



ธนาคารแห่งประเทศไทย  
BANK OF THAILAND

# Diversity with Proximity: Opportunities and Challenges of ASEAN Value Chains

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## What will we tell you?

1. What are ASEAN Value Chains?

2. Who are the two shining industries?

3. What are the challenges and how should we address them?



## 1.1 What are ASEAN Value Chains (AVCs)?

**Global Value Chain (GVC) is the geographical fragmentation of production**

→ Different comparative advantages and specializations

→ Foreign Direct Investment and Multinational Enterprises (MNEs)

### Factors contributing to development of GVCs

1. Connectivity improvements
2. Information and Communication Technology (ICT)
3. Trade and investment liberalization

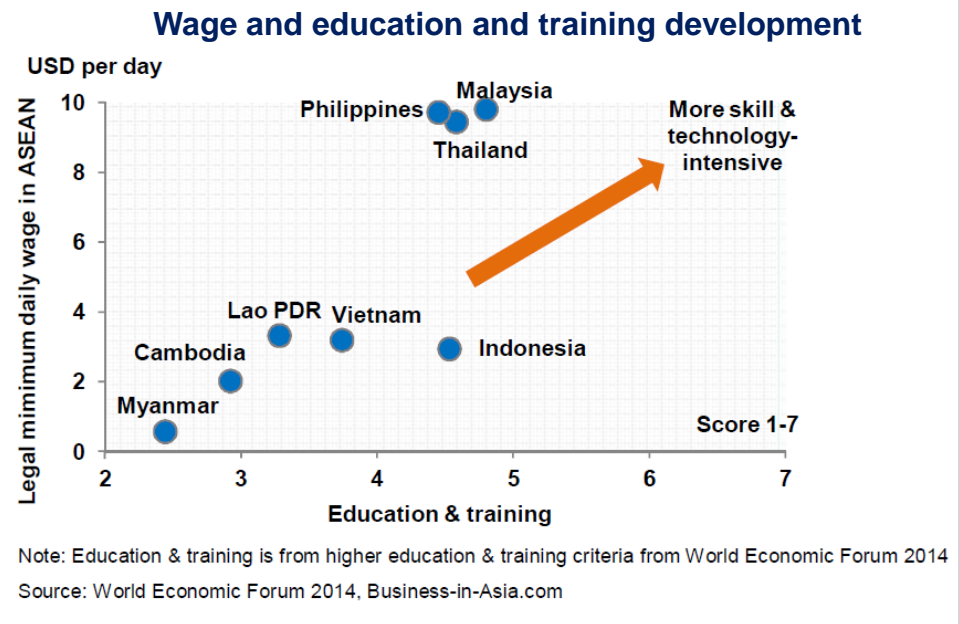
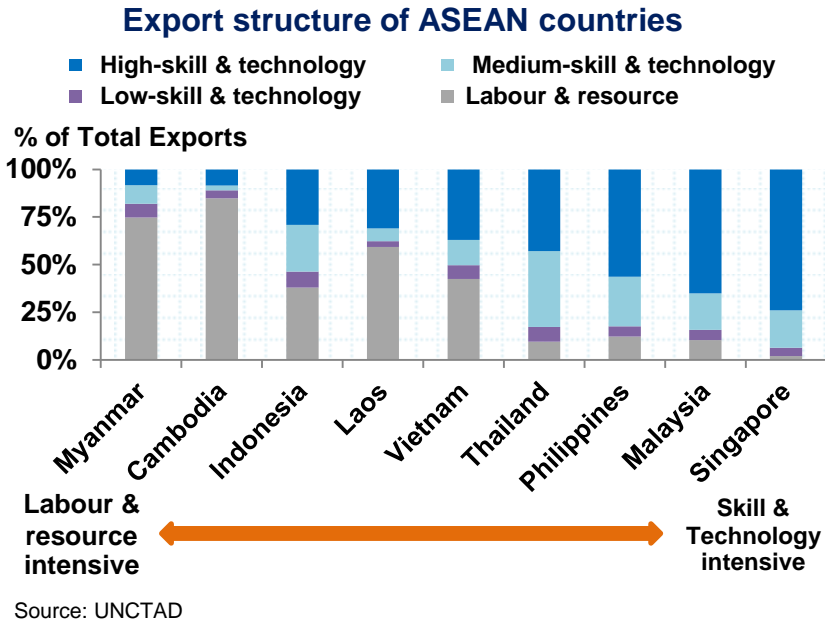
**GVCs in ASEAN = AVCs**



# 1.2 What is happening in ASEAN?

Large diversity with close proximity in ASEAN underpins the region's 5%-share in global manufacturing

