Thailand's Textile and Garment Industry

Lecture 14
bhanupong

Course Syllabus

Lecture 14-17

The rise and fall of Thailand's export-oriented industries

We explore four major industries: processed food, information technology, textile, and automobile.

While facing non-tariff barriers imposed by developed countries, some of these industries are still leading exports of Thailand.

Does the success of these industries bode well for the resilience and dynamism of the Thai manufacturing sector?

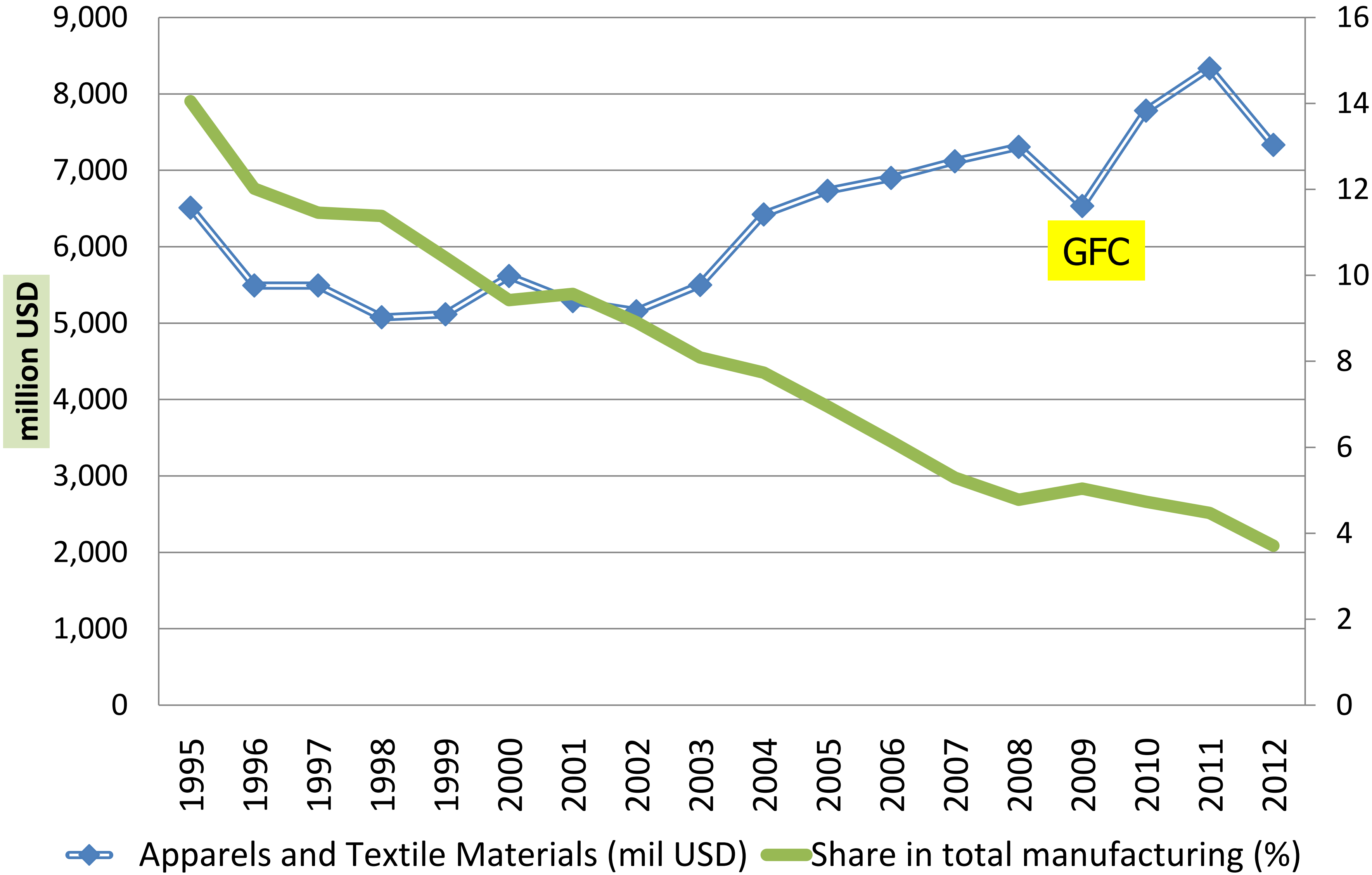
Outline

- The importance of textiles and clothing industry
- Reliance on international trade
- The role of FDI inflows and outflows
- Revealed Comparative Advantage
- The way forward

An overview of the industry prior to the GFC

- In 2007 the textile and garment industry, a *labor-intensive* industry, employed about one million workers and generated US$3.16 billion (Bt119 billion).
- In 2009 Thailand's garment and textile exports made up 1.04% of the world market.
- A small country assumption can be applied to this labor-intensive industry, which cannot influence world prices and its profitability is subject to wage cost.

