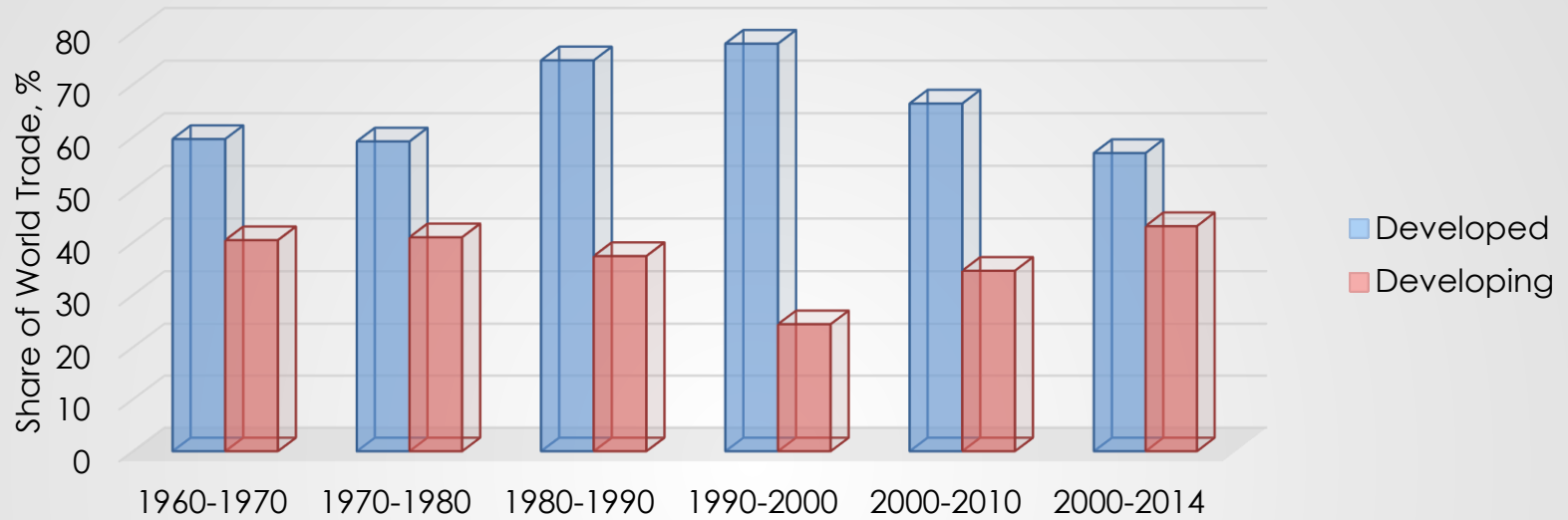


- The size of the node is % of country's export to the world export
- The thickness of the line indicates the % of bilateral trade between two countries to the world export

SOURCE: Author's calculation (Appendix A)

01 Evolution of global trade pattern

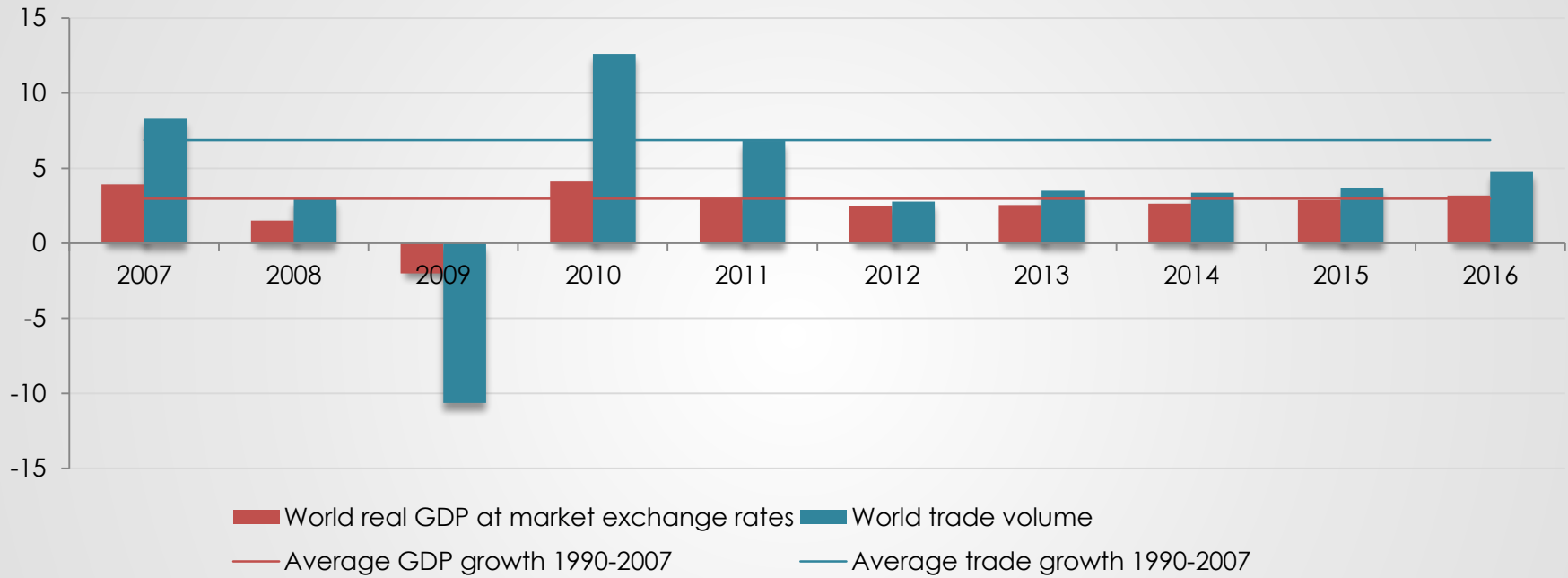
AN INCREASING ROLE OF DEVELOPING COUNTRIES IN GLOBAL TRADE



SOURCE: UNcomtrade

01 Evolution of global trade pattern

WHAT HAPPENS AFTER THE 2008-2009 GLOBAL FINANCIAL CRISIS?



SOURCE: World Economic Outlook Database, April 2015, IMF and WTO , 2015



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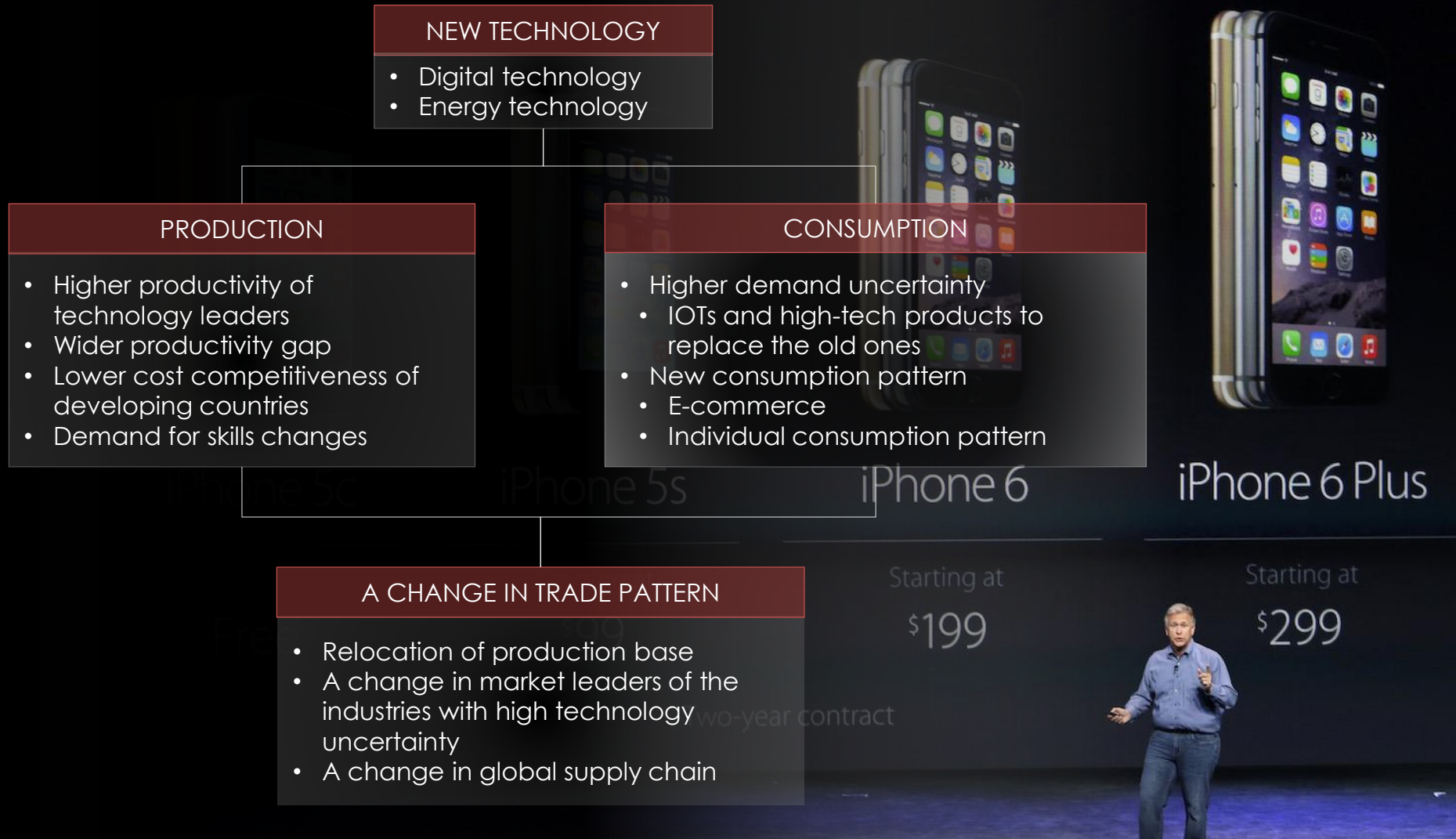


03

THE IMPACT
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02 Factors influencing new normal in global trade pattern