## Economic fundamentals





## 1.2 What is happening in ASEAN?

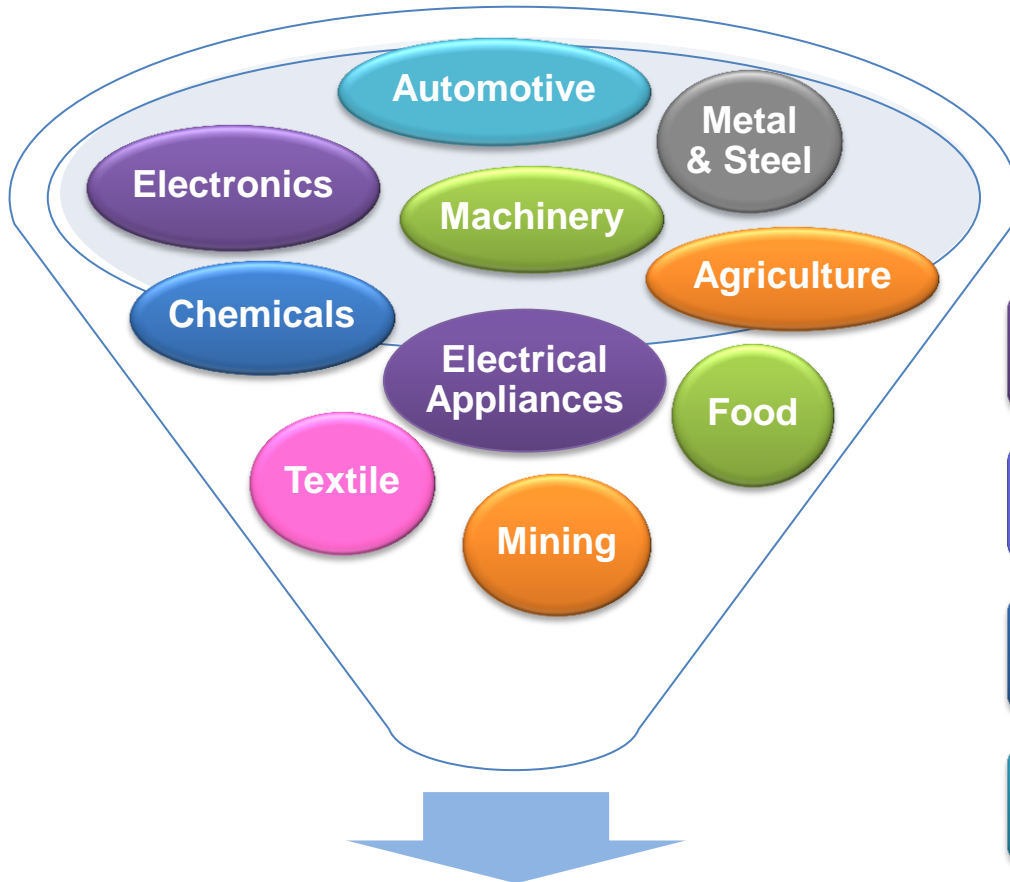
**Institutional fundamentals also support  
the establishment of regional production networks**

### **Institutional fundamentals**

- ✓ **The outward FDI of Japanese firms to ASEAN after the 1985 Plaza Accord**
- ✓ **Trade and investment policies**
- ✓ **The formation of the ASEAN Economic Community**



## 2.1 Selecting “AVC representatives”



**Representative  
ASEAN Value Chains (AVC)**

### Selection Criteria

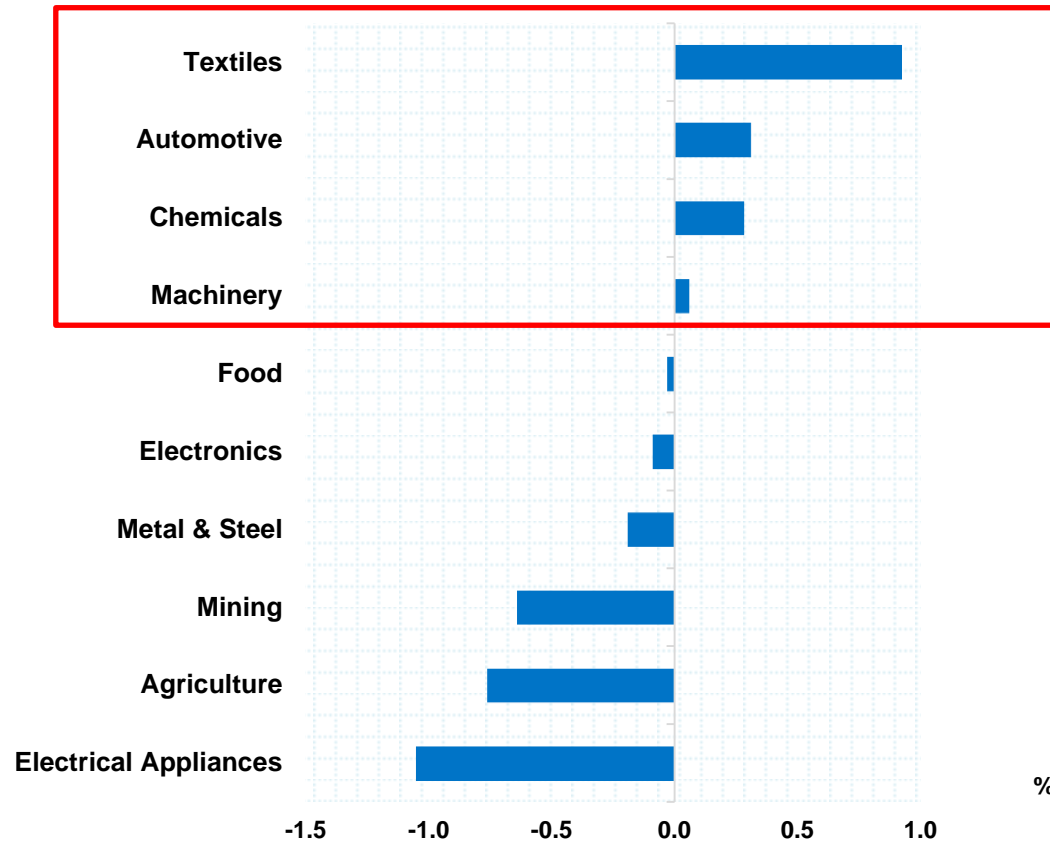
1. High growth potential
2. Competitiveness
3. Good prospects in world markets
4. High regional value-added



## 2.1 Selection criterion I

### 1. High growth potential

Change of product shares in ASEAN exports  
(2010-2014)