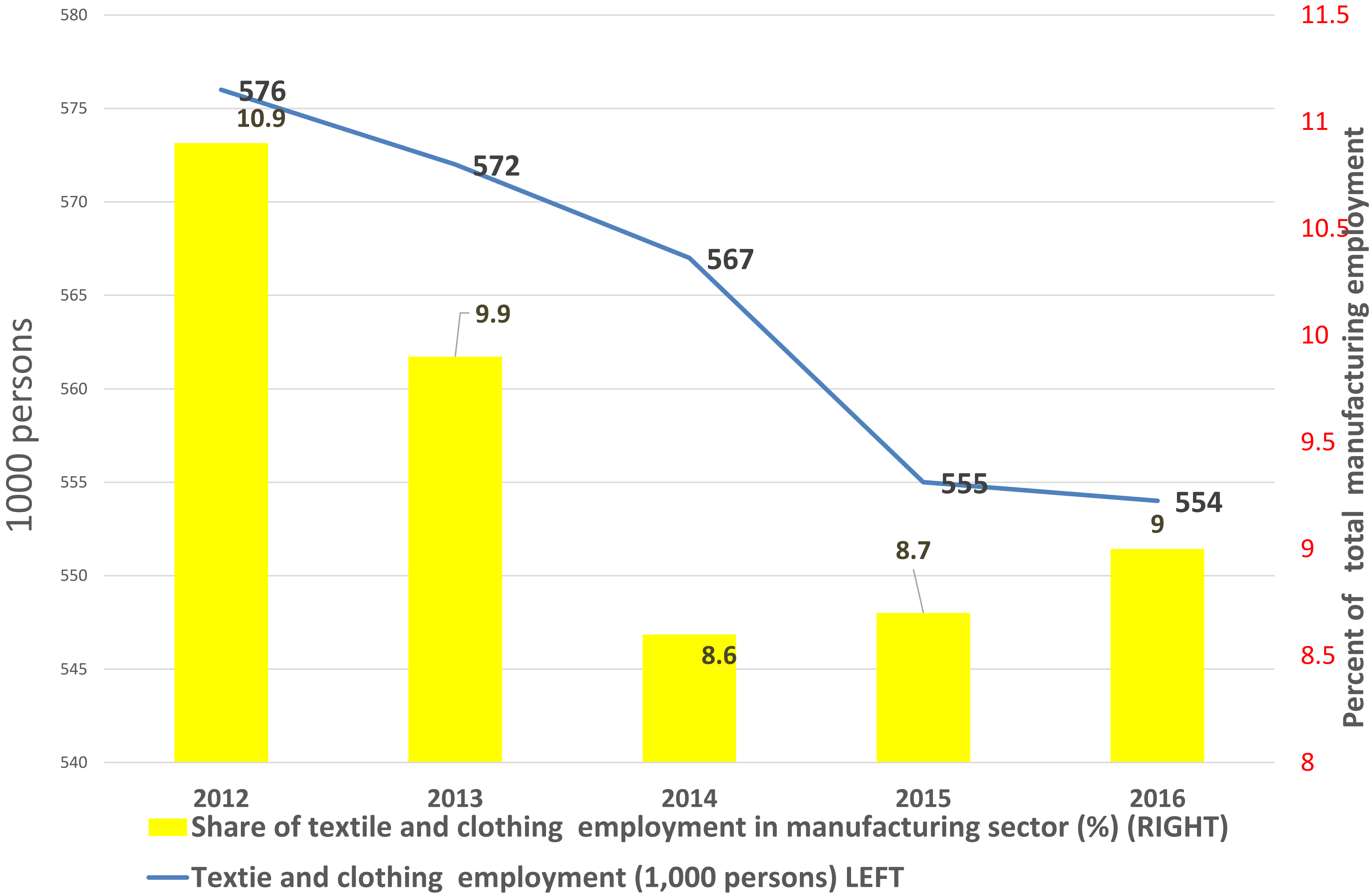
Exports of clothing and textile products



GSP withdrawal by the EU

- GSP (General Systems of Preferences) is a system of tariff reductions for developing countries exporting to the EU
- Thailand lost its GSP benefits in *2013*, as Thailand’s income level was in the middle income group.
- Too early to blame the hike of minimum wage (300 baht per day) for being the cause of losing world market shares in apparel.
- Manufacturers must learn to substitute capital for labor by exploiting the existing technology (ample elasticity of substitution between capital and labor).