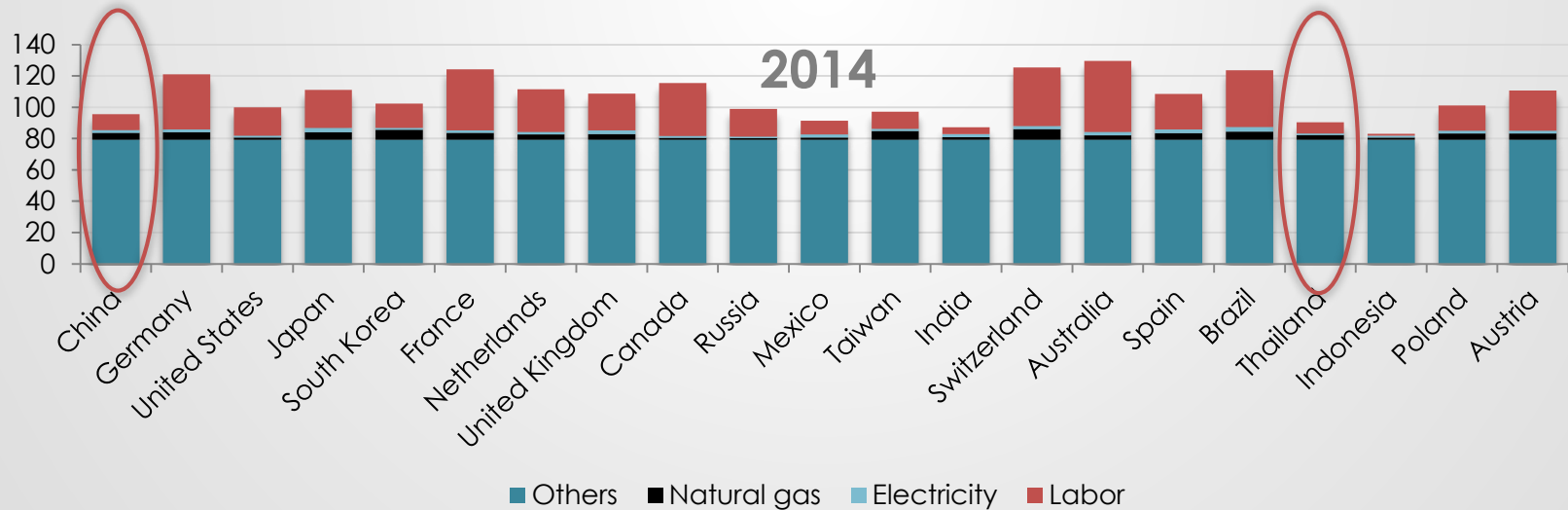
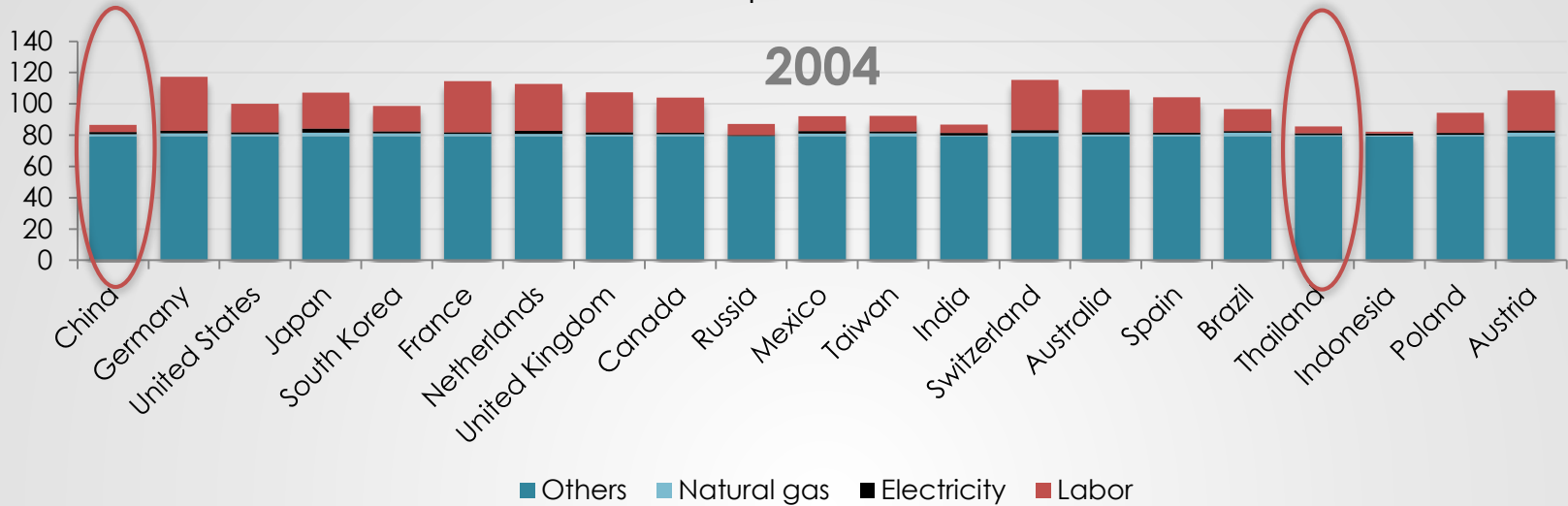
THE IMPACT OF NEW TECHNOLOGY



02 Factors influencing new normal in global trade pattern

THE IMPACT OF NEW TECHNOLOGY: PRODUCTION

Cost competitiveness index



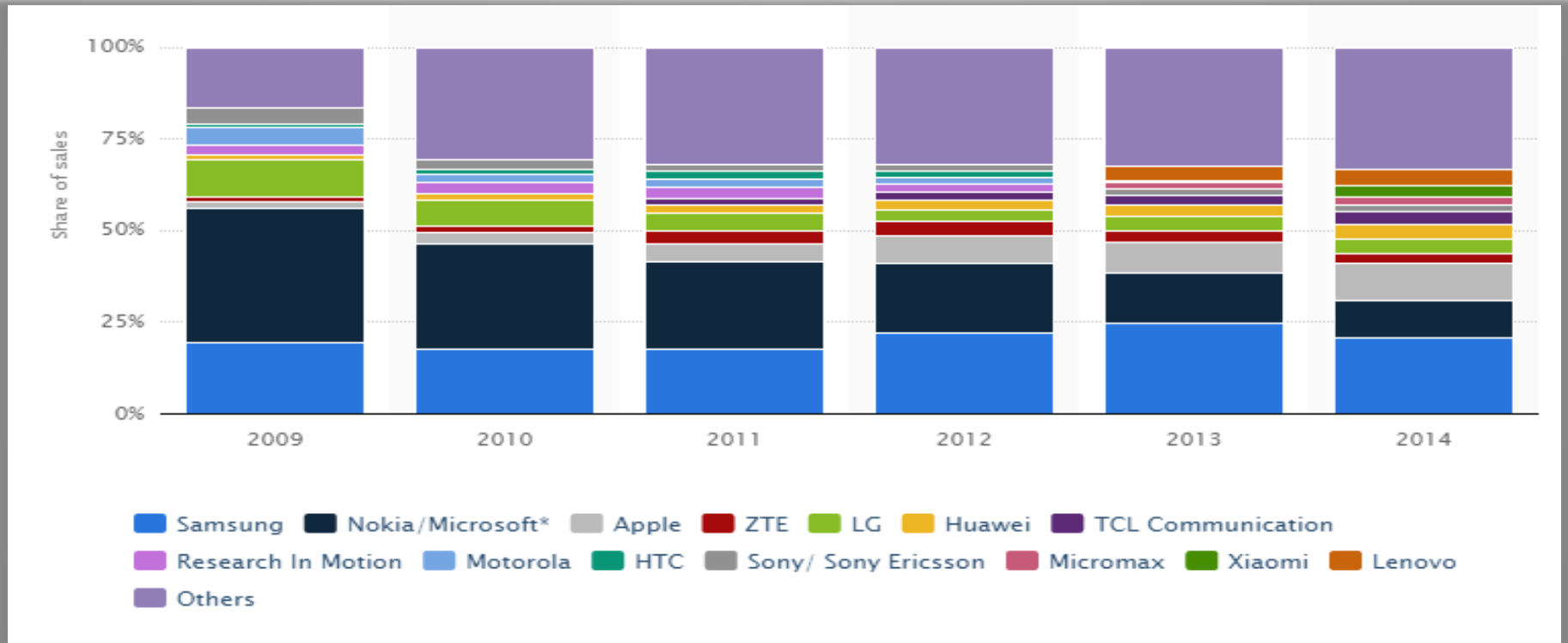
SOURCE: Boston Consulting Group

02 Factors influencing new normal in global trade pattern

THE IMPACT OF NEW TECHNOLOGY: CONSUMPTION

Market leaders in the industries with high technological uncertainty are changing !

Cellphone market share by brand

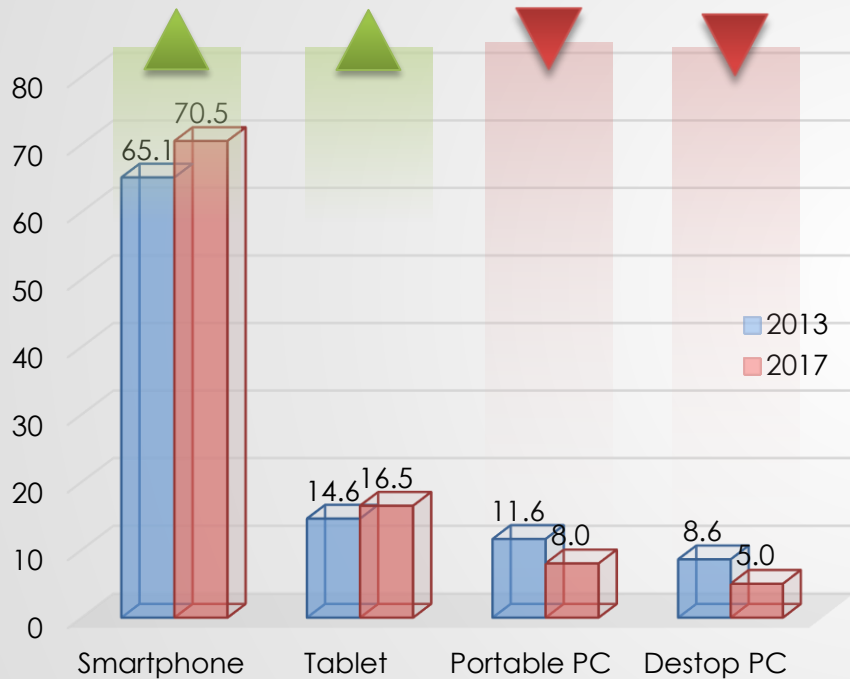


SOURCE: Statistica 2015

02 Factors influencing new normal in global trade pattern

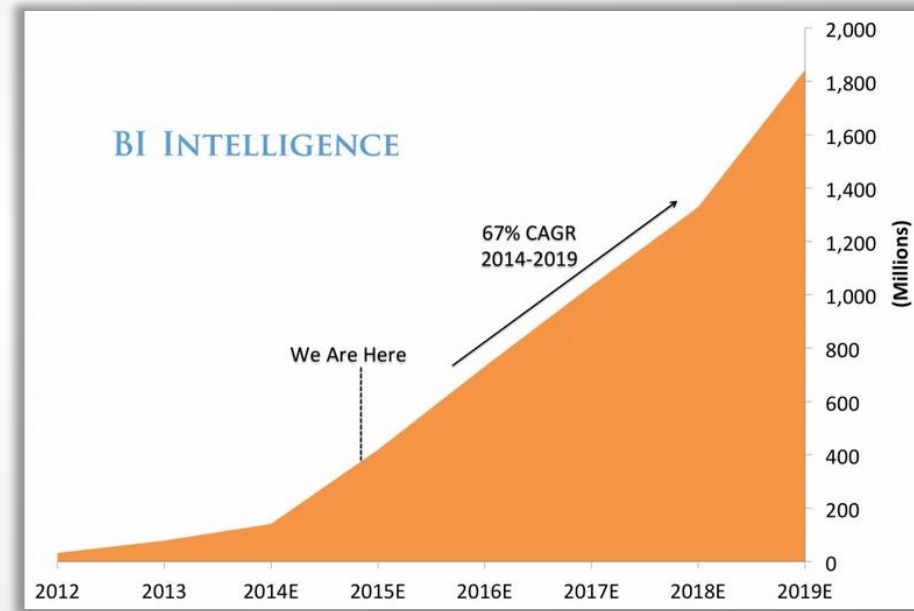
THE IMPACT OF NEW TECHNOLOGY: CONSUMPTION

Market share of IT related devices



SOURCE: IDC

Global connected-home device annual shipments



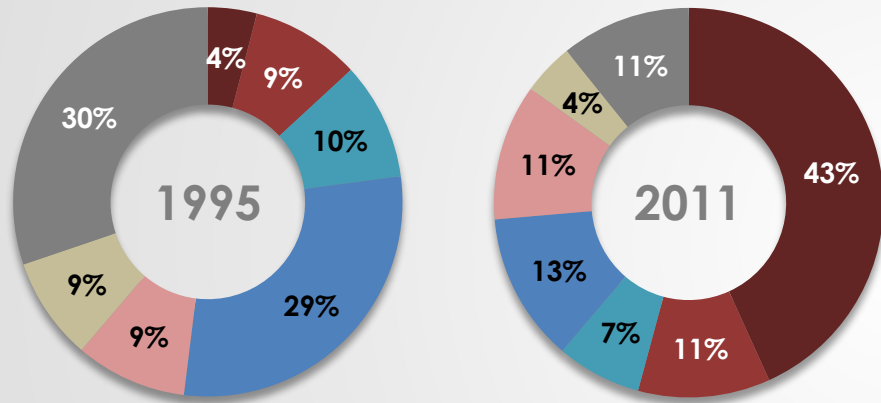
SOURCE: ABI Research, TechNavio, Pike Research, BI Intelligence Estimates

02 Factors influencing new normal in global trade pattern

THE IMPACT OF NEW TECHNOLOGY: TRADE PATTERN

An increasing role of China, Korea, and Taiwan!