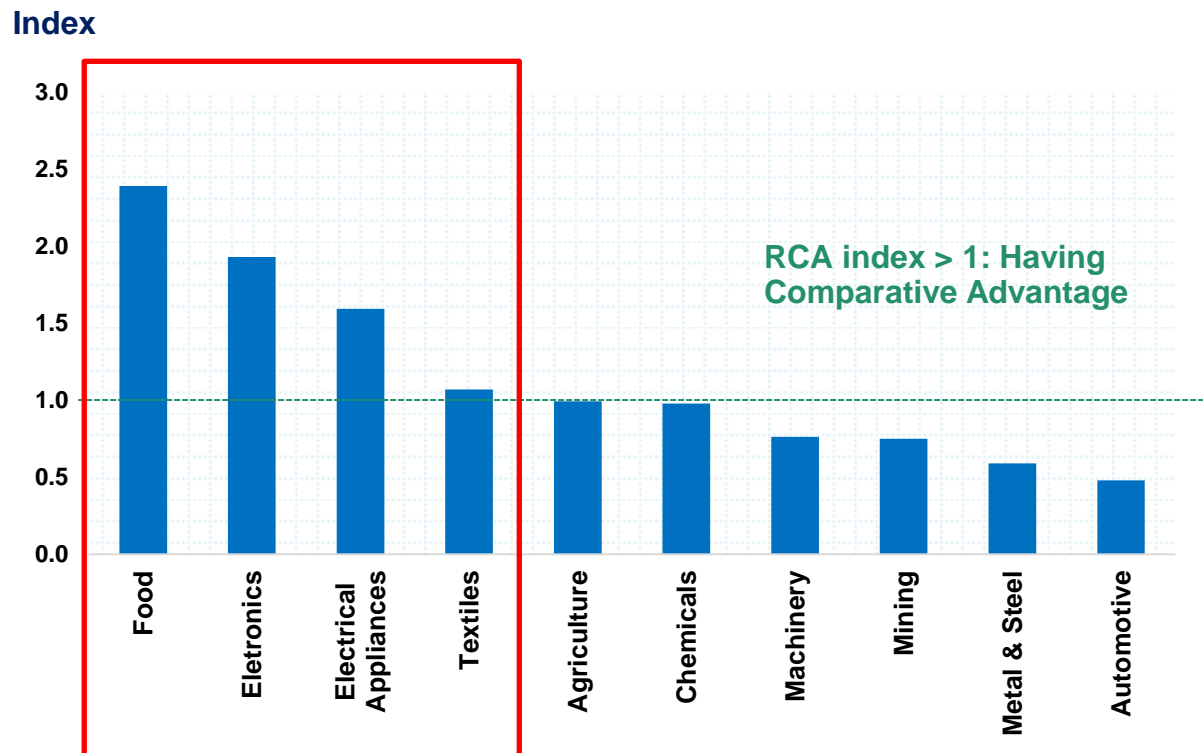
Source: Trademap



## 2.1 Selection criterion II

### 2. Competitiveness

#### Revealed Comparative Advantage Index (2014)



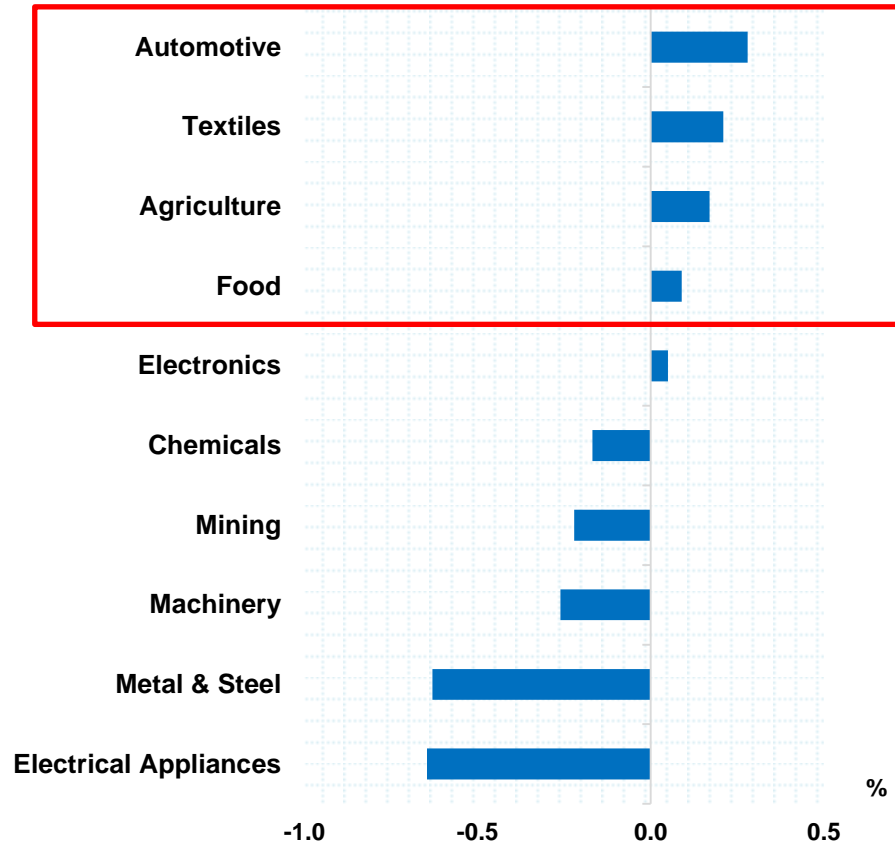
Source: Calculated by authors



## 2.1 Selection criterion III

### 3. Good prospects in world markets

Change of export product shares in world markets (2010-2014)



