

ASEAN4-JAPAN TRADE RELATIONS IN AUTOMOTIVE AND ELECTRONICS SECTORS: TRADE PATTERNS AND TRENDS IN VALUE ADDED

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Presentation Outline

- A brief Backgrounder: ASEAN and GPN (Global Production Network)
- ASEAN4-Japan: Cases on Automotive and Electronics
- Trade Patterns
 - Inter-regional
 - Intra-regional
- Trends in Value Added
- Extended Context
 - Network Trade: East and Southeast Asia Nexus
- On-going Research
 - Research Design Developed
 - Past and Contemporary Studies
 - Proposed Framework
 - Some Tentative Arguments on Regional Value Chains (RVCs)

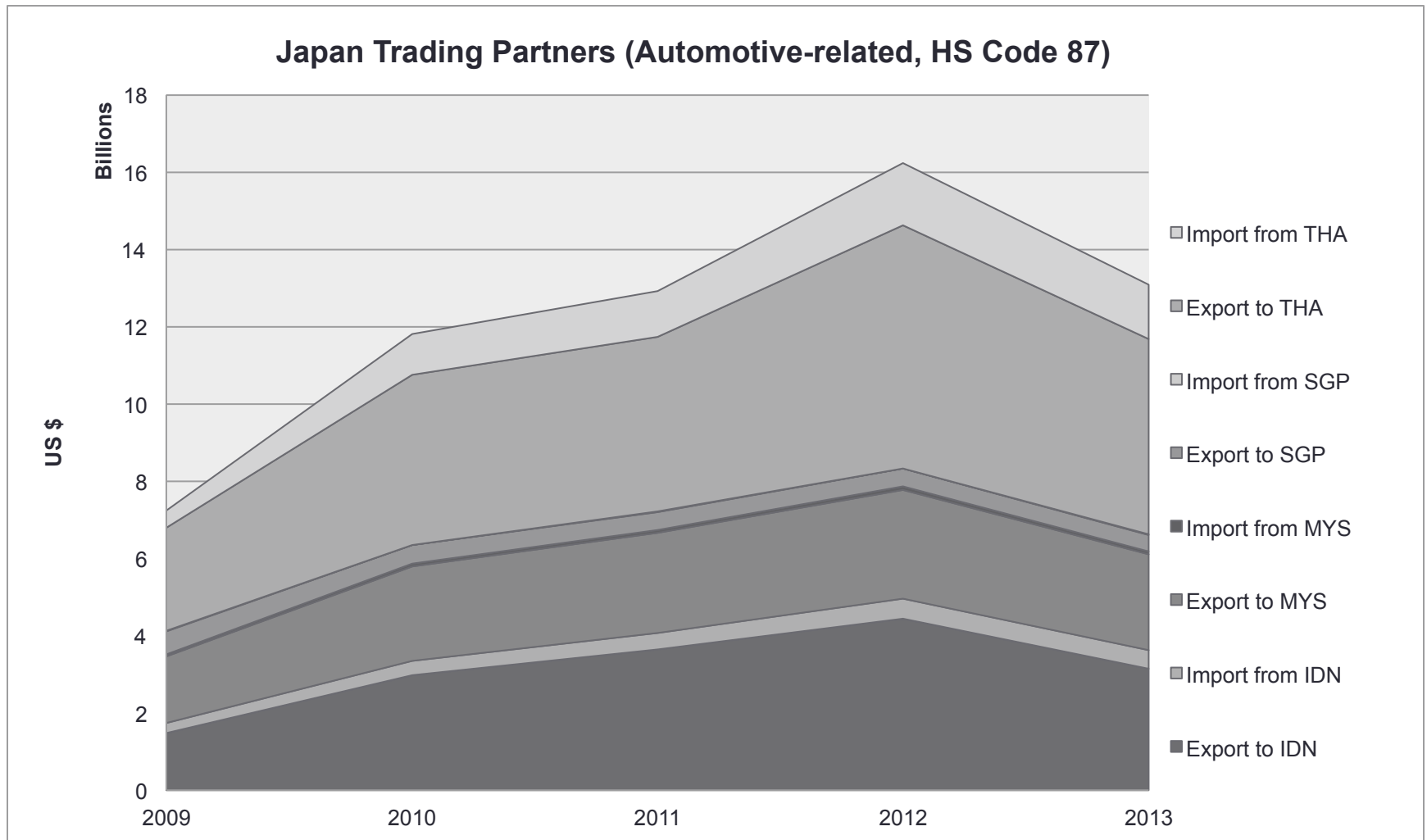
Background: ASEAN and GPN

- ASEAN+3 contribution to the region's trade and production network in the two sectors.
- Being part of the global production network in the two sectors, the +3 partner countries have positioned ASEAN as a major hub for their multinational companies venturing for:
 - sales and marketing
 - production and manufacturing
 - research and development
 - upgrading and innovation in manufacturing processes, product design and brands

ASEAN4 and Japan: Cases on Automotive and Electronics

- ASEAN4 (Indonesia, Malaysia, Singapore and Thailand) and Japan trade and investment relations in the two sectors
 - Trade Patterns (based on the UN Comtrade Database for general trends of commodities traded under HS Code 87 (automotive-related) and HS Code 85 (electronics-related))
 - Patterns of Trade in Value-Added (TiVA) (based on the OECD-WTO TiVA Database for trends in foreign value added (FVA), domestic value added (DVA) and services value added (SVA) in commodities traded in SITC transport equipment (automotive) and electrical and optical equipment (electronics)).
- **Value Chain Governance: preliminary findings on key policy issues (firms and industry-levels micro analysis)