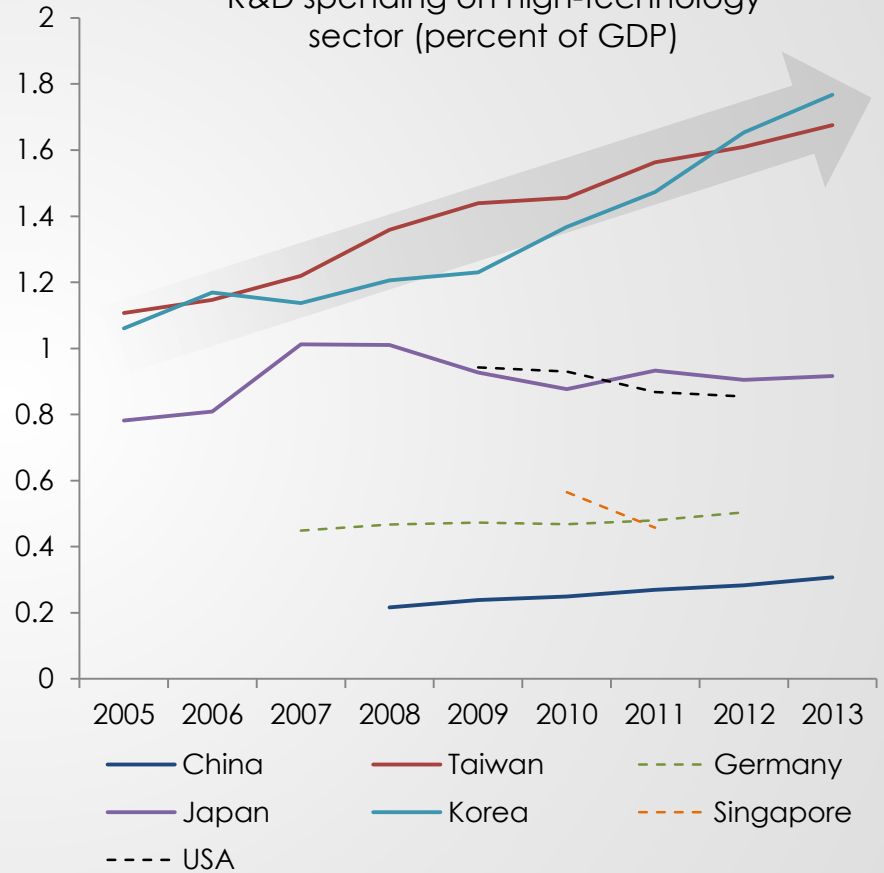
High-tech exports by country



- China
- Taiwan
- China
- Taiwan
- Germany
- Japan
- Germany
- Japan
- Korea
- Singapore
- Korea
- Singapore
- United States
- United States

SOURCE: OECDstat

R&D spending on high-technology sector (percent of GDP)



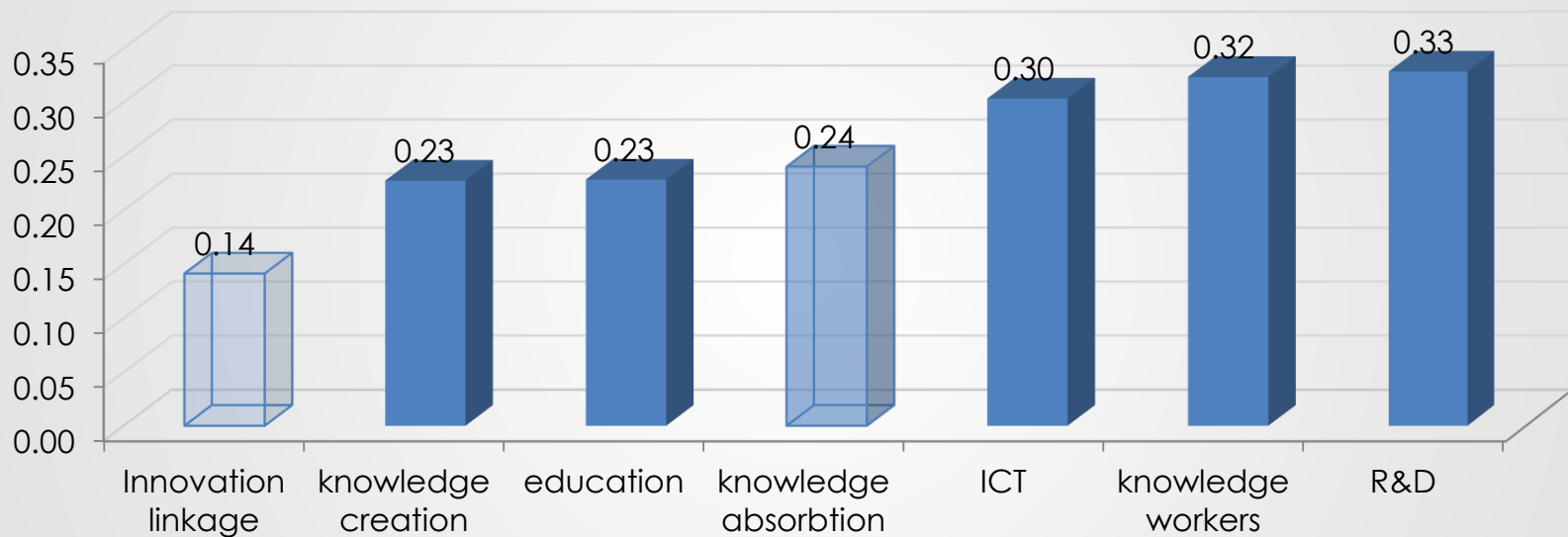
SOURCE: OECDstat, IMF, World Economic Outlook Database

02 Factors influencing new normal in global trade pattern

THE IMPACT OF NEW TECHNOLOGY: TRADE PATTERN

R&D, human capital and ICT infrastructure are the most important technology factors!

Export performance and technology factors



SOURCE: Author's calculation (Appendix C.)

02 Factors influencing new normal in global trade pattern

GLOBAL SUPPLY CHAIN PARTICIPATION

TECHNOLOGICAL CHANGES

- Wider productivity gap
- A change in products

LOWER COST
COMPETITIVENESS OF
DEVELOPING COUNTRIES

A CHANGE IN GLOBAL SUPPLY CHAINS

- HORIZONTAL SUPPLY CHAINS BETWEEN DEVELOPED AND DEVELOPING COUNTRIES
- VERTICAL SUPPLY CHAINS AMONG DEVELOPING COUNTRIES

A CHANGE IN GLOBAL LEADERS
OF THE SUPPLY CHAINS WITH
TECHNOLOGICAL UNCERTAINTY

A DECLINE IN
INDUSTRIAL JAPAN

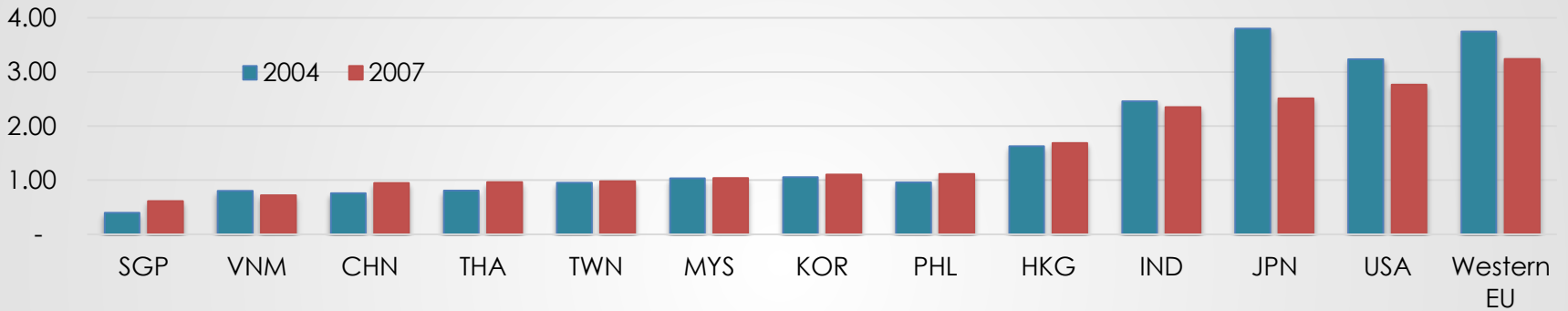


02 Factors influencing new normal in global trade pattern

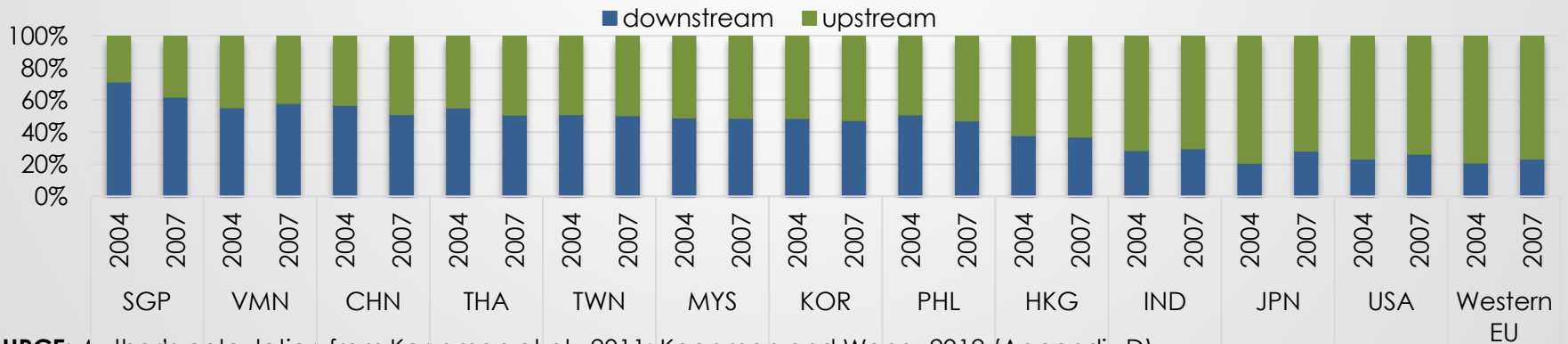
GLOBAL SUPPLY CHAIN PARTICIPATION

Developed countries concentrate on upstream but some developing countries are catching up!