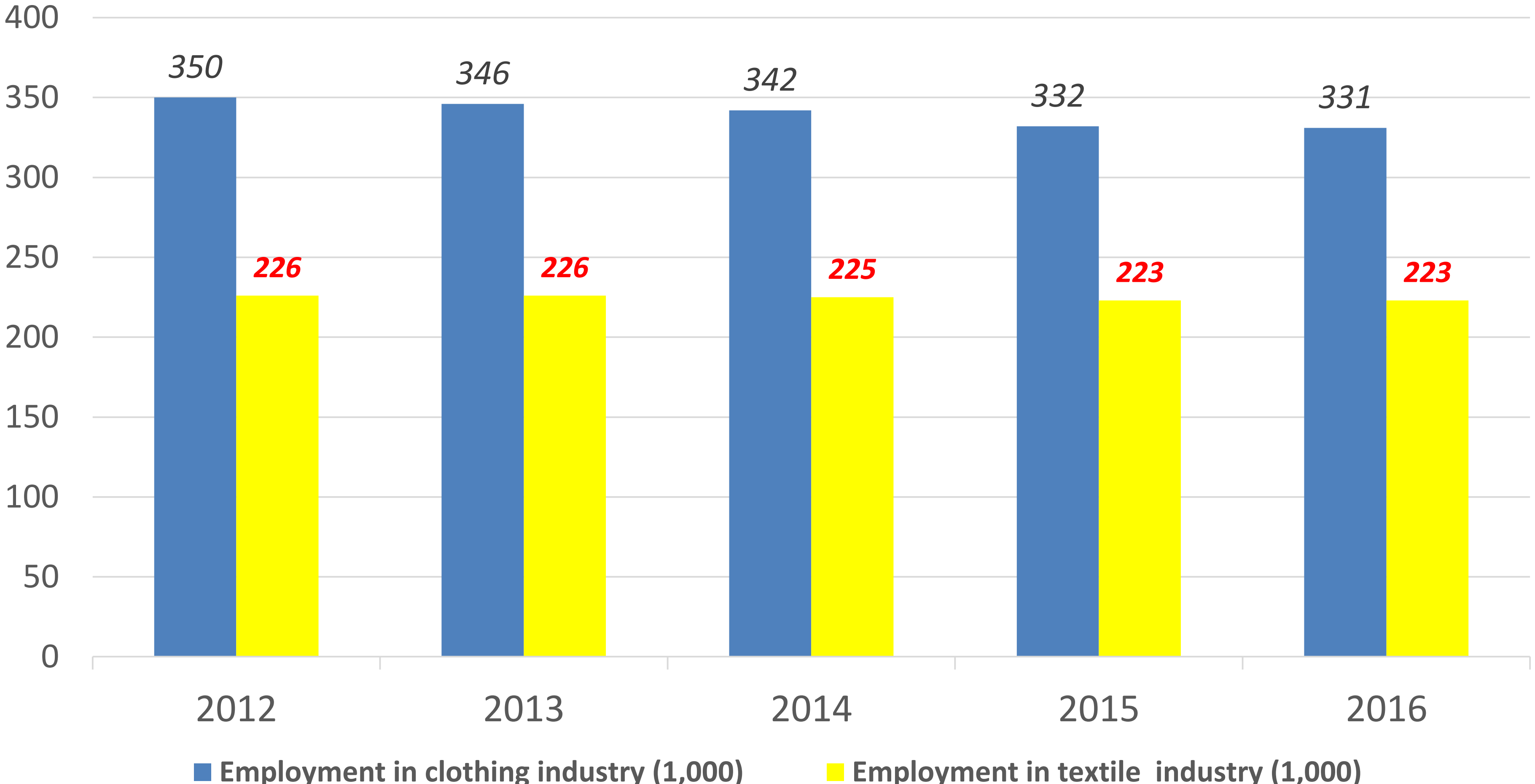
Shrinking Employment in Textile and Clothing Industry