Trade Pattern: Automotive/Japan-ASEAN4

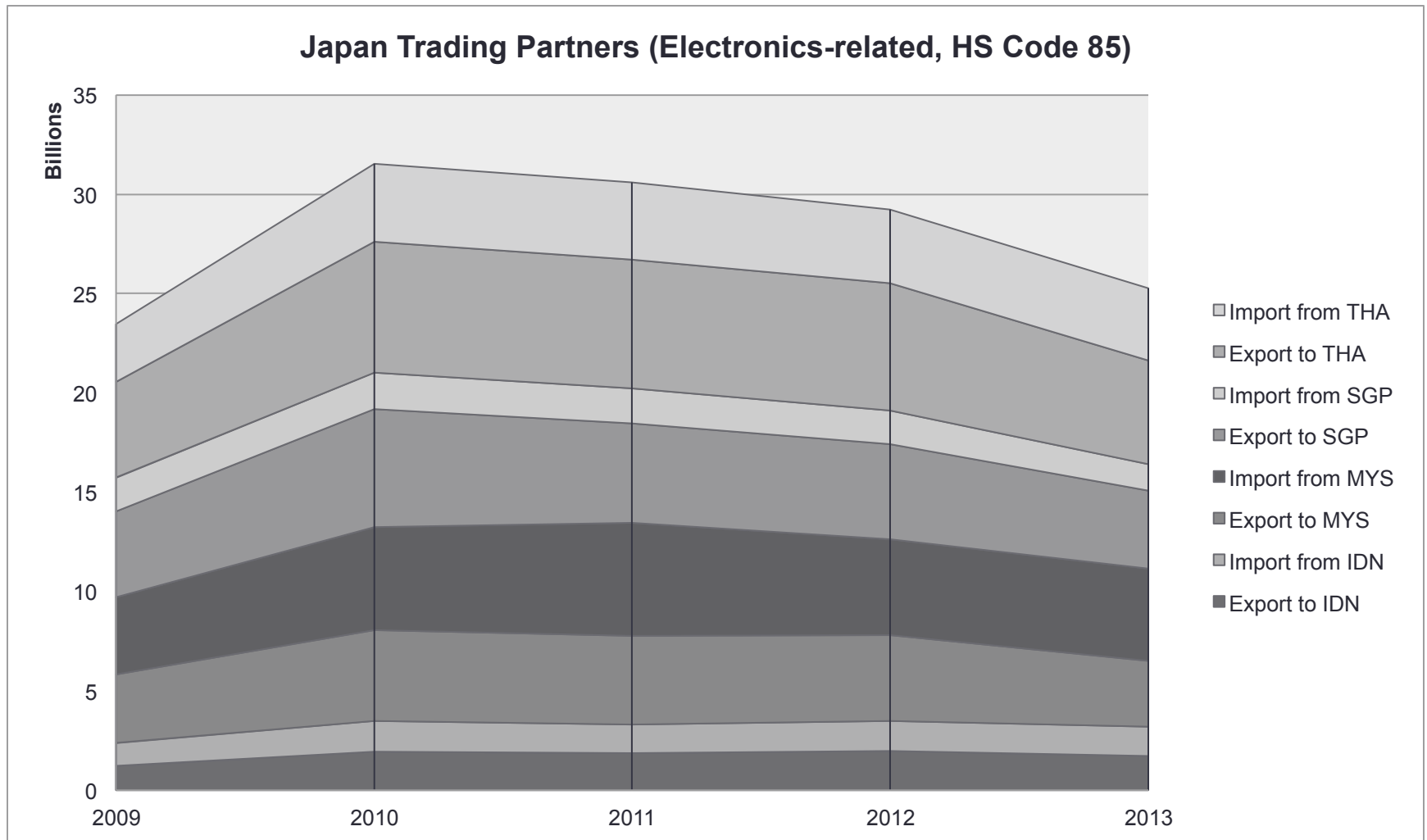


Automotive/Japan-ASEAN4: Commodities Traded

- Main commodities traded: parts and accessories (HS Code 8708), particularly transmissions for motor vehicles (HS Code 870840)
- Types of main commodities traded:
 - 8703 – Motor vehicles for the Transport of Persons (Passenger Cars except Bus)
 - 8704 – Motor vehicles for the Transports of Goods (Trucks, etc.)
 - 8706 – Motor vehicle Chassis fitted with Engine
 - 8708 – Parts and Accessories for Motor Vehicles
 - 8714 – Parts and Accessories of Motorcycles, etc.

	Thailand	Indonesia	Malaysia	Singapore
Japan Export to	8708 (4 b US \$) 8706 (0.8 b US \$)	8708 (2 b US \$) 8704 (1.2 b US \$)	8703 (1.2 b US \$) 8708 (0.9 b US \$)	8703 (0.3 b US \$) 8708 (0.1 b US \$)
Japan Import from	8703 (0.7 b US \$) 8708 (0.6 b US \$)	8708 (0.3 b US \$) 8704 (0.2 b US \$)	8708 (0.05 b US \$) 8714 (0.01 b US \$)	8708 (0.01 b US \$) 8714 (0.01 b US \$)

Trade Pattern: Electronics/Japan-ASEAN4

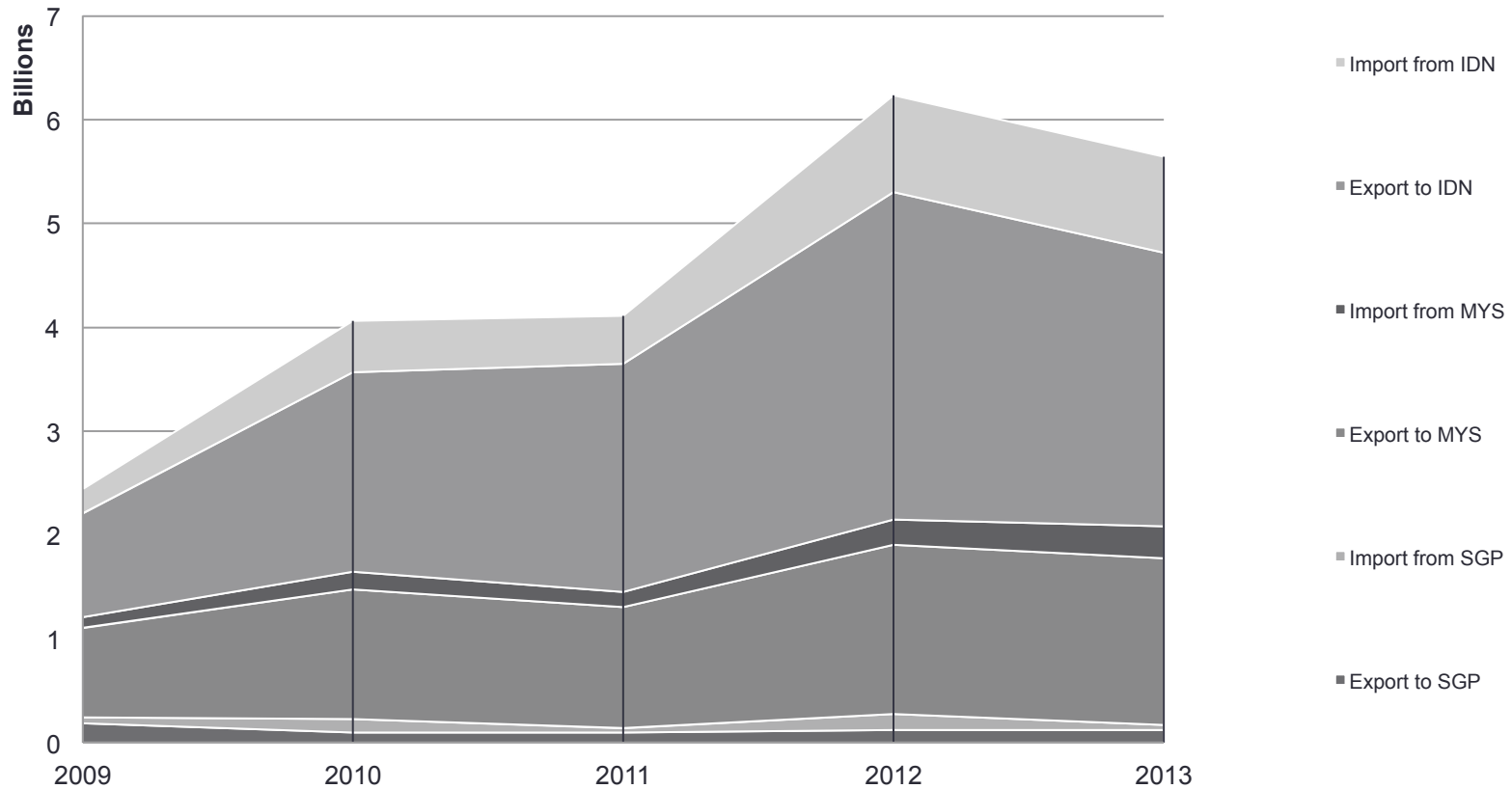


Electronics/Japan-ASEAN-4: Commodities Traded

- Main export commodities: electronic integrated circuits and micro-assemblies (HS Code 8542) (top destinations are Singapore and Malaysia)
- Main import commodities: electric apparatus for line telephony, telegraph (HS Code 8517) and television receivers, video monitors, projectors (HS Code 8528) (from Malaysia)
- Types of main commodities traded:
 - 8516 – electric equipment with heating element, domestic, etc.
 - 8517 – electric apparatus for line telephony, telegraph
 - 8525 – radio & TV transmitters, television cameras
 - 8528 – television receivers, video monitors, projectors
 - 8536 – electrical switches, connectors, etc. for <1 kV
 - 8541 – diodes, transistors, semi-conductors, etc.
 - 8542 – electronic integrated circuits and micro-assemblies
 - 8544 – insulated wire & cable, optical fiber cable