Source: Trademap



## 2.1 Selection criterion IV

### 4. High regional value-added

#### Share of ASEAN contents in ASEAN's exports (2011)

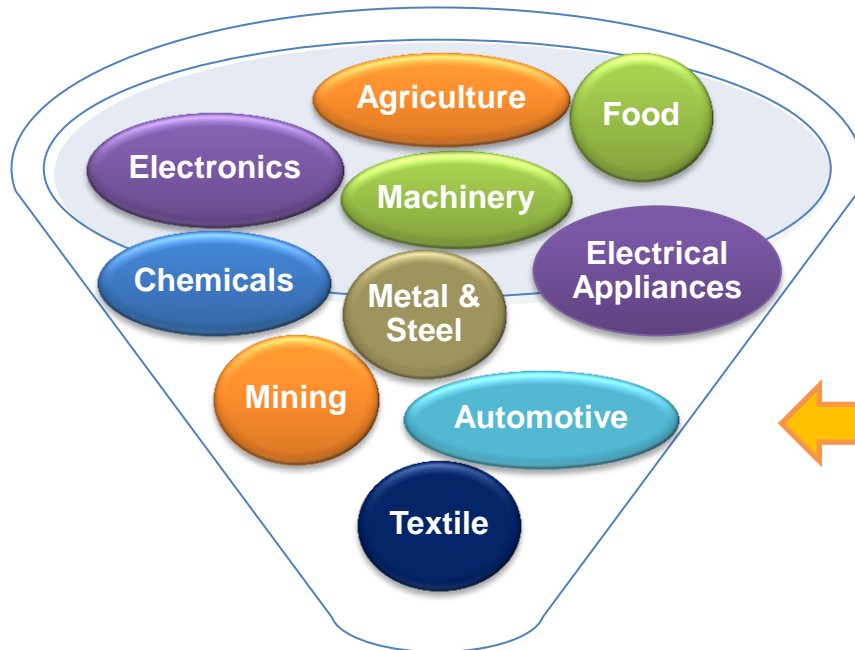
Manufacturing	%
Wood	73.5
Food	72.6
Non-metallic mineral	65.7
Textiles	62.7
Chemicals	62.1
Precision instruments	61.4
Rubber and plastic	61.0
Printed media	60.4
Metals	56.0
Machinery	53.8
Electronics	43.5
Petroleum products	42.5
Automotive	37.5

Note: ASEAN content is ASEAN value-added  
Source: ASEAN Investment Report 2013-2014



## 2.1 Selection results

The textile industry is selected as an AVC representative



**Textiles**

**= Shining Industry I**

Criteria	Textiles
1. High growth potential	✓
2. Competitiveness	✓
3. Good prospect in world markets	✓
4. High regional value-added	✓



## 2.1 Selection results

The automotive is selected as another AVC representative to explore factors for moving up the value chain

Criteria	Textiles	Food	Automotive
1. High growth potential	✓		✓
2. Competitiveness	✓	✓	
3. Good prospect in world markets	✓	✓	✓
4. High regional value-added	✓	✓	