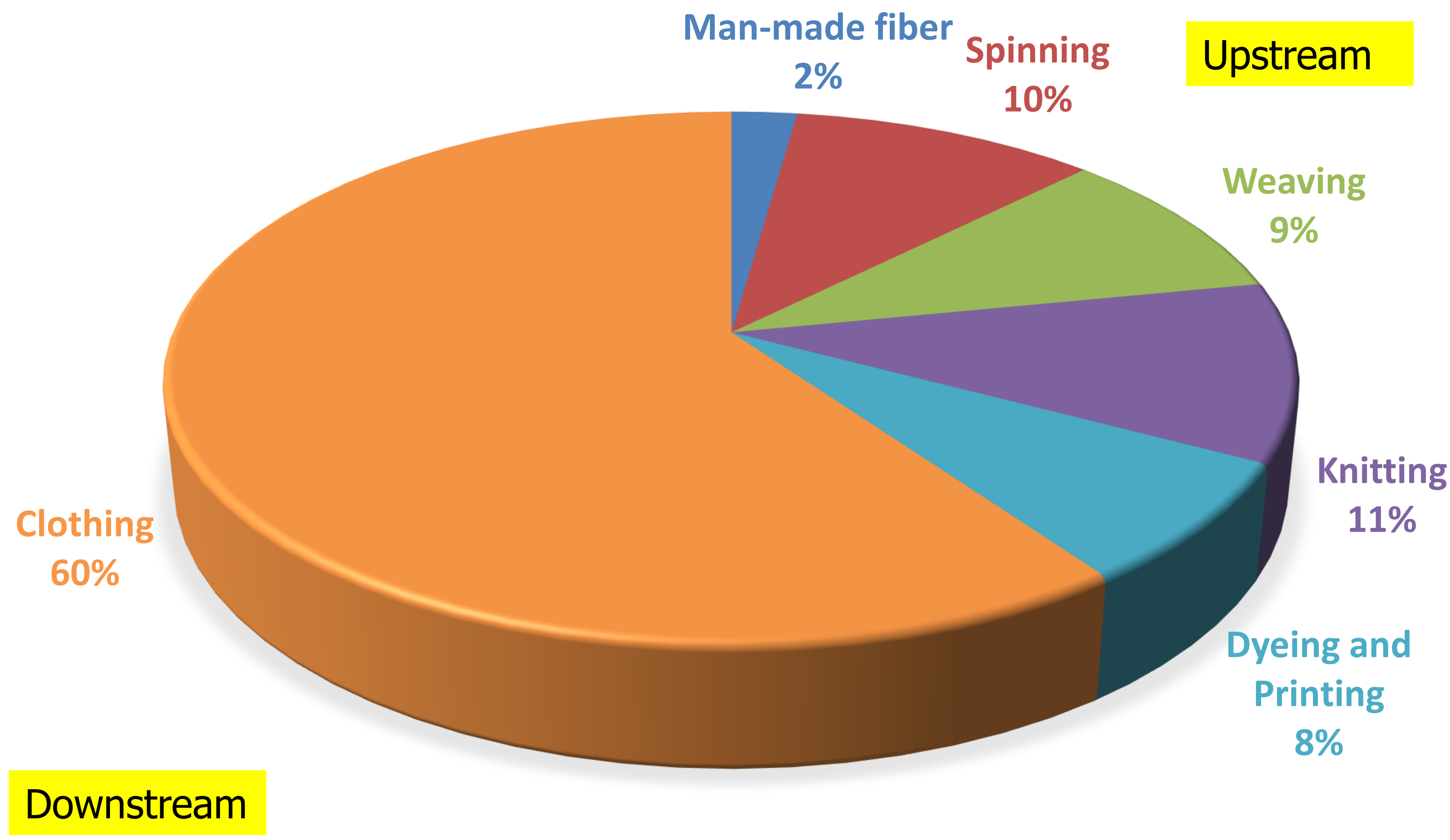
Employment within in the Industry
Textile vs Apparel industries

(1,000 persons)

Source: Thailand Textile Institute



DISTRIBUTION OF WORKERS IN CLOTHING AND TEXTILE INDUSTRY: 2016



Where did Thailand import textiles from?

Source: Office of Industrial Economics (OIE)

Upstream industry

1. Fibers used in Textile Production

USA (31.8%), Australia (14.8%) and India (9.3%).