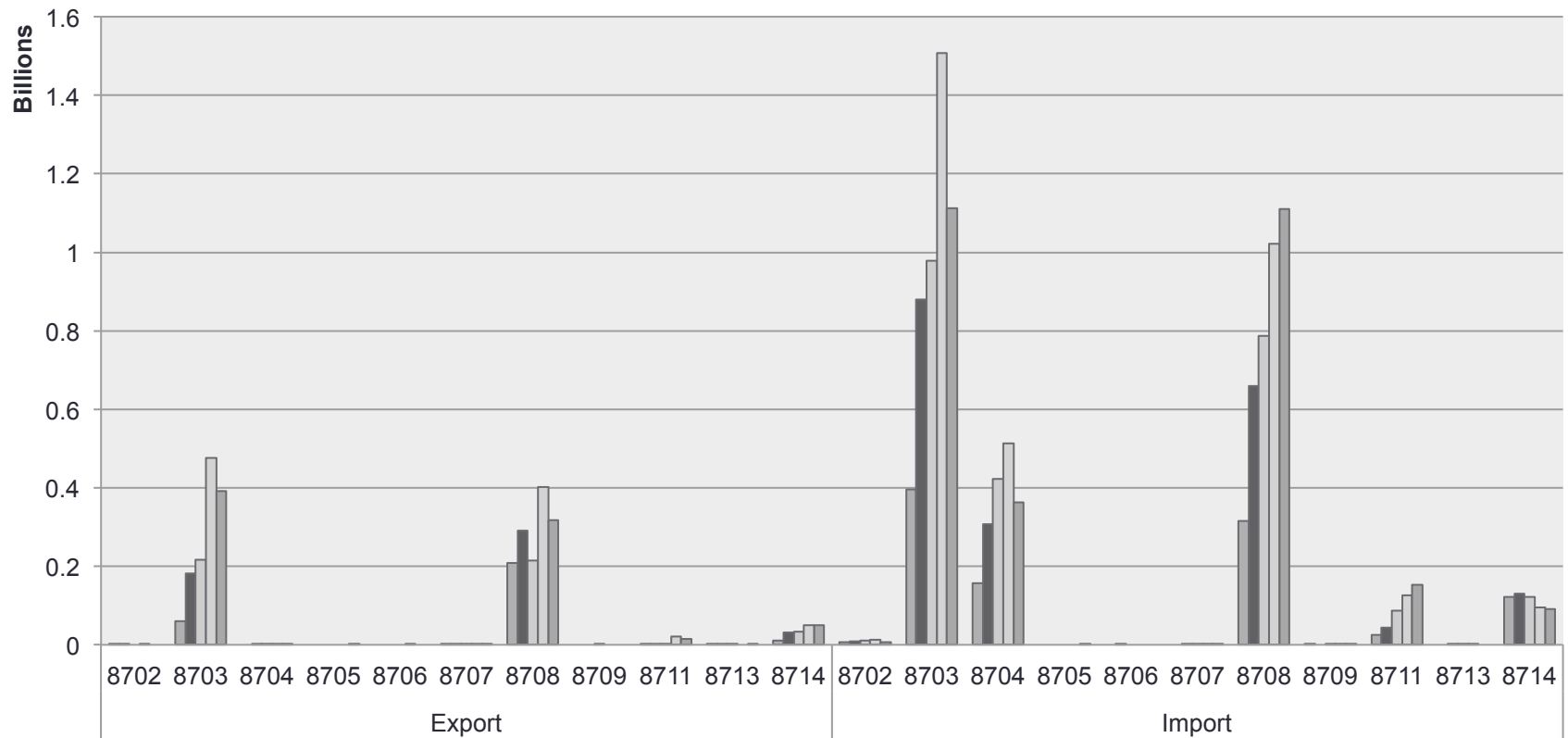
Trade Pattern: Automotive/Intra ASEAN4

Thailand as Major Hub

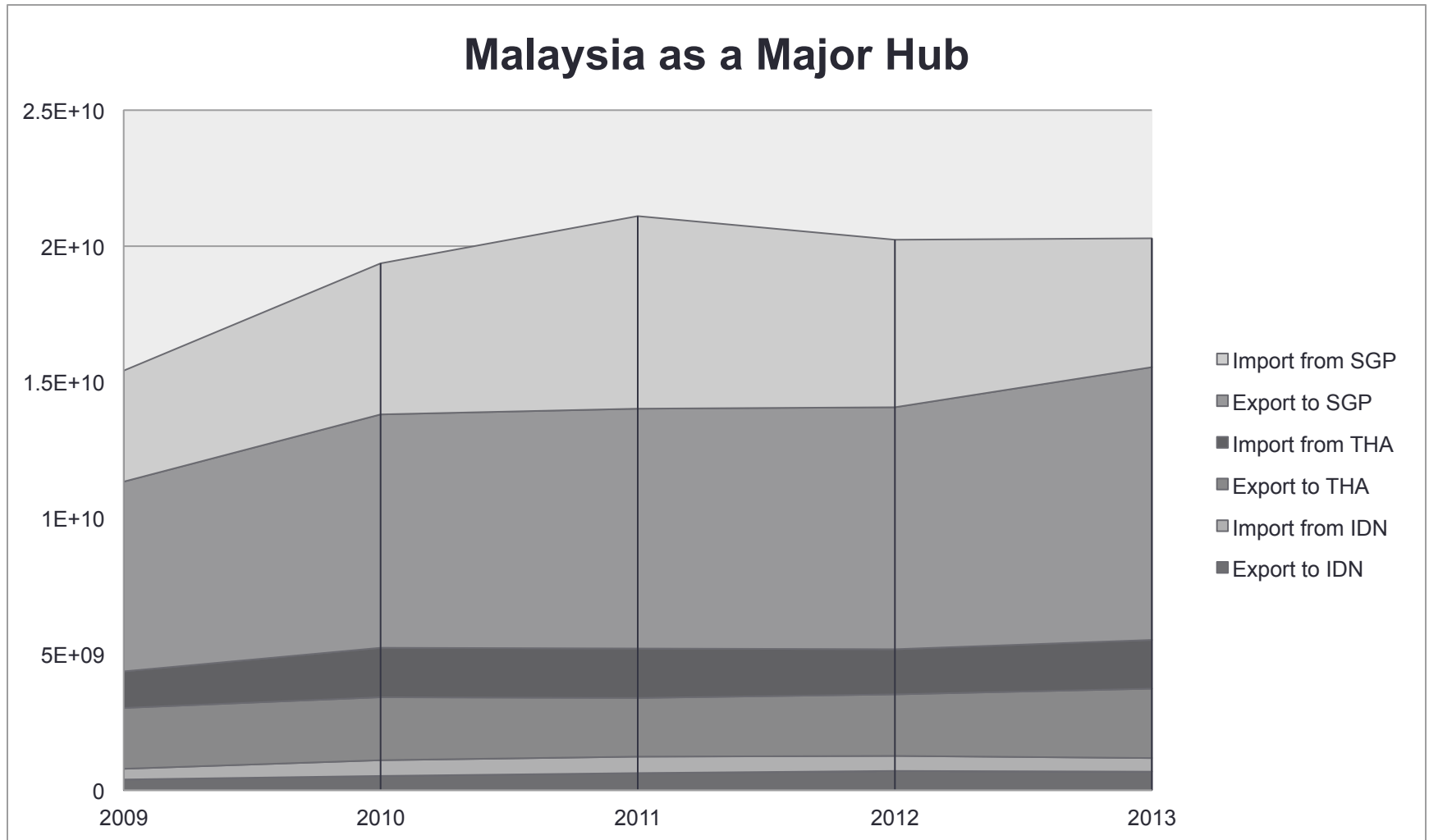


Automotive/Intra ASEAN4: Commodities Traded

Indonesia Top Five Trades with Thailand: Passenger Cars (HS 8703)/I&E; Motor Vehicle Parts & Accessories (HS 8708)/I&E; Trucks (HS 8704)/I; Motorcycles (HS 8711)/I; Motorcycle Parts and Accessories (HS 8714)/I&E