Product classification

Labour-intensive product

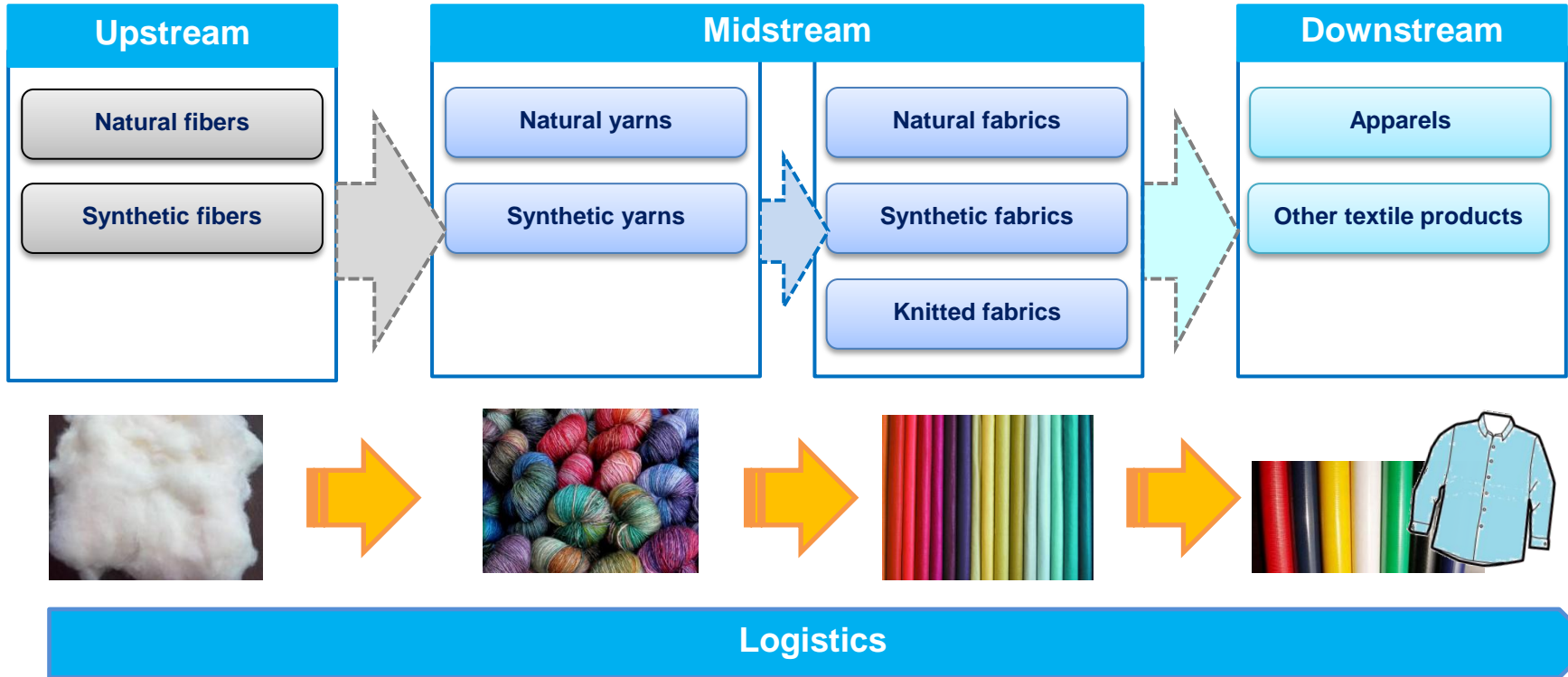
Primary product

Mid-high skill product



# 2.2 Shining industry I: Textiles

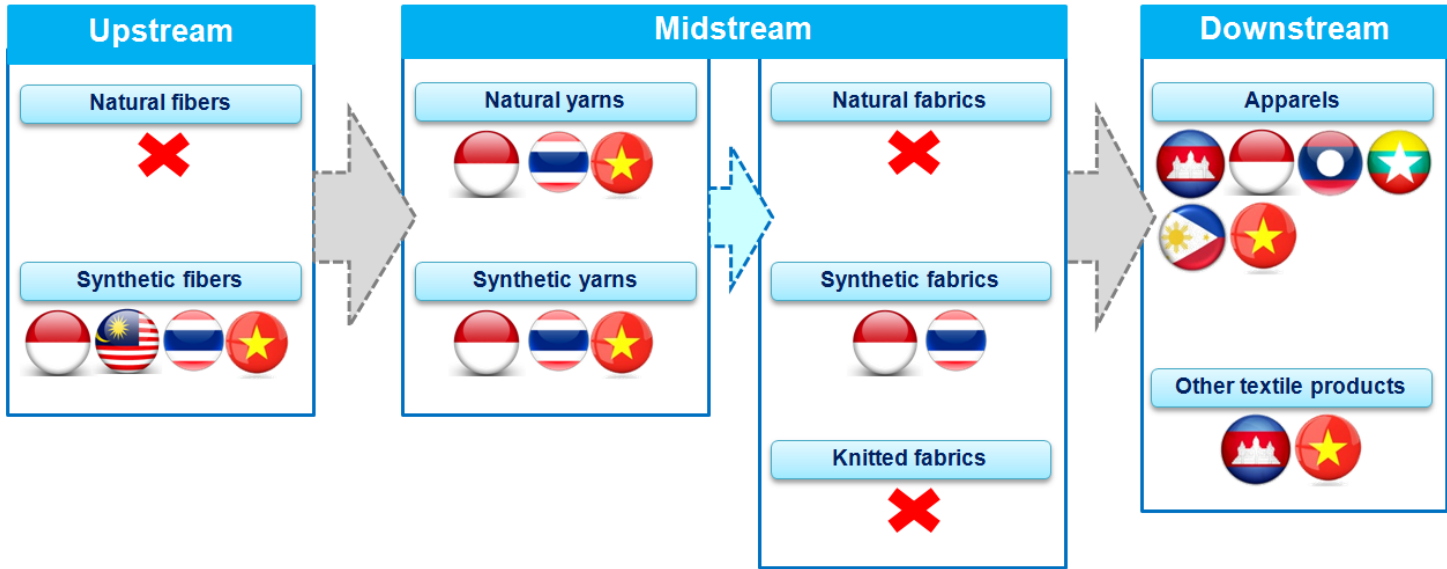
Textiles value chain can be divided into 3 stages of production



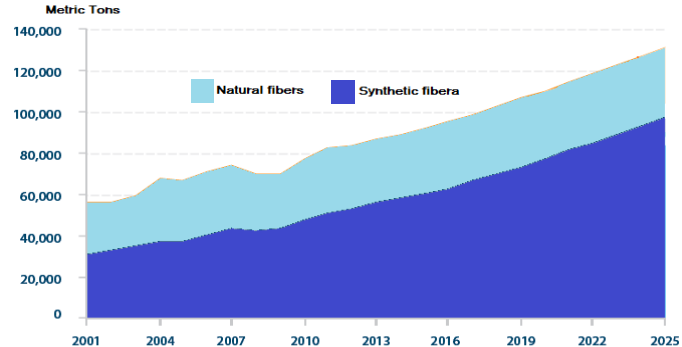


# 2.2 Global comparative advantages of ASEAN members in the textile supply chain

As a region, ASEAN has comparative advantages in more industries than each individual country