2. Yarn

China (19.9%) , Japan (16.5%), Taiwan (12.3%) and Indonesia (11.6%).

3. Fabrics:

China (39.7%) , Taiwan (16.3%) , Japan (8%), and Hong Kong (8%).

*Extensive activities of **intra-industry trade***

Sources of imported garments and machinery

4. Ready-made Apparel: downstream

China (48%), Hong Kong (12.9%), Spain (6.1%) and Italy (5.8%).

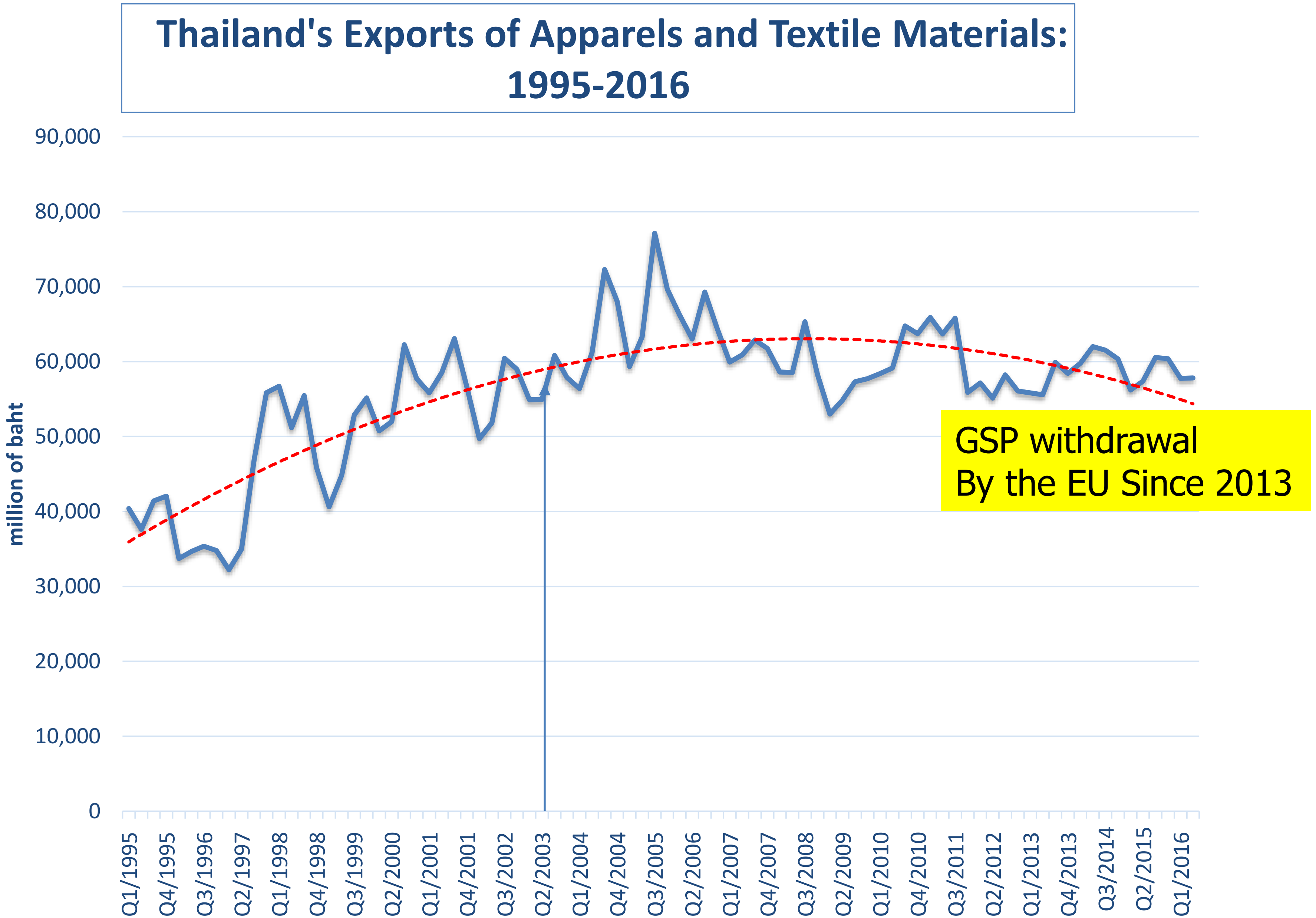
5. Textile Machinery

Germany (21.2%), Japan (18.8%), Taiwan (13.8%), China (12.9%).