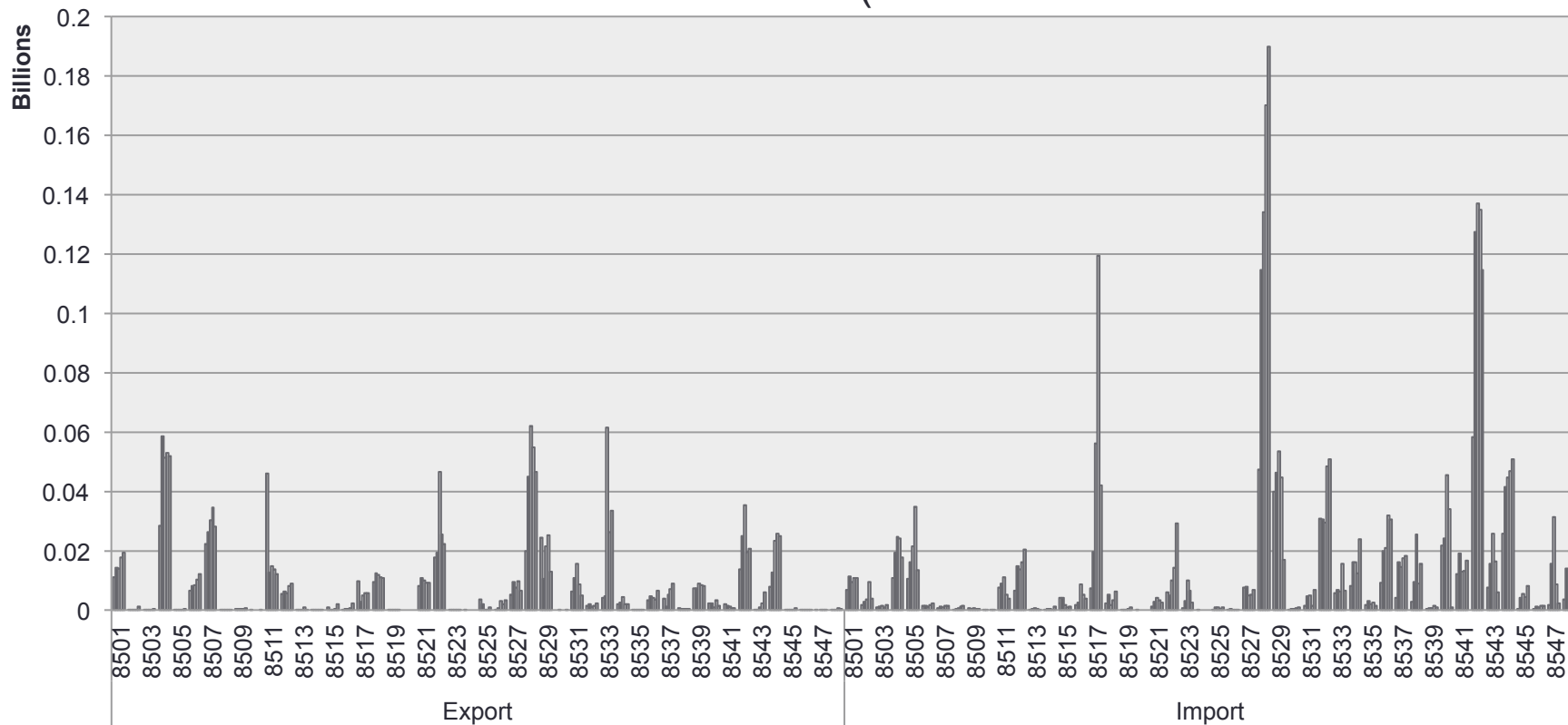


Trade Pattern: Electronics/Intra ASEAN4



Electronics/Intra ASEAN4: Commodities Traded

Indonesia Top Five Trades with Malaysia: TV, Video Monitors, Projectors (HS 8528)/I&E; Electronic Integrated Circuits, Micro Assemblies (HS 8542)/I; Line Telephony App (HS 8517)/I; Resistors, Rheostats (HS 8533)/E; and Transformers, Static Converters (HS



ASEAN4-Japan Trade Patterns: Recap

Automotive [commodities under HS Code 87: vehicles, other than railway, tramway]

~Intra-regionally: passenger cars are the main commodity traded confirming production network shift to Thailand and Indonesia as the two countries participating firms' production sharing are in a steady increase (InEIM 2012, Athukolara & Kohpaiboon 2013)

~Inter-regionally: parts and accessories are the main commodity traded

~Japan is a leading home country of firms investing in manufacturing facilities (as FDIs), particularly in Indonesia and (still) in Thailand (Nakanishi et al, 2015)

Electronics [commodities under HS Code 85: electrical and electronic equipment]

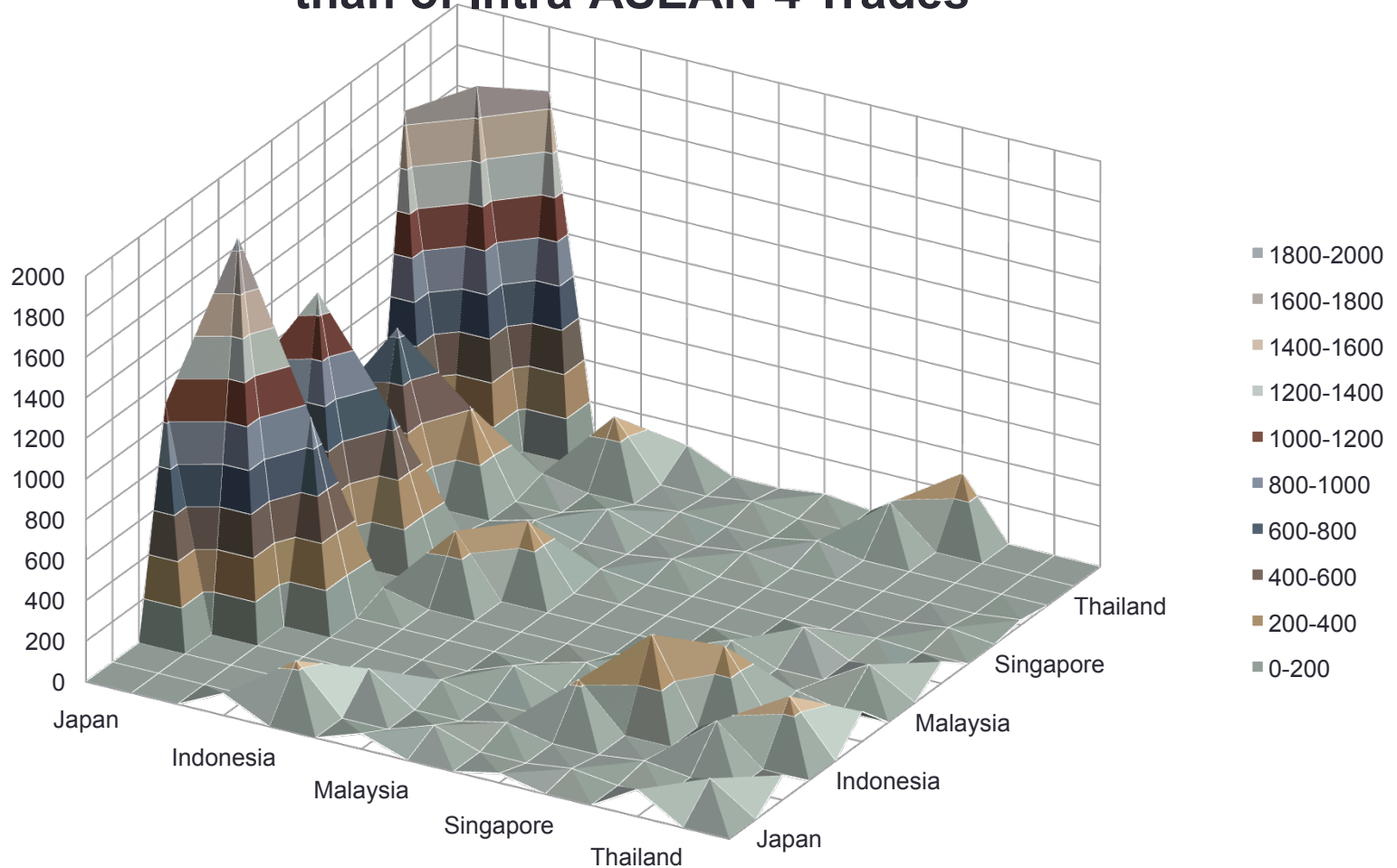
~Intra-regionally: TV, video monitors and projectors are the major commodity traded confirming existing hub triangle of Malaysia, Singapore and Thailand

~Inter-regionally: electronic integrated circuits and micro assemblies are the major commodity traded

~China and Japan factors in the industry have come to an era where China has no longer attractive as FDI destination in terms of cheap labor or other low-end factors of production and Japan has reversed its position for in-shoring and re-shoring their firms production sites, especially for the latest high-end products (Kwan, Ikebe et al 2015).