Trend of global fiber consumption

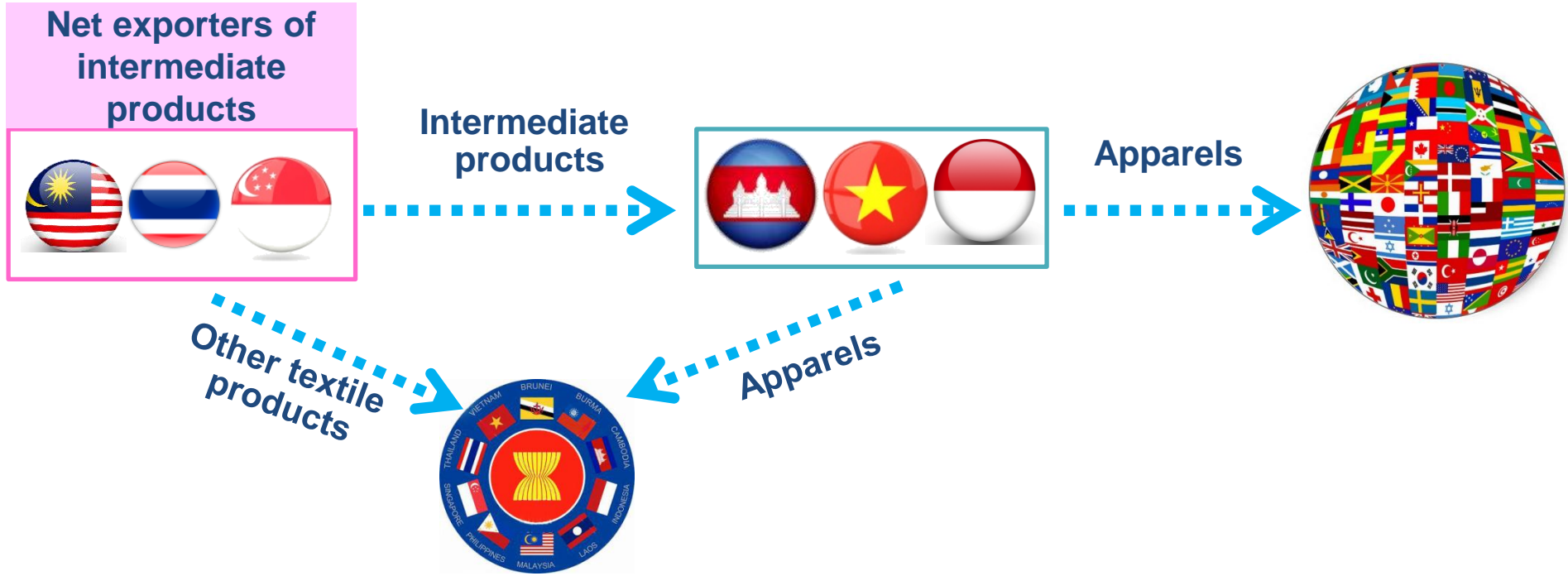


Source: Australia and New Zealand Banking Group Limited (2015)



# 2.2 Examples of textiles trade flows of ASEAN countries

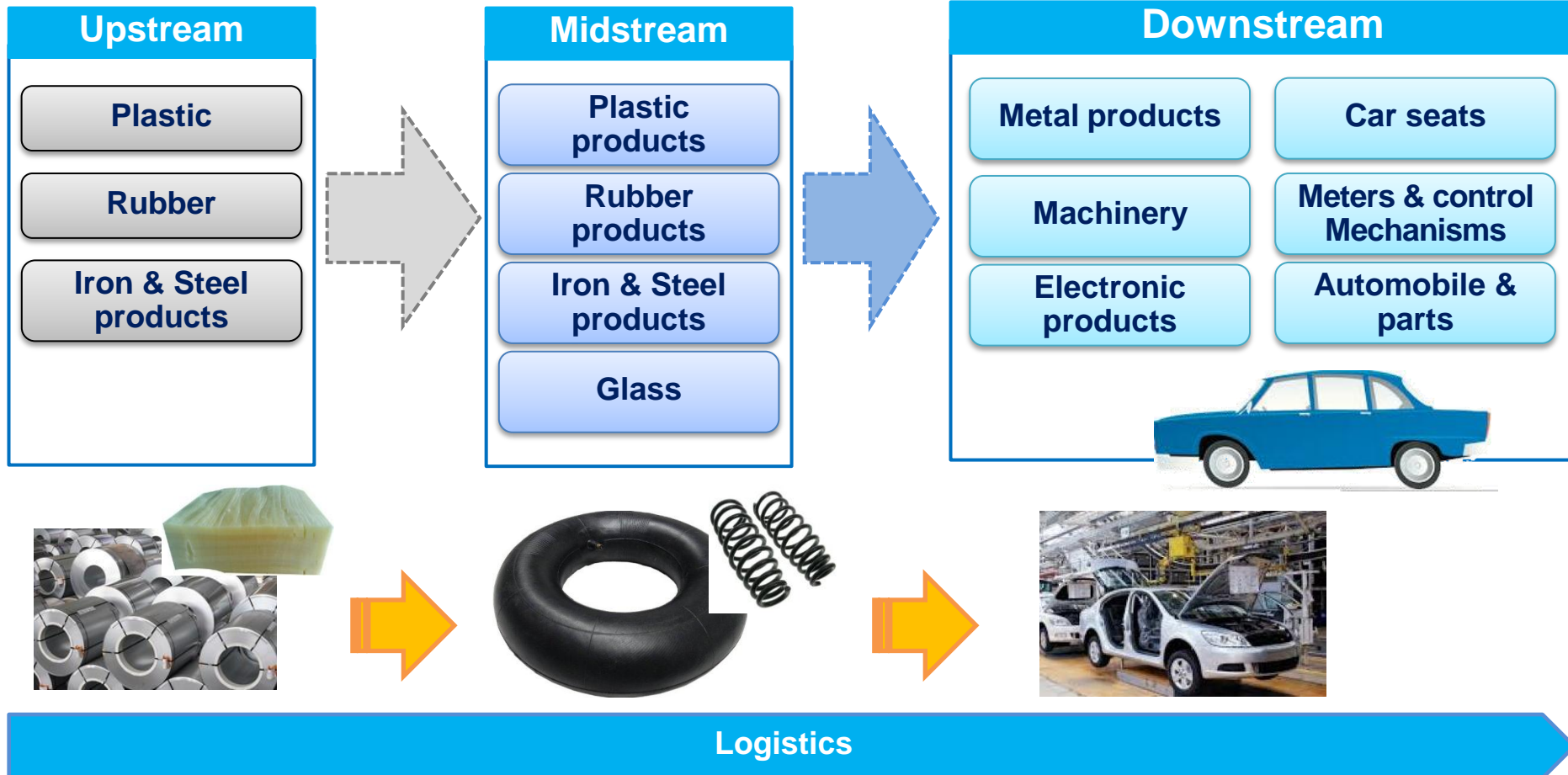
The results of RCA index are mostly in line with trade flows in ASEAN