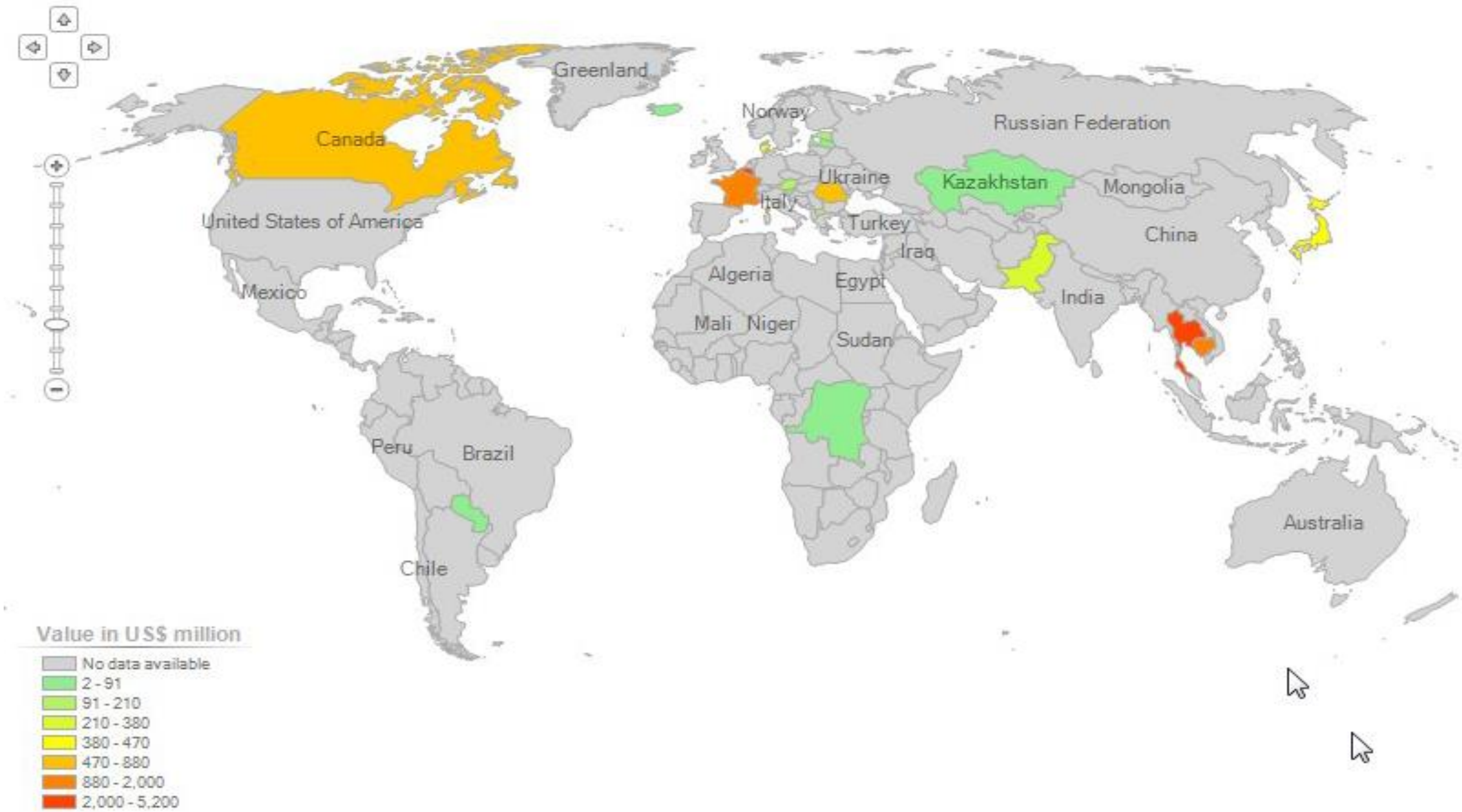
Diversified sources of raw materials

98% of cotton are imported

- Thailand relies on importing cotton, yarn and fabric in order to produce garments and textiles.
- This has impact on the returns from garment exports.
- Thailand's textile industry requires much more **cotton** than the country produces itself: 500,000 tons are needed per year, but only 10,000 tons are annually produced in Thailand.
- Thus, Thailand only provides for 2% of the raw cotton used in its textile industry.