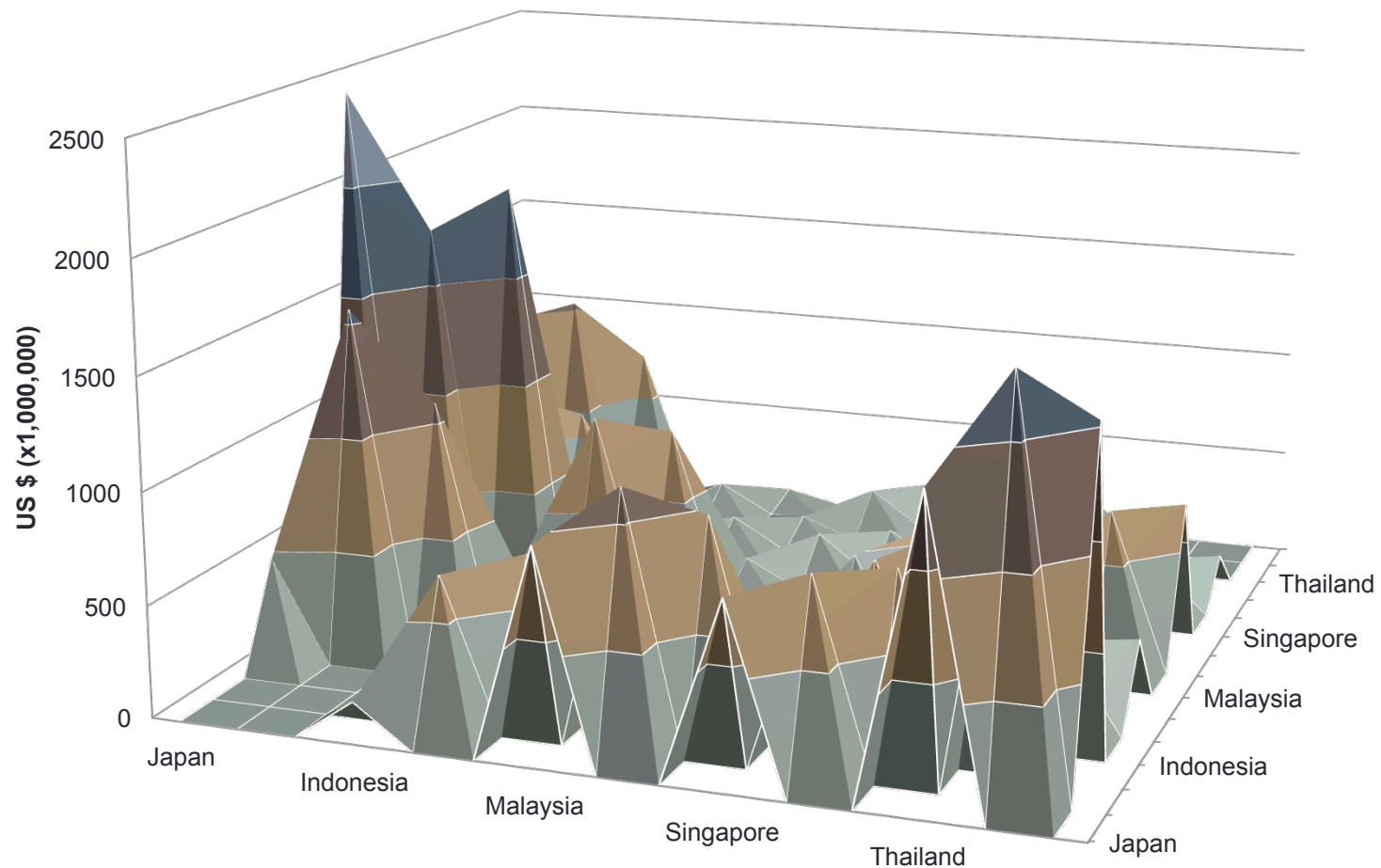
Pattern of TiVA: Automotive/Japan-ASEAN4 FVA/DVA

**Substantially more FVAs/DVAs of Japan-ASEAN-4
than of Intra-ASEAN-4 Trades**



Pattern of TiVA: Electronics/Japan-ASEAN4 FVA/DVA

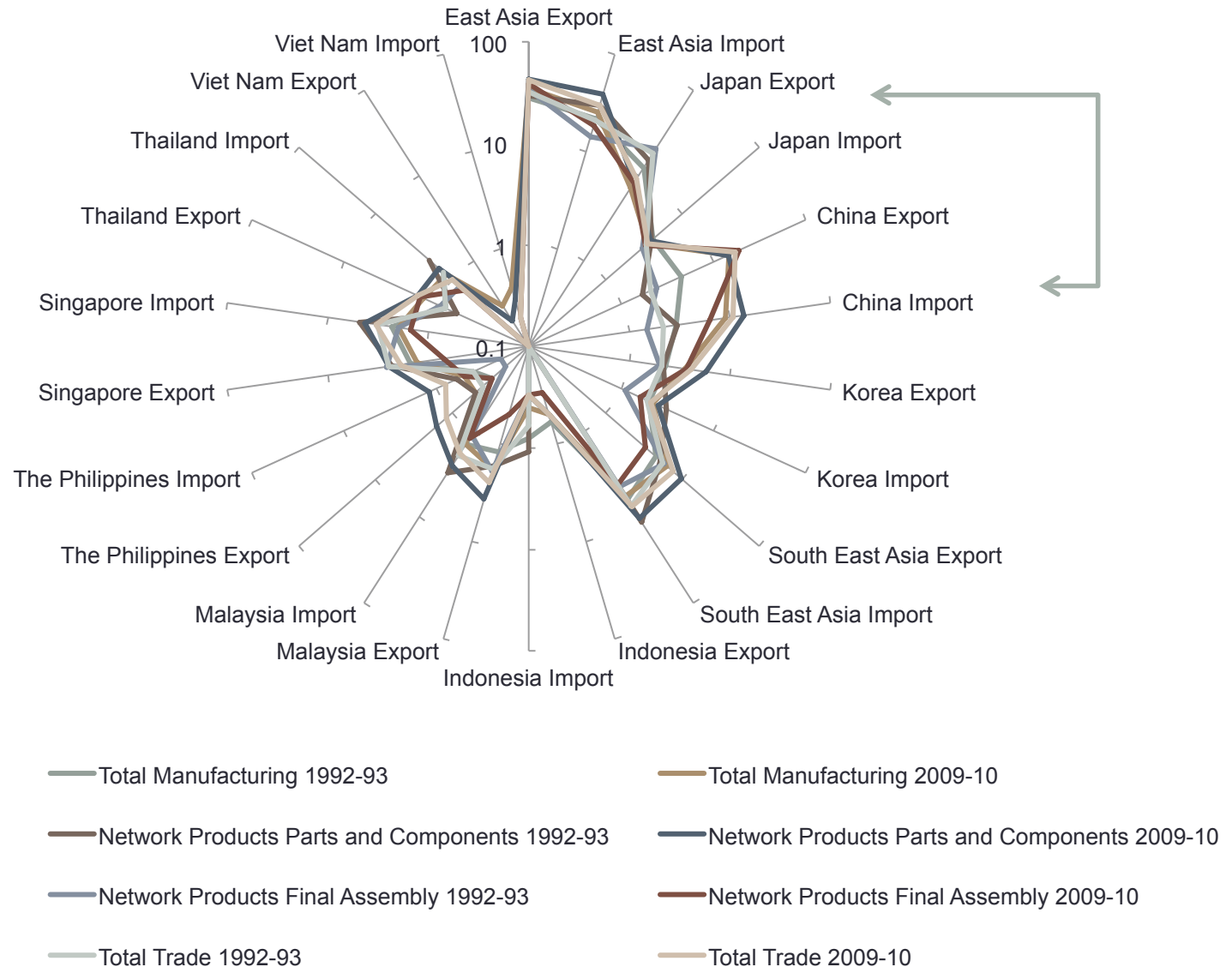
Intra-ASEAN-4 FVAs/DVAs are catching up those of Japan-ASEAN-4 Trades