## 2.3 Shining industry II: Automotives

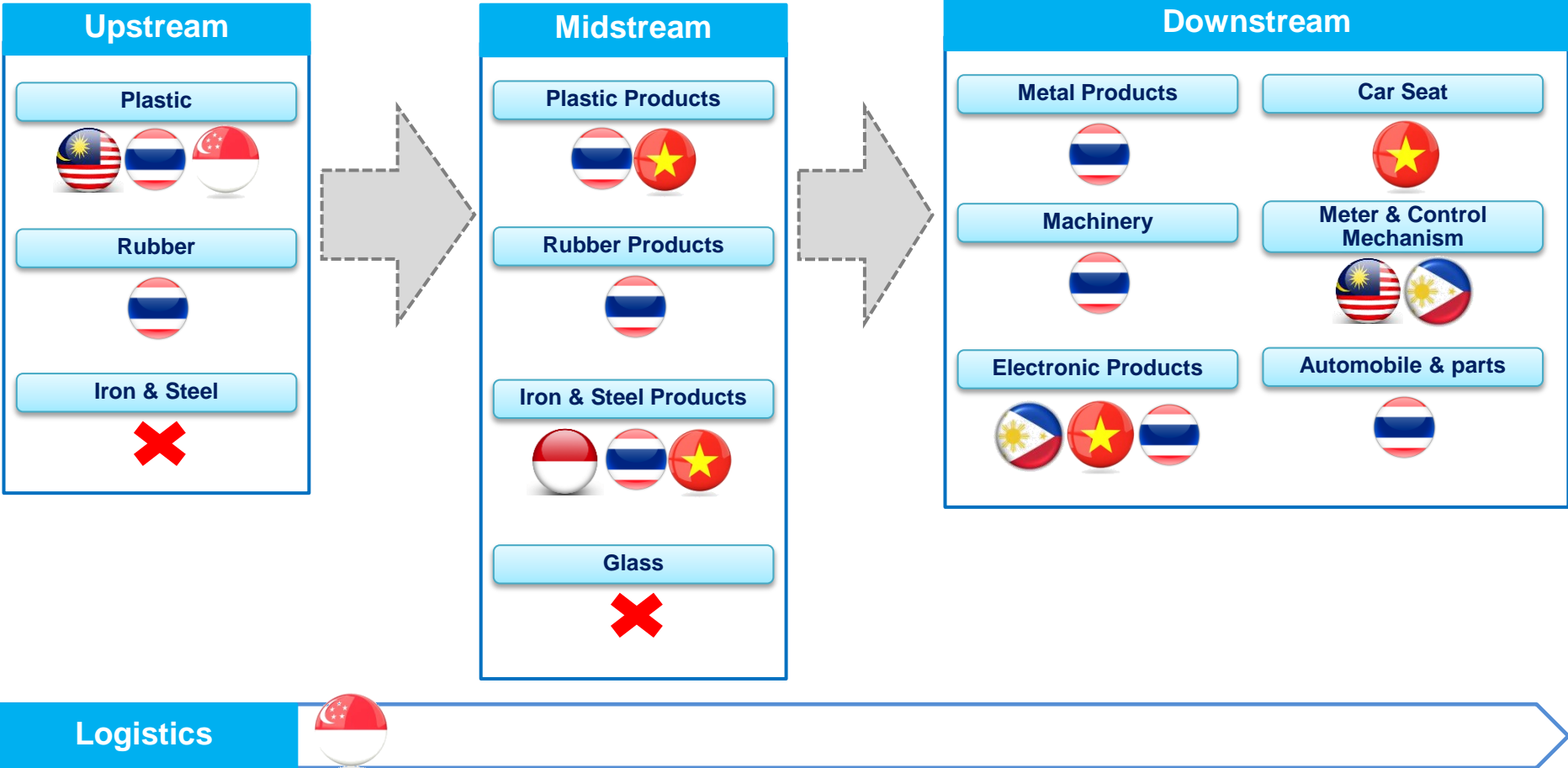
The automotive value chain can be divided into 3 stages of production





# 2.3 Global comparative advantages of ASEAN members in the automotive supply chain

As a region, ASEAN has comparative advantages in more industries than each individual country