Index of upstream position



A share of upstream and downstream



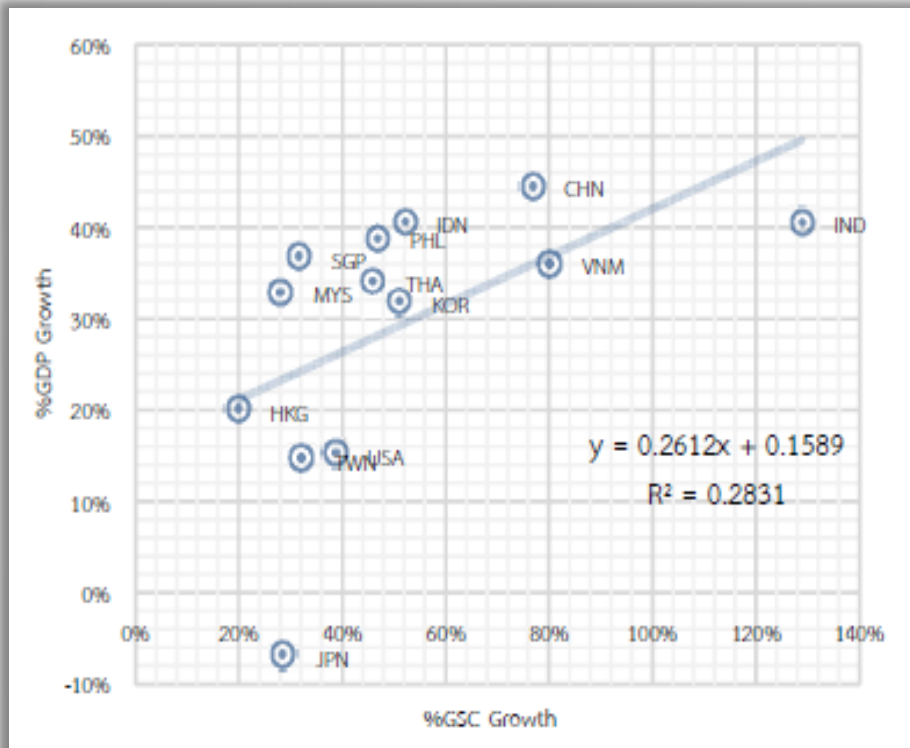
SOURCE: Author's calculation from Koopman et al., 2011; Koopman and Wang, 2012 (Appendix D)

02 Factors influencing new normal in global trade pattern

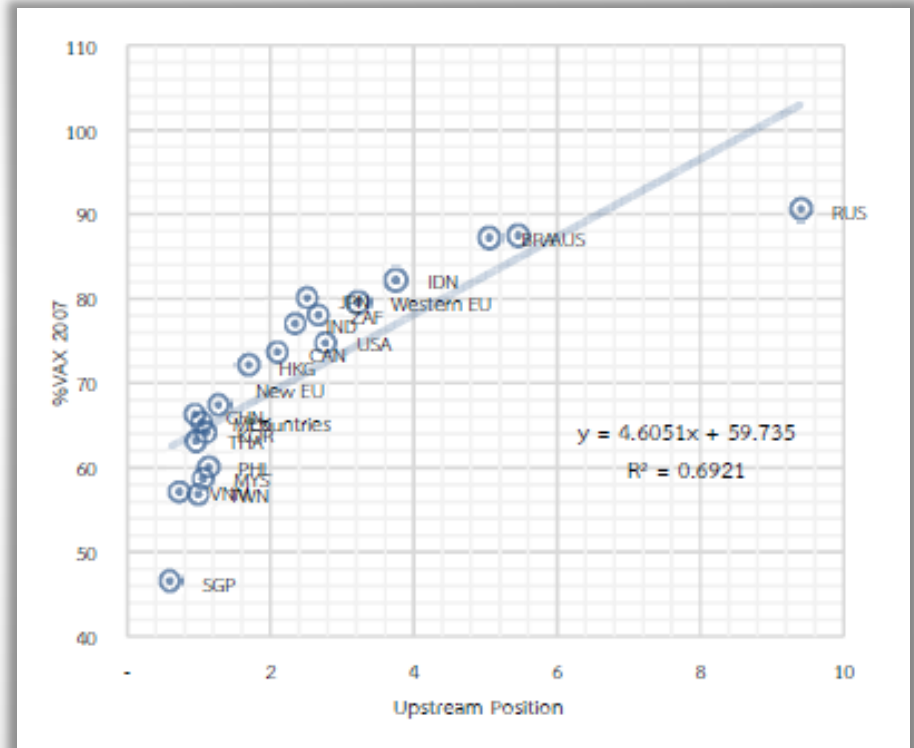
GLOBAL SUPPLY CHAIN PARTICIPATION

GSC participation benefits from economic growth but upstream industries are the activities that contribute to domestic value added

GSC participation and economic growth



Upstream position and value added



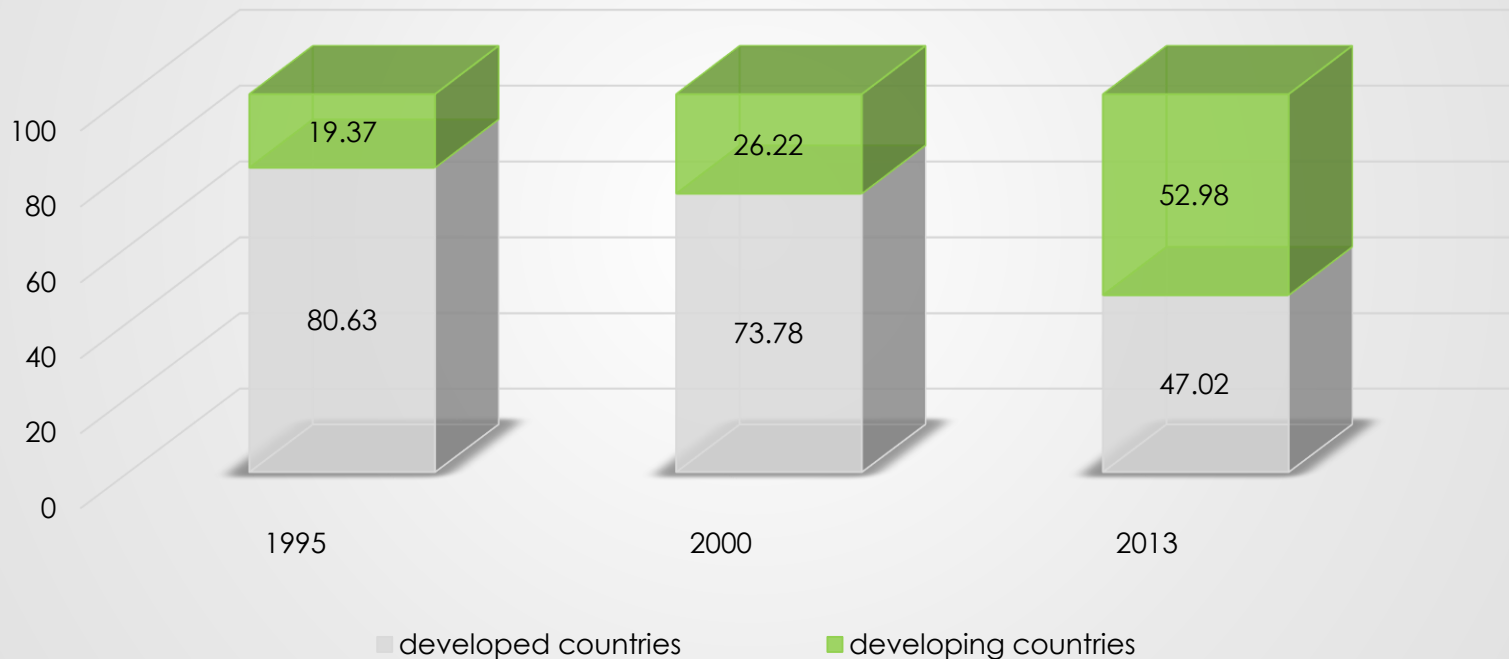
SOURCE: Author's calculation from Koopman et al., 2011 (Appendix D)

02 Factors influencing new normal in global trade pattern

A CHANGE IN GLOBAL SUPPLY CHAIN: HORIZONTAL SUPPLY CHAIN

A closer gap between developed and developing countries!

A share of high-tech export by economic group



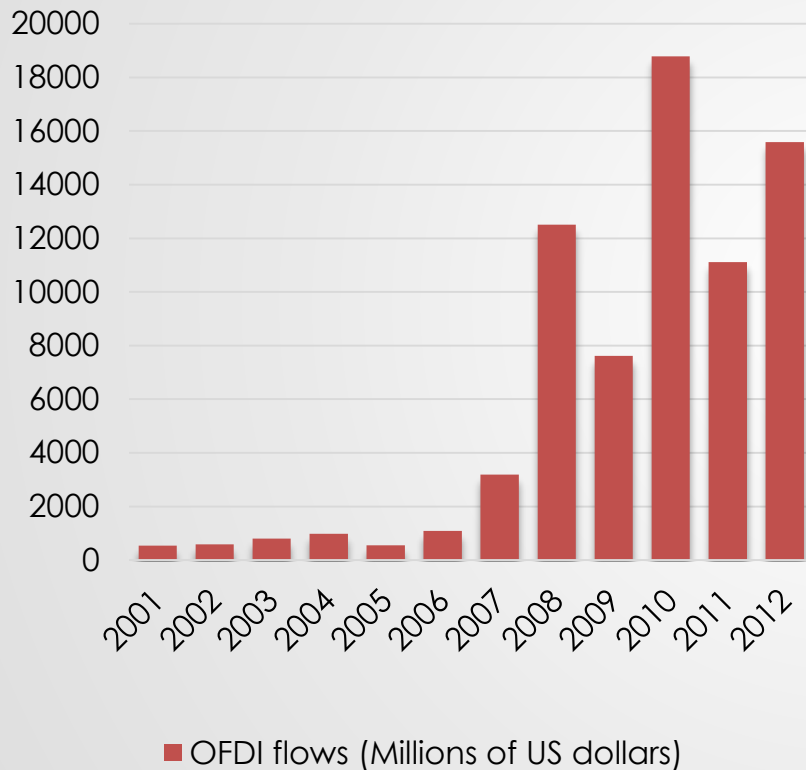
SOURCE: World Development Indicators

02 Factors influencing new normal in global trade pattern

A CHANGE IN GLOBAL SUPPLY CHAIN: HORIZONTAL SUPPLY CHAIN

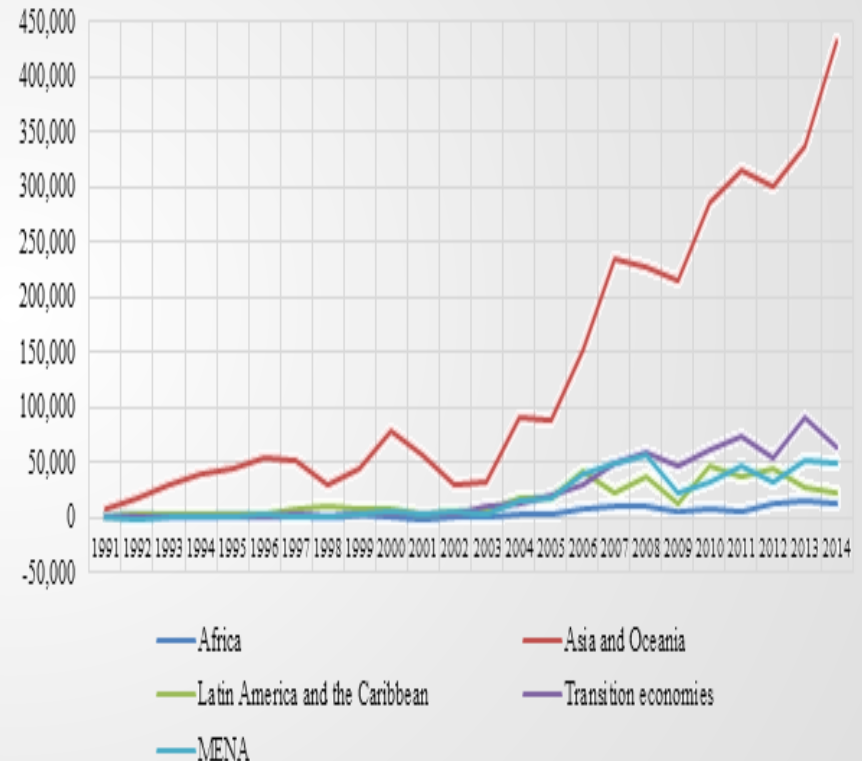
Formation of vertical supply chains among developing countries.