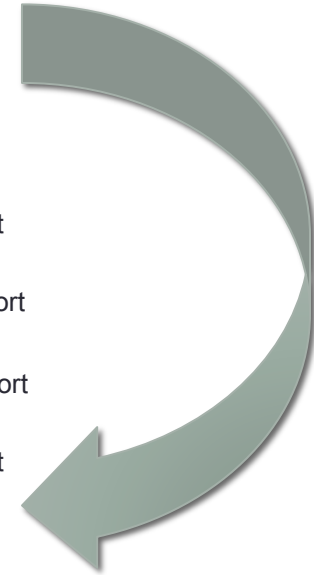
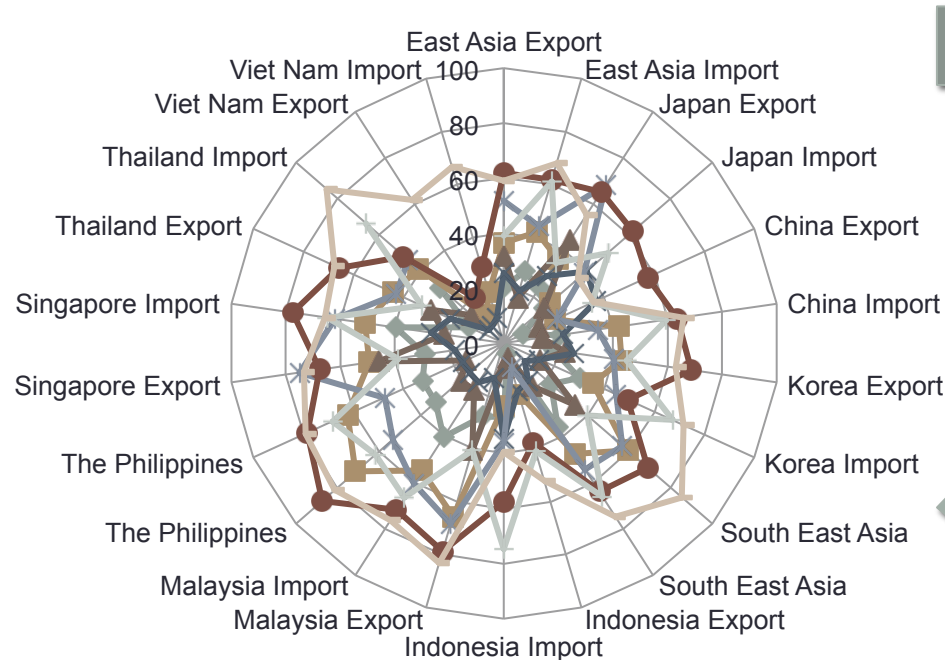
ASEAN4-Japan Trends in Value Added: Recap

Automotive (commodities under SITC: transport equipment)	Electronics (commodities under SITC: electrical and optical equipment)
<p>~Japan-ASEAN4 trade has produced considerably more FVAs, DVAs and SVAs than the ones resulted among ASEAN4 countries trade</p> <p>~Japan-ASEAN4 trade have generated much more FVAs than FVAs created among ASEAN4 countries for the commodities, with Japan-Thailand and Japan-Indonesia FVAs dominating at 1,681.8 million US \$ (2009) and 937.4 million US \$ (2009) respectively</p>	<p>~ASEAN4 FVAs, DVAs and SVAs gained momentum and have been tagging closely behind the Japanese ones as the values reach to almost half of the Japan's where Japan-Malaysia and Japan-Thailand FVAs are the highest gainers.</p> <p>~In terms of DVAs, Thailand and Malaysia gain the most for its embodied final foreign demand in Japan with the values of US \$ 1,525.9 million (2009) and US \$ 974.6 million (2009) respectively.</p>

Extended Context (1): Reverse Positions of China and Japan in Network Products of Manufacture Trade (Athukorala & Kohpaiboon 2013)



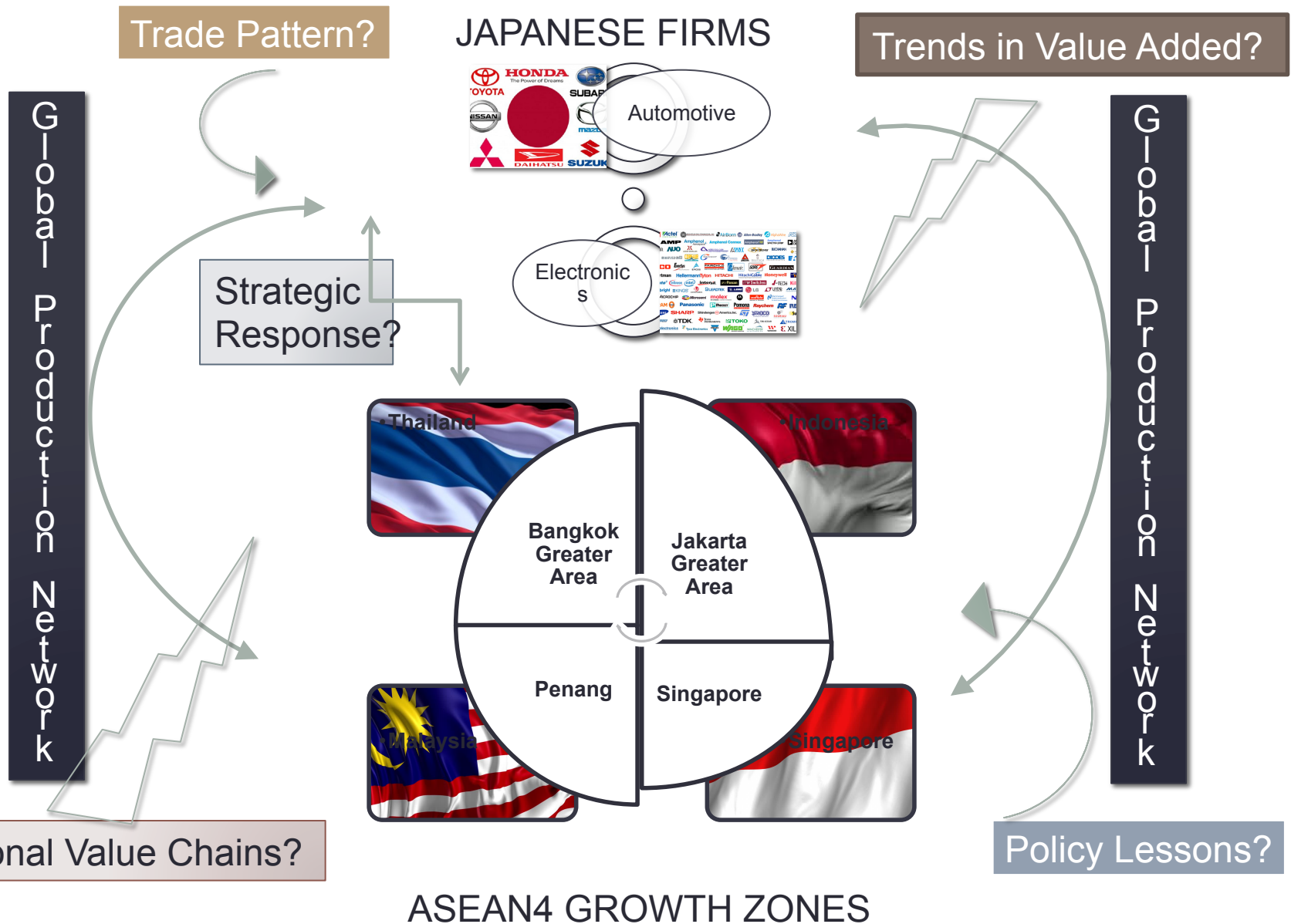
Extended Context (2): Shifting Roles and the Centrality of Southeast Asia/ASEAN4 as Hub of Parts and Components Trade (*ibid*)