## 3.1 Key enablers and challenges in the AVCs

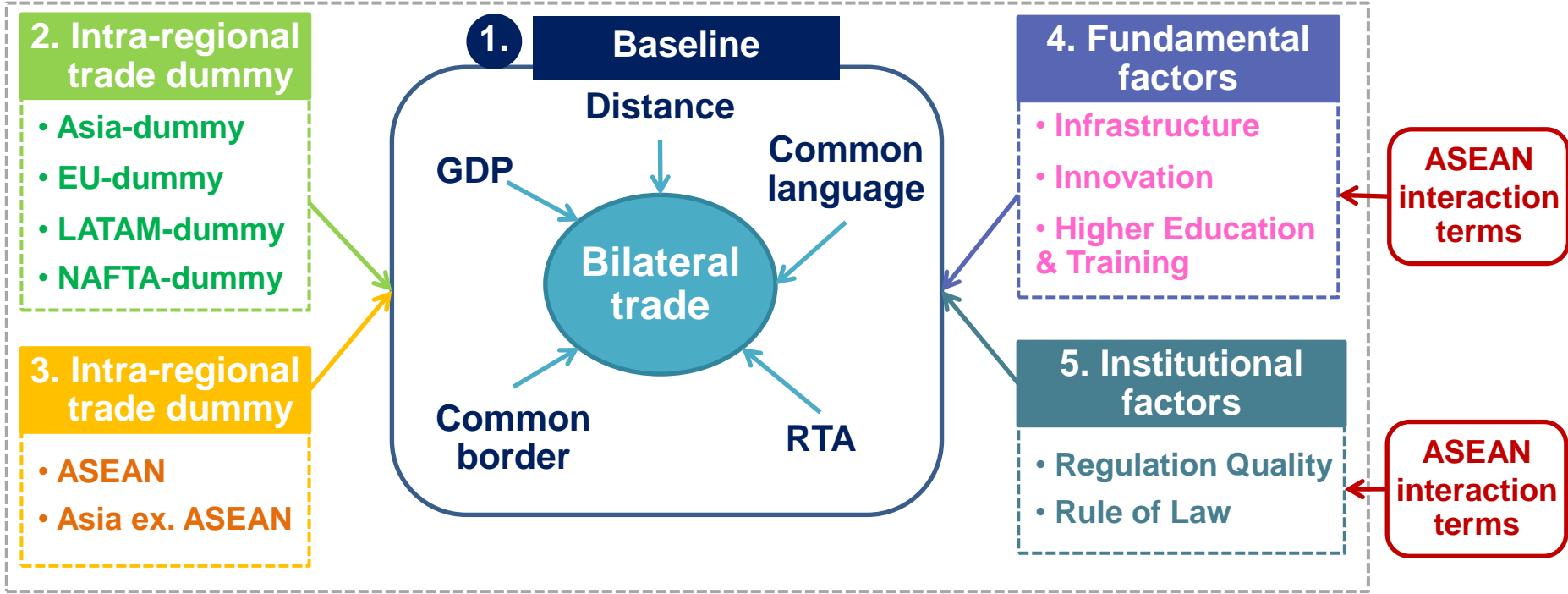
Finding the main factors driving bilateral trade in the textile  
as well as automotive industries through Gravity Model

<b>Methodology</b>	<b>5 Gravity Model regressions</b>
<b>Data</b>	<b>139 countries</b>
<b>Time Period</b>	<b>2001 - 2012</b>



# 3.1 Key enablers and challenges in the AVCs

What factors explain the bilateral trade flows of any two countries?





## 3.1 Results: Baseline Gravity Equation

- Bilateral trade will be greater if the countries become richer but less if they are distant
- Countries speaking the same language or having connected border will trade more
- Formation of regional trade agreement helps to boost trade

Equation	Independent Variables:	Textile Industry
<b>Baseline Gravity Model</b>	Log (Nominal GDP) – Source	+
	Log (Nominal GDP) – Destination	+
	Log (Distance)	-
	Common Language	+
	Border	+
	Regional Trade Agreement	+



## 3.1 Result: Intra-regional trade integration

Regional integration is a key factor driving trade in textile industry

Equation	Dependent Variables:	Textile Industry
<b>Intra-regional trade integration</b>	European Union-Intra Dummy	+
	Latin America-Intra Dummy	+
	NAFTA-Intra Dummy	+
	ASEAN-Intra Dummy	+

Regression 2&3  
Intra-regional trade dummy



## 3.1 Results: Fundamental factors

Trade in textile industry is still associated with high trade costs, whereas for the automotive industry many factors matter

### Regression 4 Fundamental factors

### ASEAN interaction terms

Dependent Variables:	Textile Industry	Auto Industry
Infrastructure – Source	+	+
Infrastructure – Destination	..	+
Innovation – Source	+	+
Innovation – Destination	..	..
Labour Force – Source	+	+
Labour Force – Destination	..	..
ASEAN-Intra*Infrastructure – Source	-	..
ASEAN-Intra*Infrastructure – Destination	..	+
ASEAN-Intra*Innovation – Source	..	..
ASEAN-Intra*Innovation – Destination	..	+
ASEAN-Intra*Labour Force – Source	..	..
ASEAN-Intra*Labour Force – Destination	..	..

\*indicates interaction term

.. Indicates insignificant



# 3.1 Results: Institutional factors

Lack of rules and regulations harmonization also impedes bilateral trade

Regression 5  
Institutional  
factors

Independent Variables:	Textile Industry
Regulation Quality – Source	..
Regulation Quality – Destination	+
Difference in Regulation Quality	-
Rule of Law – Source	..
Rule of Law – Destination	+
Difference in Rule of Law	-

.. indicates insignificant



## 3.2 Challenges and Policy Recommendations

### Challenge 1: Not one country can benefit in the entire stages of production

- Need to realize each member's potentials and coordinate as partners to strengthen ASEAN value chains

### Challenge 2: High trade costs due to lack of quality infrastructure and differences in rules and regulations

- Need to further enhance physical connectivity and harmonize rules and regulations

### Challenge 3: ASEAN has to accept volatility in global export demand

- Need to strengthen our own regional demand and invest in R&D to speed up technology to increase value-added

### Challenge 4: Changes in regional and global environments

- Need to ride the wave of regional and global trends



## 3.2 Key takeaways

1

- **ASEAN Value Chains exist due to ASEAN's diversity with proximities**

2

- **Regional comparative advantages allow ASEAN to compete strongly in the world market**

3

- **ASEAN should stand ready for any possible external changes and challenges**