South-South FDI flows in Asia



SOURCE: UNCTAD FDI/TNC database

FDI flows from developing countries by region



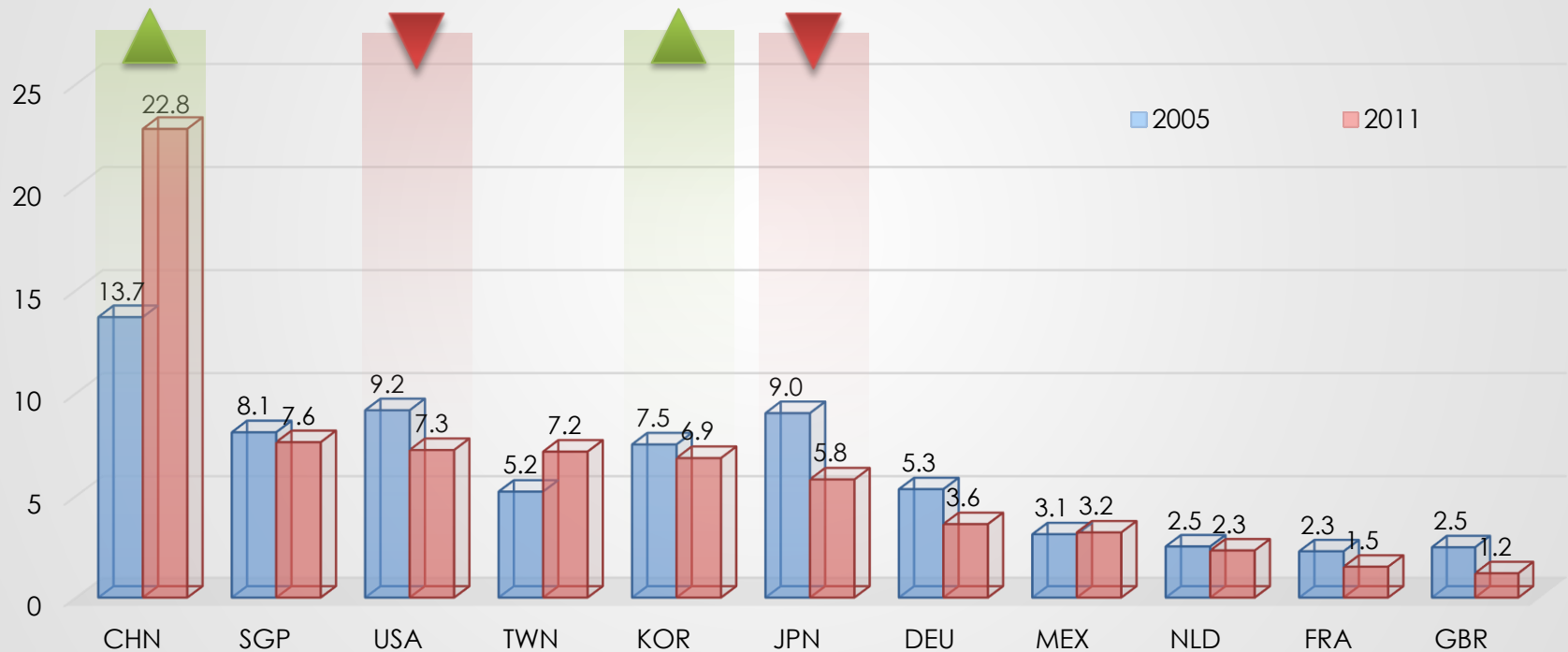
SOURCE: UNCTAD,

02 Factors influencing new normal in global trade pattern

A CHANGE IN GLOBAL SUPPLY CHAIN: A CHANGE IN GLOBAL PLAYERS

China and Taiwan have an increasing market share while Japan is experiencing a downfall in electronic industry.

Market share of electronic exports by country



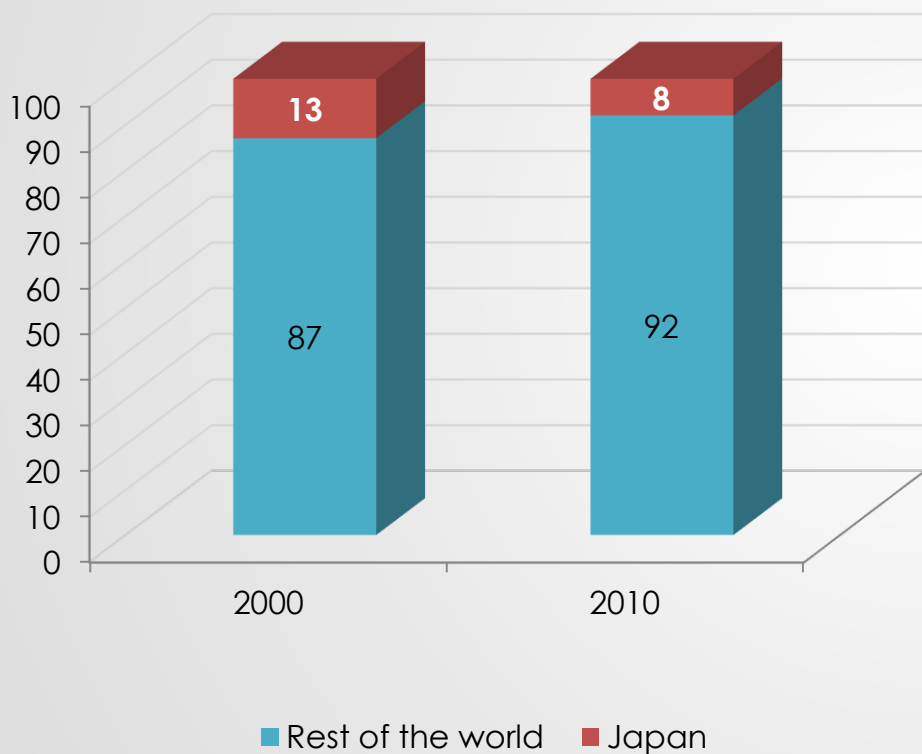
SOURCE: OECD

02 Factors influencing new normal in global trade pattern

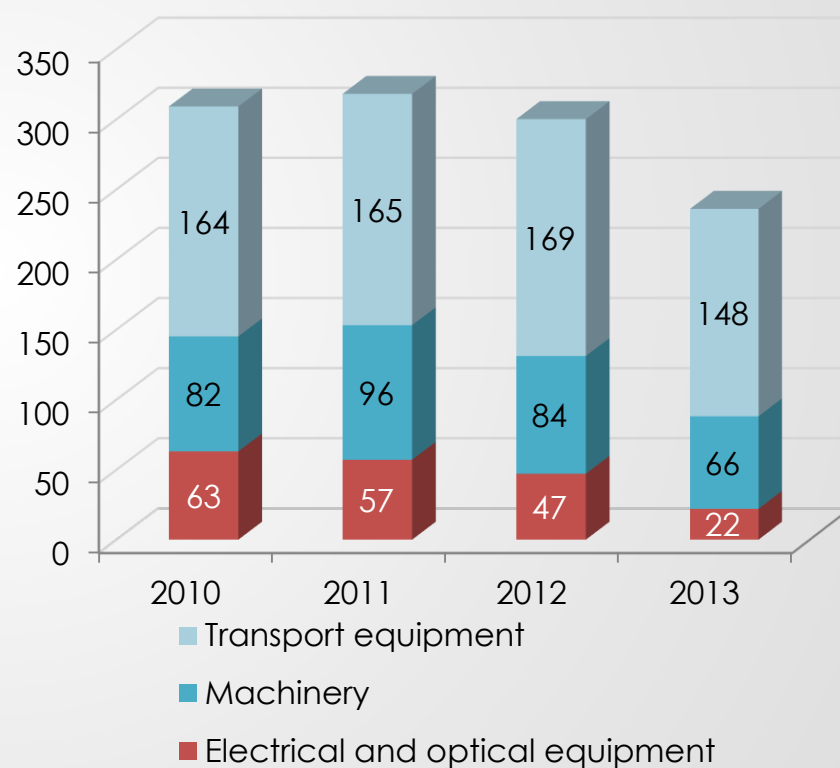
A CHANGE IN GLOBAL SUPPLY CHAIN: A DECLINE IN "INDUSTRIAL JAPAN"

A decline in machinery and electrical equipment industries in Japan.

An export share of advanced manufacturing goods of Japan



Japanese exports of advanced manufacturing goods by product

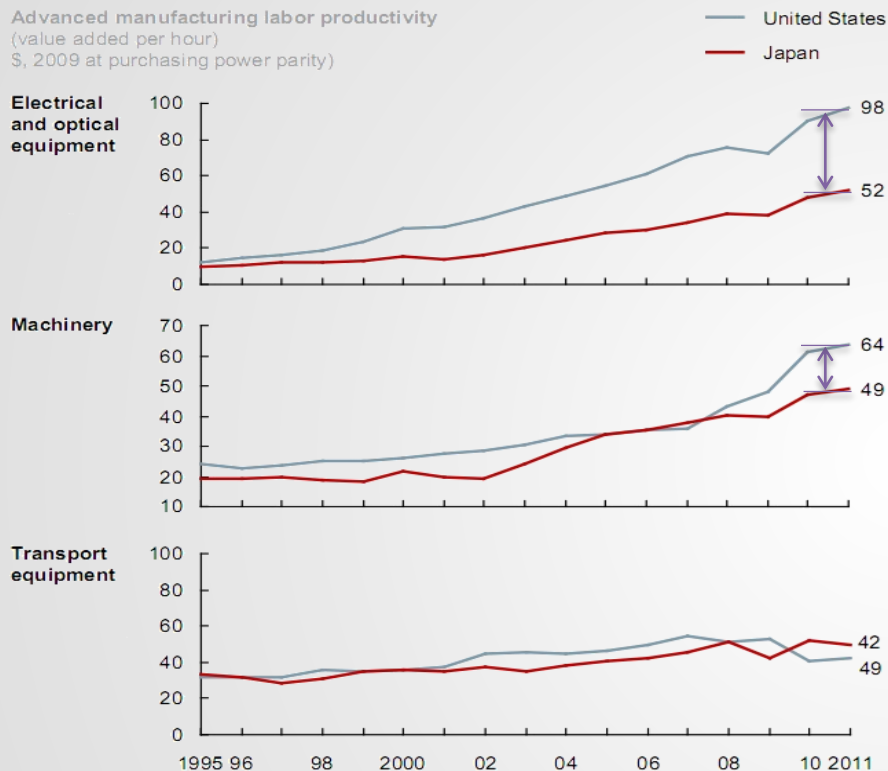


SOURCE: Mckinsey Global Institute, 2015, calculated from World Integrated Trade Solutions Database

02 Factors influencing new normal in global trade pattern

A CHANGE IN GLOBAL SUPPLY CHAIN: A DECLINE IN "INDUSTRIAL JAPAN"

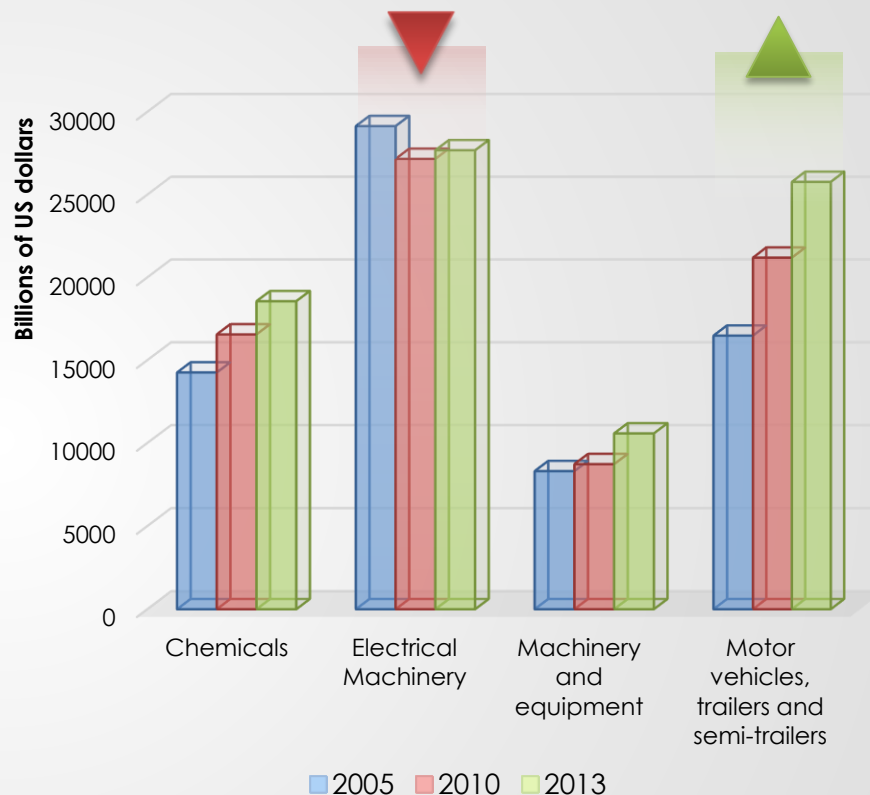
Productivity gap by sector



NOTE: Advanced manufacturing labor productivity (value added per hour)
(US\$, 2009 at purchasing power parity)