Extended Context (3) Other Features (*ibid*)

Inter-regional strong growth in network products of manufacture trade	East Asia's shifting roles in final assembly trade and in parts and components trade	Southeast Asia's roles in parts and components trade & Industrial development gaps
<p>~Both regions of East Asia (EA) and Southeast Asia (SEA) have persistently maintained substantial share of total network products in manufacturing trade between 1992-3 and 2009-10</p> <p>~Export share EA: 51.8% → 61.7% SEA: 56.8% → 69.2%</p> <p>~Import share EA: 44.4% → 61.8% SEA: 54.4% → 64%</p>	<p>~East Asia's share of final assembly trade export has declined quite significantly as China and Japan reverse the roles: 31.6% → 25.3%</p> <p>~Japan assembly export significantly dropped and its final assembly import rose drastically</p> <p>~Both China and Japan has experienced substantial increase in parts and components trade export</p>	<p>~Southeast Asia's share of parts and components trade export has substantially increased: 22.7% (1992-3) to 59.2% (2009-10).</p> <p>~Among Southeast Asian countries, Indonesia has gained the greatest changes in share of final assembly trade import: its share has almost quadrupled (9.2% → 34.8%) indicating a stagnated industrialization</p>

ON-going (1) Research Design Developed



ON-going (2) Past & Contemporary Studies

Regional economic integration as seen from GVC and GPN: comprehending changes in production network as part of dynamic (regional) economic integration of ASEAN4 growth zones and Japanese automotive and electronics industries

GVC framework as an alternative perspective to comprehend East & Southeast Asia regional economic integration stemming from functioning production networks (IDE JETRO & WTO, 2011 and UNCTAD, 2013)

Automotive and electronics sectors as prime cases (Kuroiwa & Heng, 2008 and Kawakami, 2008)

Strategic responses of firms and other relevant stakeholders

Regional value chains: types of value addition and methods of industrial collaborations

Policy dimension: firms level setting and governmental context

ON-going (3) Proposed Framework

Strategic Responses

[Ref.: Mariel & Minner, 2015; Watanabe, 2014; Francesco et al, 2014; Thome et al, 2014; Aoki et al, 2014; Mai, 2013; Wells & Nieuwenhuis, 2012; Thoma & O'Sullivan, 2011]

Firms Strategy:
Production Sites,
Product Development,
Chains Organization,
Technological
Development

Suppliers Relations:
Firms linkages to
SMEs in wider
industrial development

Technical Capacity
Building & Human
Resource
Development

Regional Value Chains

[Ref.: F-Stark, Bamber, Gereffi, 2012; Levy, 2008; Kaplinsky, 2000 & 2005; Gereffi, Humphrey, Sturgeon, 2005; Kaplinsky & Morris, 2000; Humphrey & Schmitz, 2000;

Types of Value
Addition: Process,
Product, Functional,
and Inter-Sectoral/
Inter-Chains
Upgrading

Methods of Industrial
Collaboration: Trans.
Complexity (Cx-T);
Trans. Codification
Cd-T); Suppliers
competence (SC)

Policy Incentives
Scheme: Local or
National Host
Governments, Regional
Economic Schemes

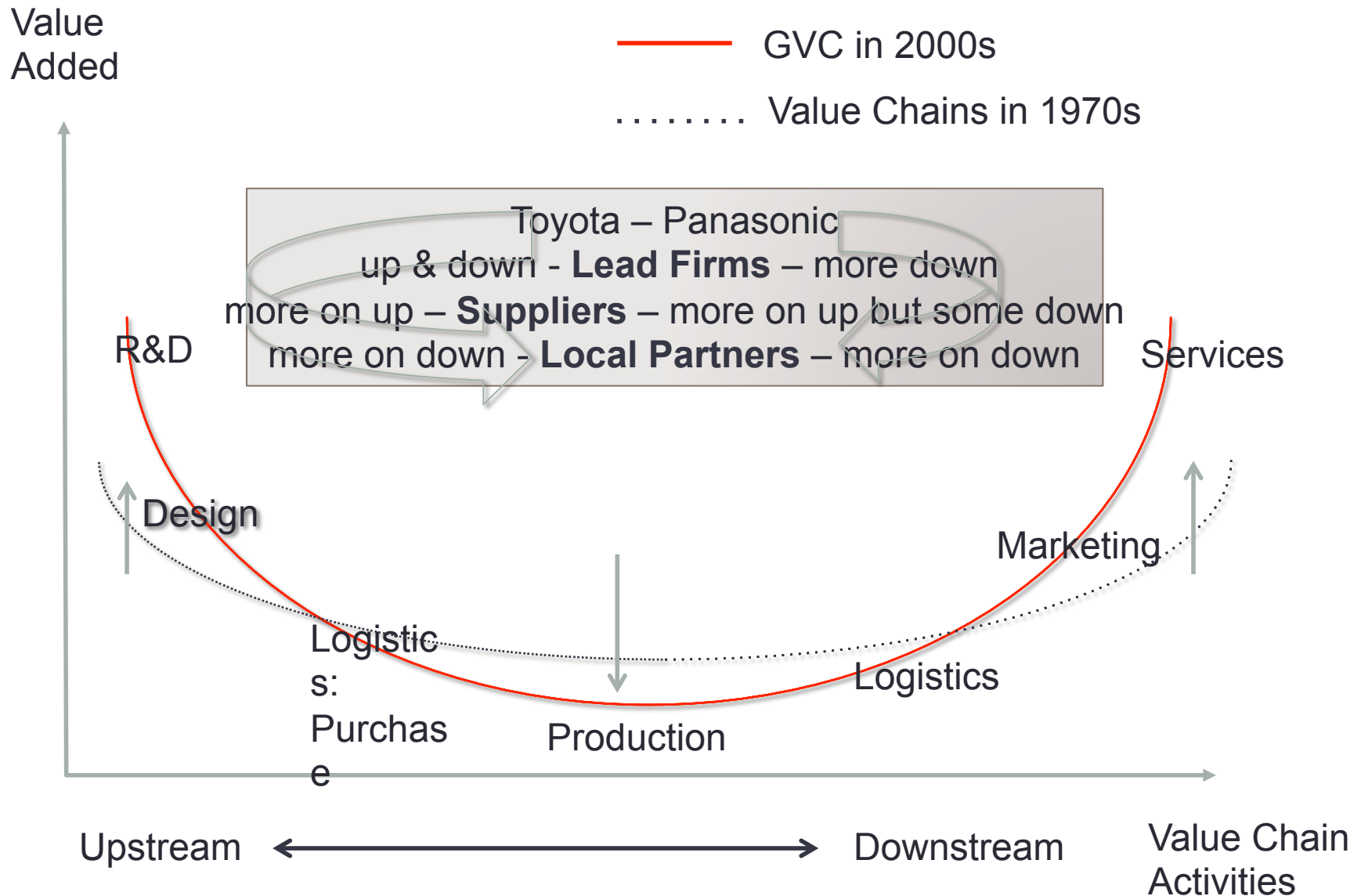
Policy Dimension

[Ref.: Nurcahyo & Wibowo, 2015; Rabellotti, 2014; Hasan et al, 2014; Pietrobelli & Rabellotti, 2011; Saliola & Zanfei, 2009; Giuliani, Pietrobelli & Rabellotti, 2005;