Thailand's Exports of Apparels and Textile Materials: 1995-2016
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
million of baht
Q1/1995
Q4/1995
Q3/1996
Q2/1997
Q1/1998
Q4/1998
Q3/1999
Q2/2000
Q1/2001
Q4/2001
Q3/2002
Q2/2003
Q1/2004
Q4/2004
Q3/2005
Q2/2006
Q1/2007
Q4/2007
Q3/2008
Q2/2009
Q1/2010
Q4/2010
Q3/2011
Q2/2012
Q1/2013
Q4/2013
Q3/2014
Q2/2015
Q1/2016
GSP withdrawal
By the EU Since 2013

Inward FDI stock: Textiles and clothing



Market Analysis and Research, International Trade Centre (ITC); Palais des Nations; CH-1211 Geneva 10; Switzerland
Tel.: +41 (0)22 730 04 68; Fax: +41 (0)22 730 05 77; marketanalysis@intracen.org

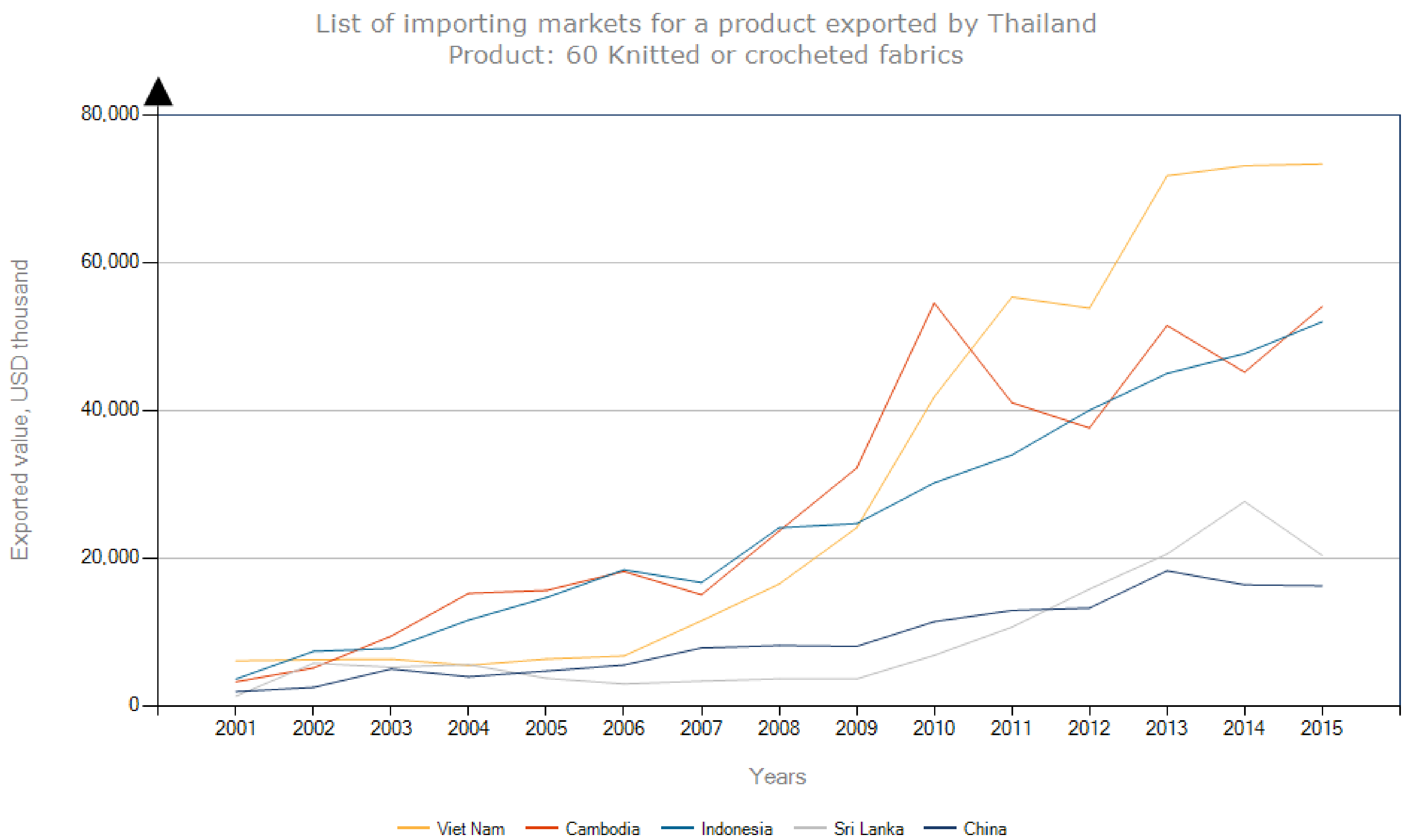
Thailand's sources of imports (product 55) Man-made staple fibers

Why importing from high income countries?