SOURCE: Mckinsey Global Institute, 2015, calculated from IHS, World Input-Output Database

Japanese R&D spending by sector



SOURCE: OECDstat



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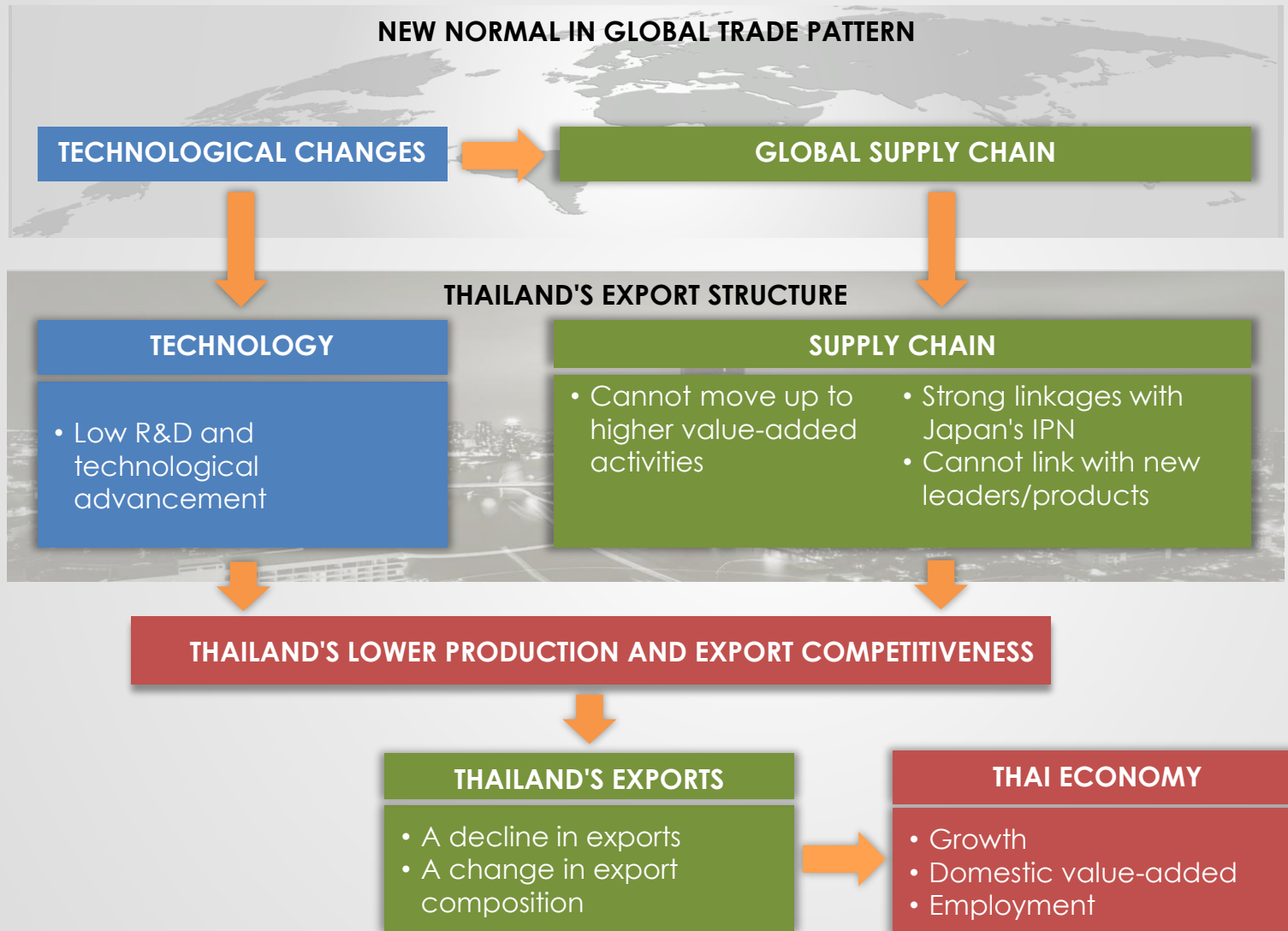


03

THE IMPACT
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THAI
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03 The impact of new normal in global trade pattern on Thailand's economy

A CHANGE IN THAILAND'S EXPORT STRUCTURE



03 Factors influencing new normal in global trade pattern

A CHANGE IN GLOBAL SUPPLY CHAIN: IMPACT ON THAILAND'S EXPORT PATTERN

GLOBAL TECHNOLOGICAL CHANGES

- Wider productivity gap
- A change in products and market leaders



THAILAND

- Low R&D
- Low technological advancement
- Low innovation



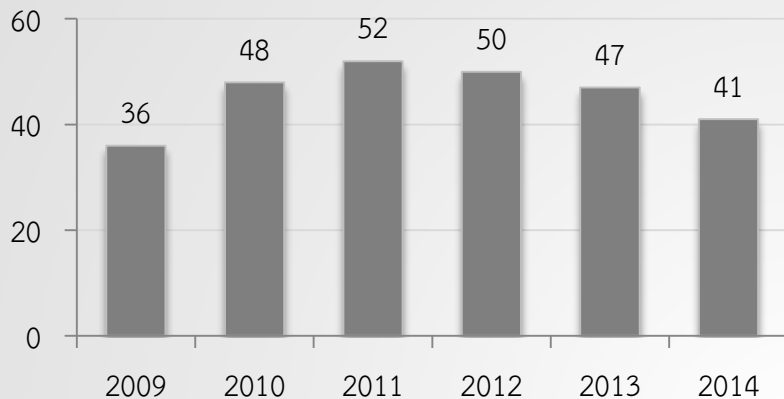
THAILAND'S SUPPLY CHAIN PARTICIPATION

EXPORT COMPETITIVENESS

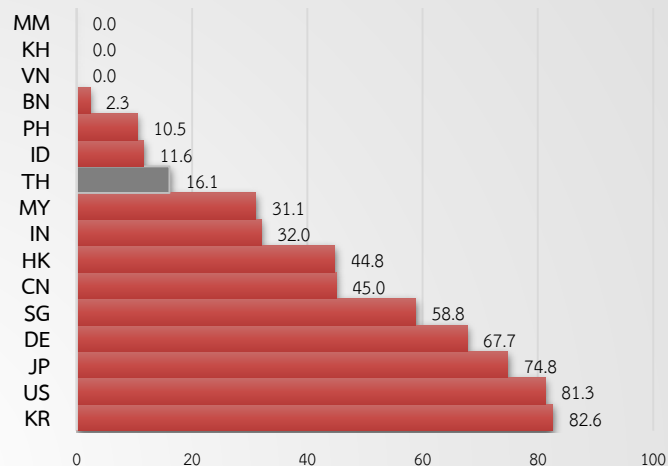
03 Factors influencing new normal in global trade pattern

THE IMPACT OF NEW TECHNOLOGY ON THAILAND'S EXPORT PATTERN

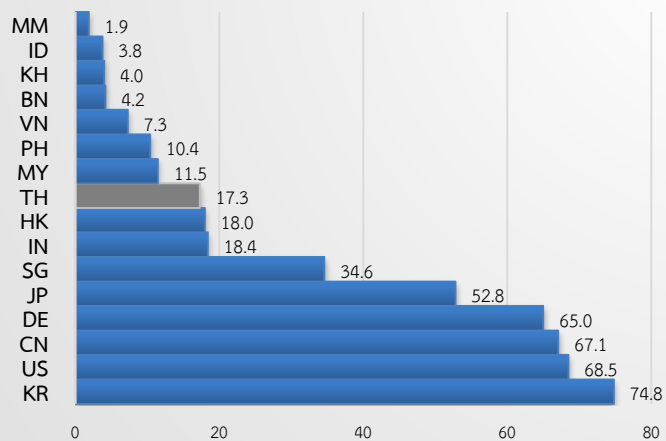
Thailand's IMD technology readiness ranking



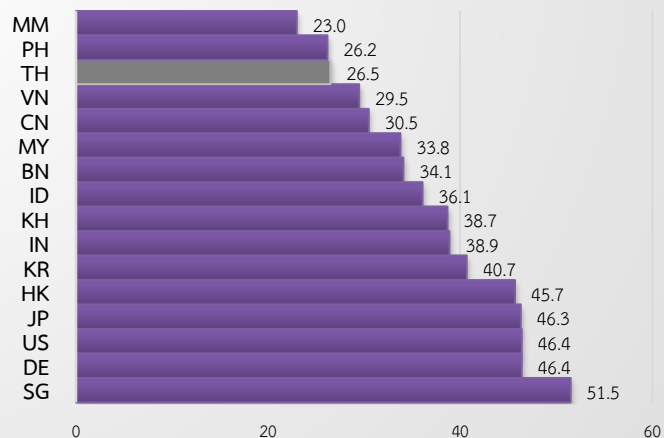
Research and development (R&D)



Knowledge creation



Innovation linkages



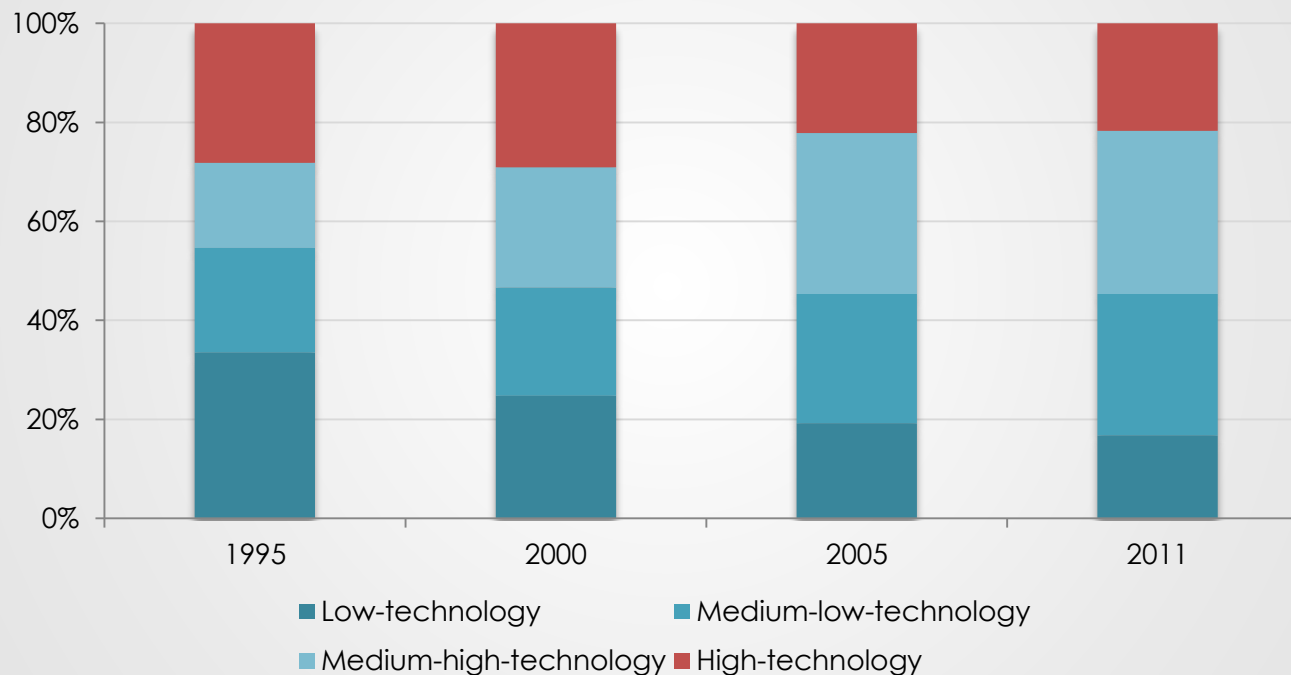
SOURCE: The Global Innovation Index, 2014 and IMD

03 Factors influencing new normal in global trade pattern

THE IMPACT OF NEW TECHNOLOGY ON THAILAND'S EXPORT PATTERN

Thailand has a decreasing share of high-tech exports.