Lessons Learnt at Firms
Level Setting: Learning
Mechanism of how
upgrading is acquired

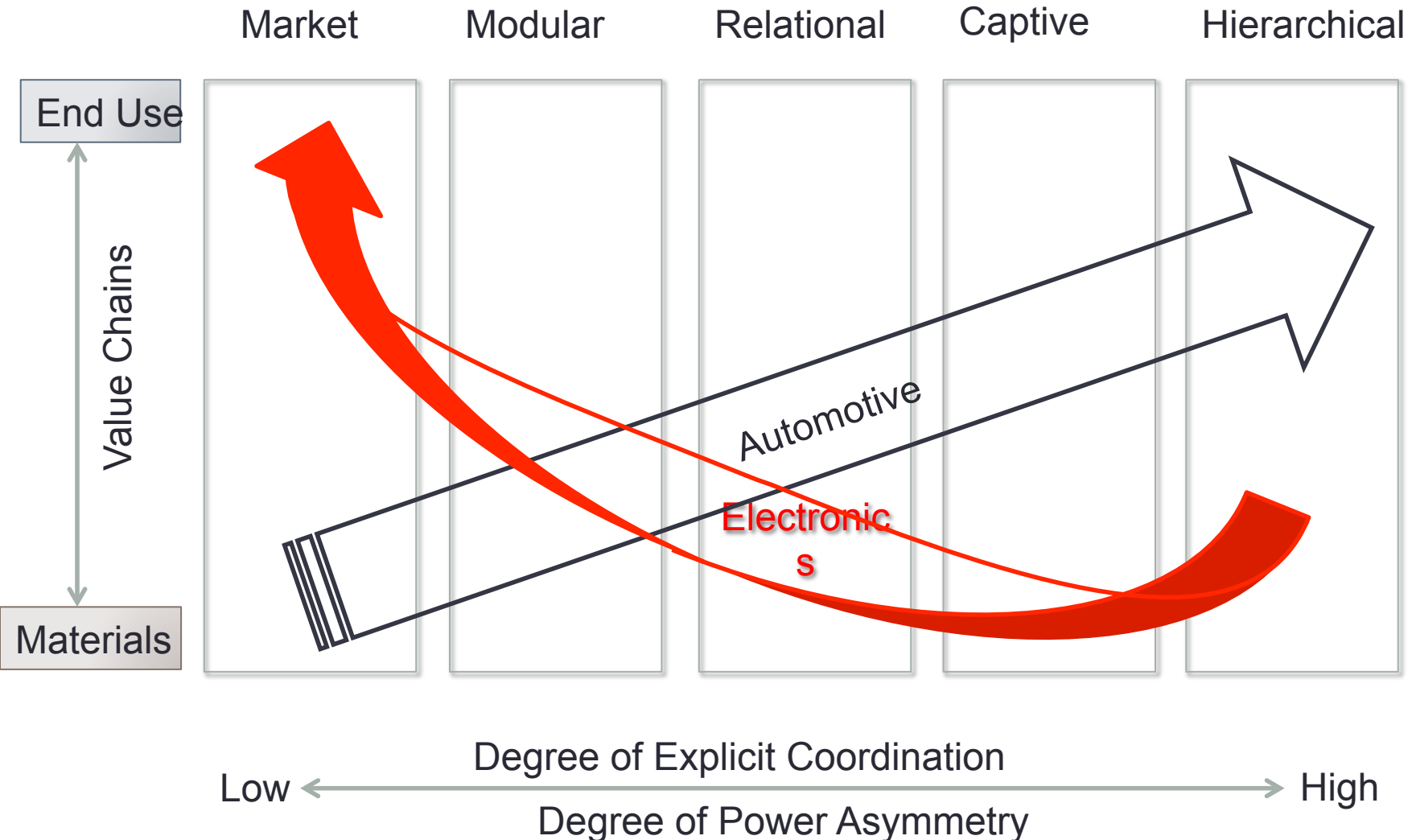
Lessons Learnt at
Institutional Context:
Policy Mechanism of
how business and
innovation systems are
developed

RVC #1: Value Added-ness at Firms level



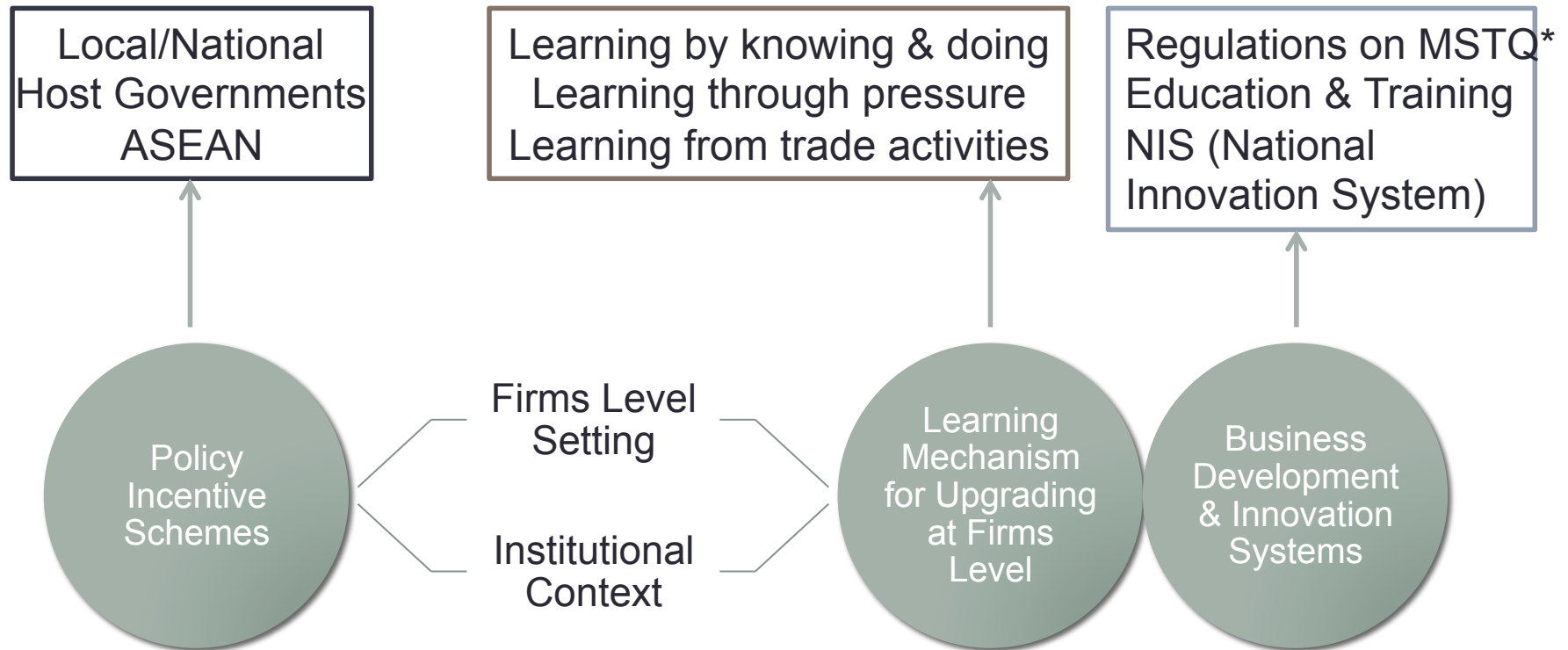
*Graphical illustration is adapted from Rabellotti, 2014

RVC #2: Industrial Collaborations in Value Addition?



*Graphical illustration is adapted from Gereffi & Fernandez-Stark, 2011

RVC #3: Policy Lessons on Learning Mechanism for Upgrading?



*MSTQ: Metrology,
Standards, Testing,
And Quality