Thailand's exports by technology levels



SOURCE: OECDstat

03 Factors influencing new normal in global trade pattern

A CHANGE IN GLOBAL SUPPLY CHAIN: IMPACT ON THAILAND'S EXPORT PATTERN

A CHANGE IN GLOBAL SUPPLY CHAIN

- Moving to horizontal supply chain
- New leaders in technology-related sectors
- A decline of Japanese manufacturing sectors



THAILAND

- Cannot move up to high-tech sectors or higher value-added activities
- Strong linkages with Japanese supply chains
- Weak linkages with the supply chains of new products or new market leaders



A DECLINE IN THAILAND'S EXPORTS

A CHANGE IN THAILAND'S EXPORT COMPOSITION

Getty Images

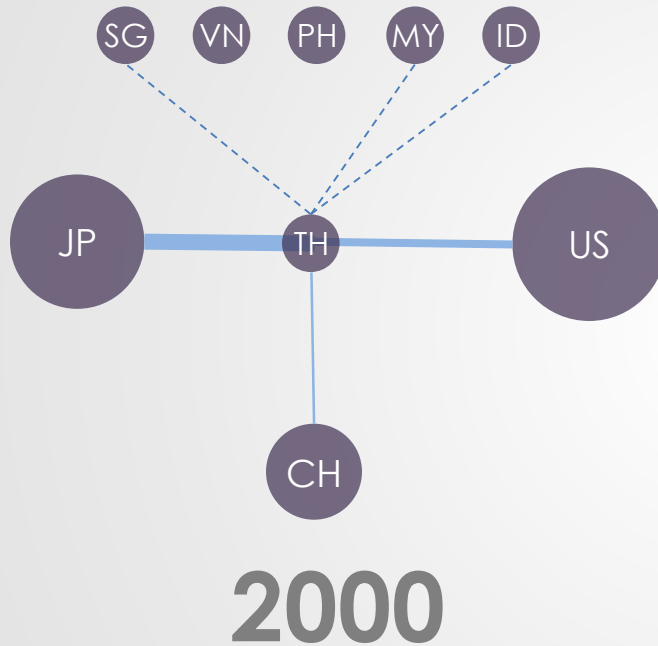
03 Factors influencing new normal in global trade pattern

A CHANGE IN GLOBAL SUPPLY CHAIN: IMPACT ON THAILAND'S EXPORT PATTERN

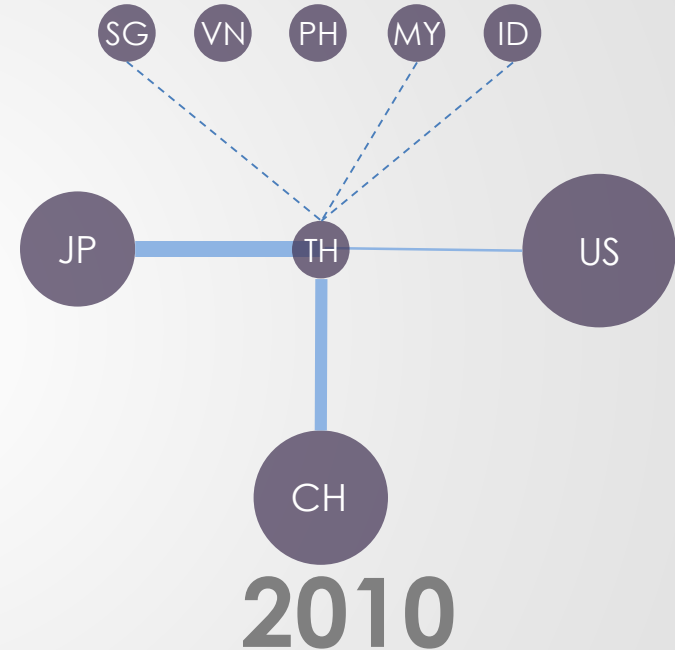
NOTE: For illustration purpose

Strong reliance on Japan!

Thailand's trade network in 2000



Thailand's trade network in 2010



- The size of the node is % of trade partners' exports to Thailand's total exports
- The thickness of the line indicates the % of bilateral trade between trade partners and Thailand

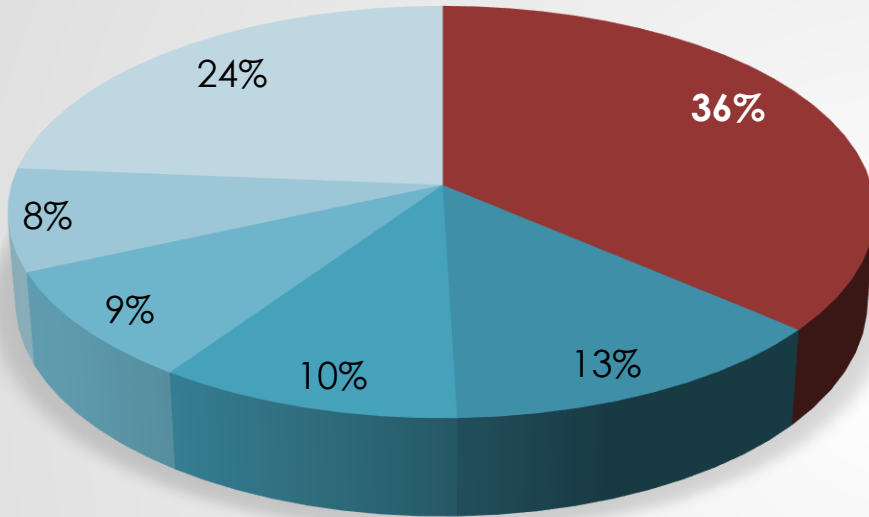
SOURCE: Author's calculation (Appendix A)

03 Factors influencing new normal in global trade pattern

A CHANGE IN GLOBAL SUPPLY CHAIN: IMPACT ON THAILAND'S EXPORT PATTERN

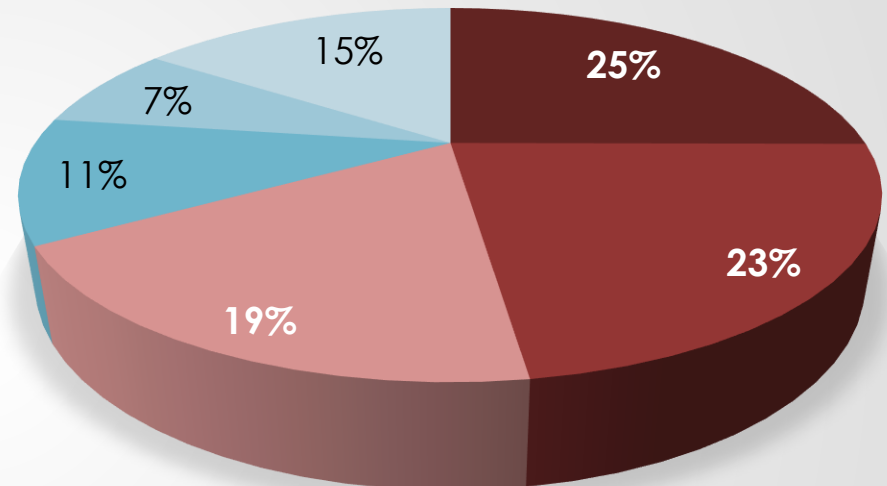
Strong reliance on Japan!

FDI in Thailand in 2005, by country



- Japan
- United States
- Hong Kong
- China
- Netherlands
- Other

Japanese FDI in Thailand in 2005, by sector



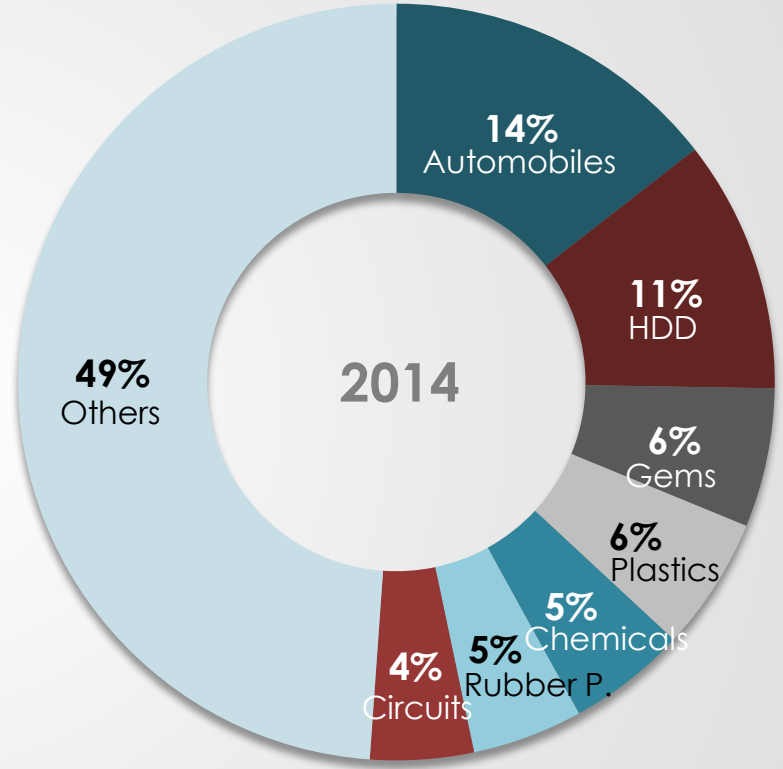
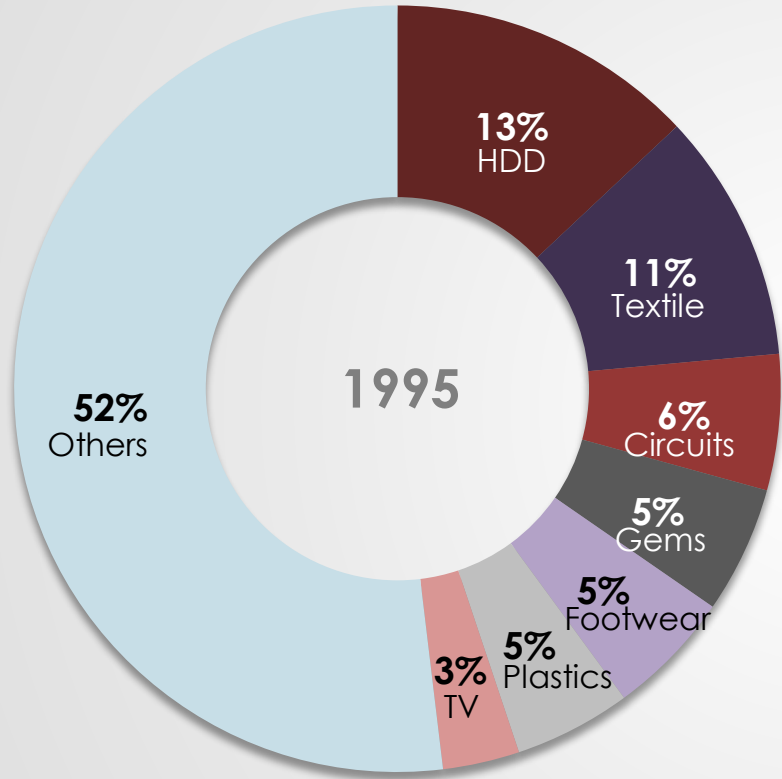
- Radio, television, communication equipment and apparatus
- Motor vehicles, trailers and semi-trailers
- Machinery and equipment
- Chemicals and chemical products
- Fabricated metal products

SOURCE: UNCTAD FDI/TNC database and Bank of Thailand

03 Factors influencing new normal in global trade pattern

A CHANGE IN GLOBAL SUPPLY CHAIN: IMPACT ON THAILAND'S EXPORT PATTERN

Thailand's export composition has changed overtime



- HDD
- Textile
- Circuits
- Gems
- Automobiles
- HDD
- Gems
- Plastics
- Footwear
- Plastics
- TV
- Others
- Chemicals
- Rubber P.
- Circuits
- Others

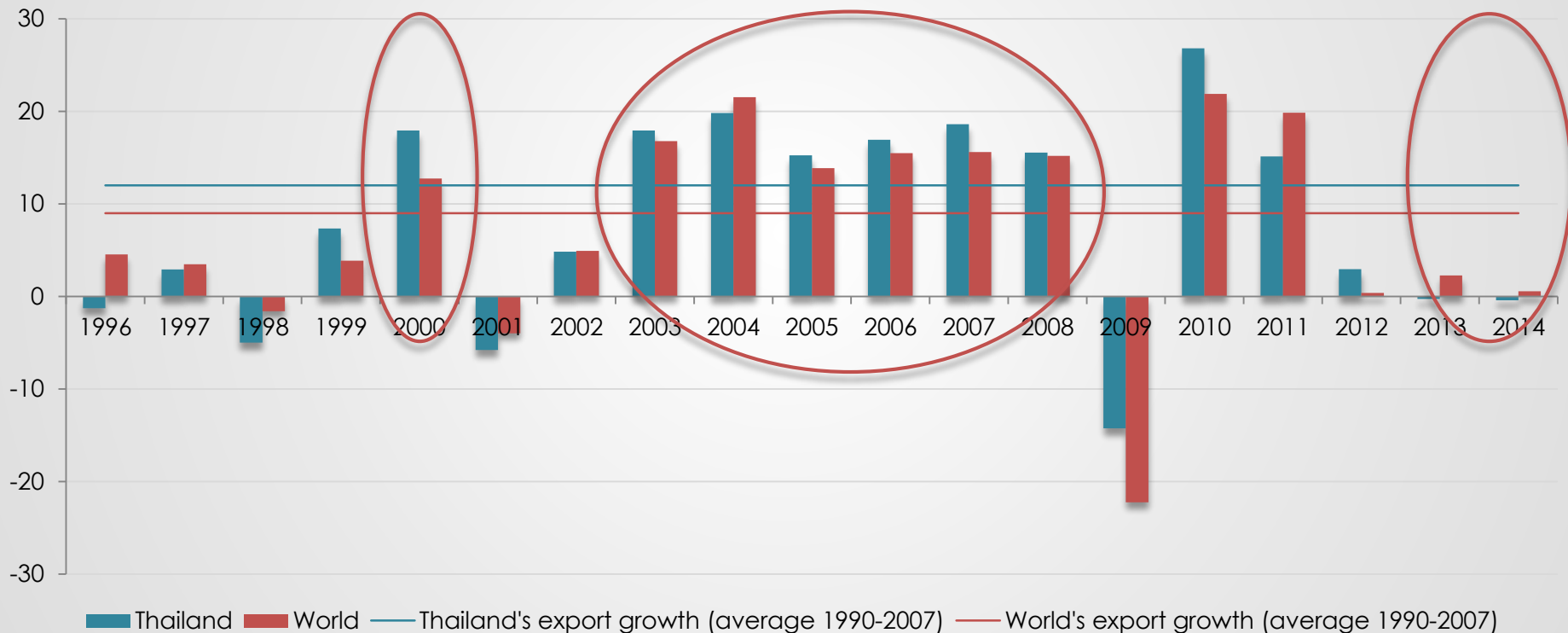
SOURCE: Ministry of Commerce, Office of the Permanent Secretary, Information and Communication Technology Center with cooperation of the Customs Department

03 The impact of new normal in global trade pattern on Thailand's economy

A CHANGE IN THAILAND'S EXPORT STRUCTURE

After 2012, Thailand's export growth is smaller than that of the world

Thailand's export growth vs World's export growth

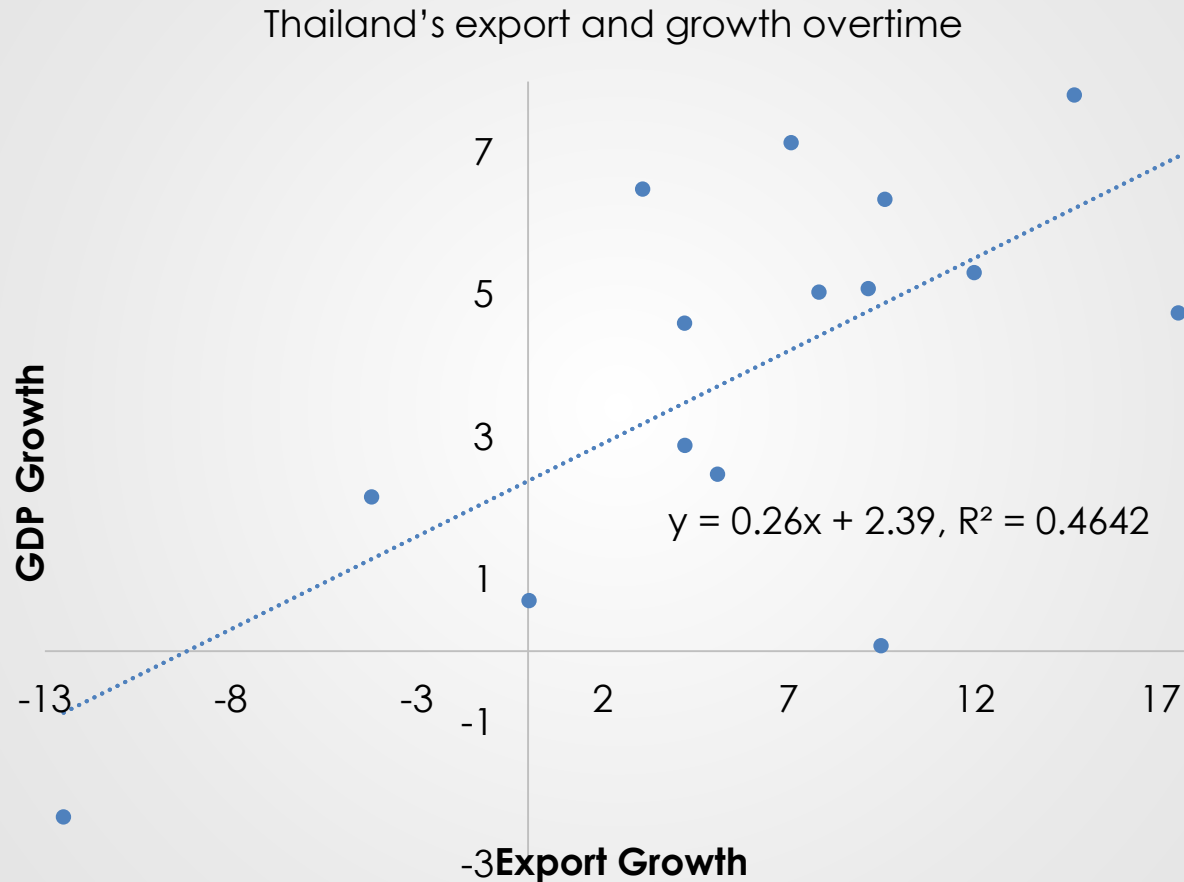


SOURCE: UNCTAD

03 The impact of new normal in global trade pattern on Thailand's economy

EXPORTS AND ECONOMIC GROWTH

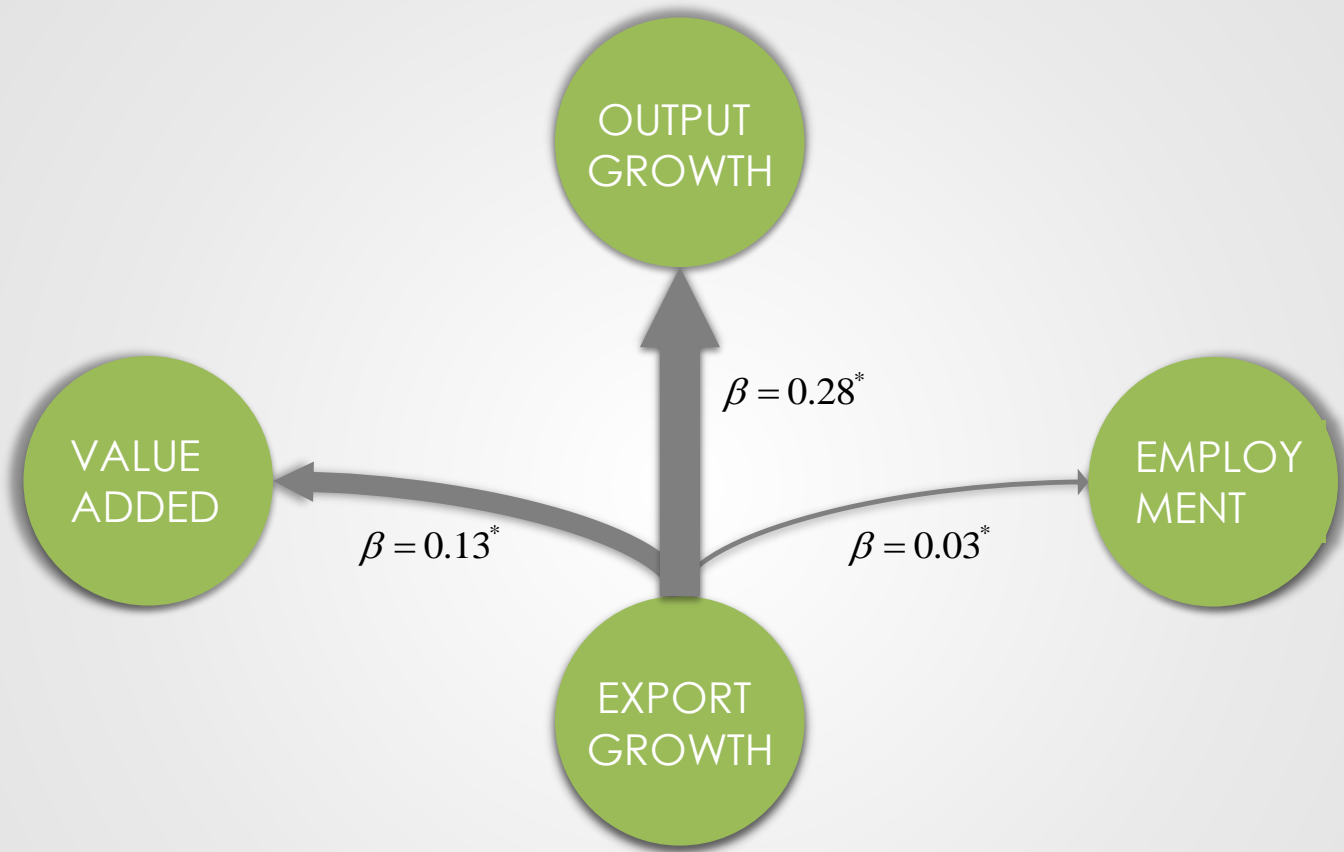
Export growth plays an important role in economic growth.



SOURCE: Author's calculation

03 The impact of new normal in global trade pattern on Thailand's economy

EXPORTS AND OUTPUT GROWTH AT THE STRUCTURAL LEVEL



SOURCE: Author's calculation (Appendix E)

NOTE: * denotes p-value < 0.01

- The new normal in global trade is driven by changes in technology and global supply chain.
- All changes have negative impacts on Thailand's export performance.
- Technology: Thailand's costs of production are rising relative to developed countries. But Thailand cannot upgrade to more advanced technology or upstream industries.
- Supply chain: Thailand has strong linkages with Japan which is losing its leadership in markets. Moreover, Thailand cannot create new linkages with new leaders.
- A drop in exports would cause drop in output, value added and employment.