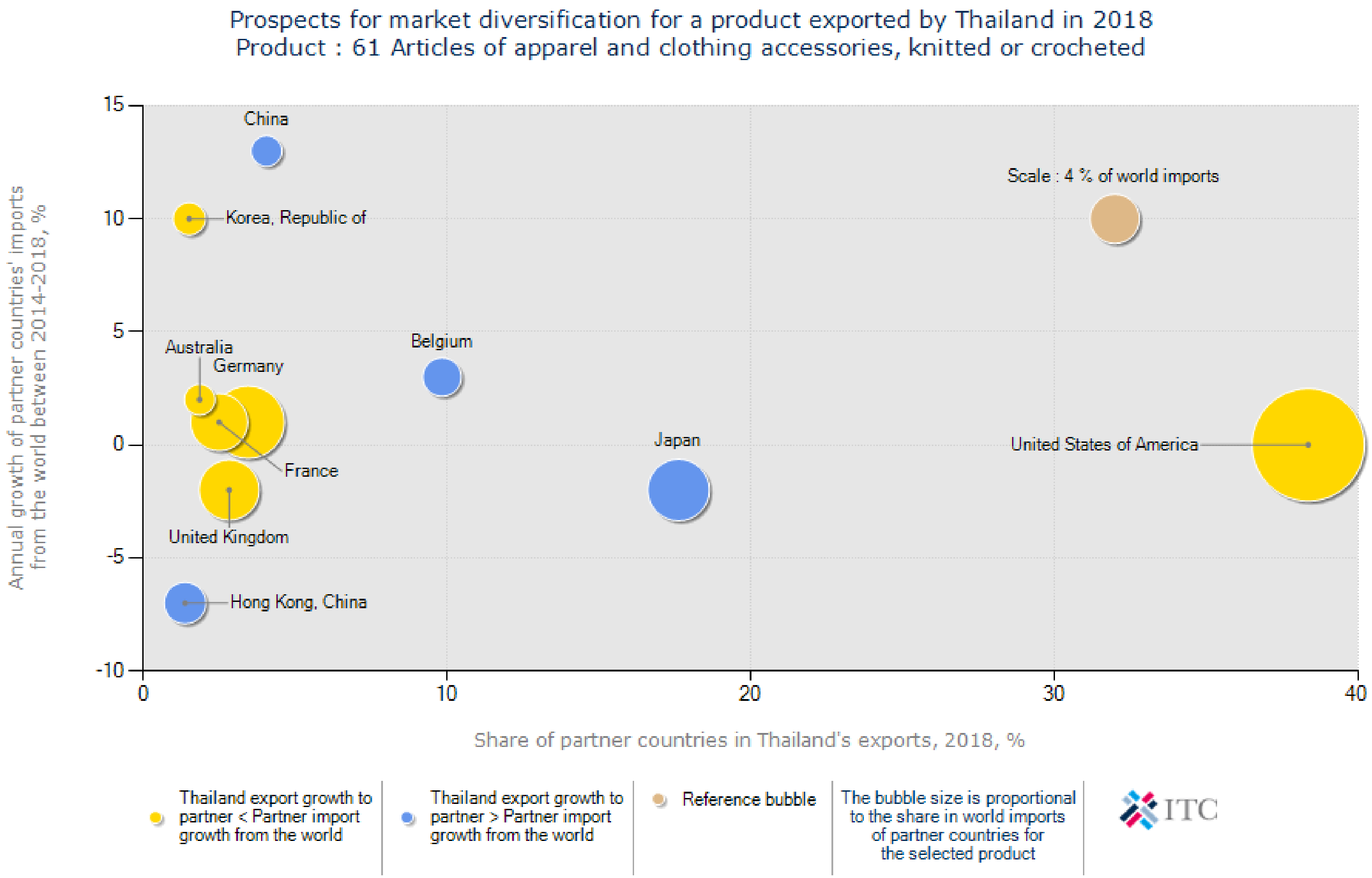
Thailand's export markets

product 60: Knitted or crocheted *fabrics*

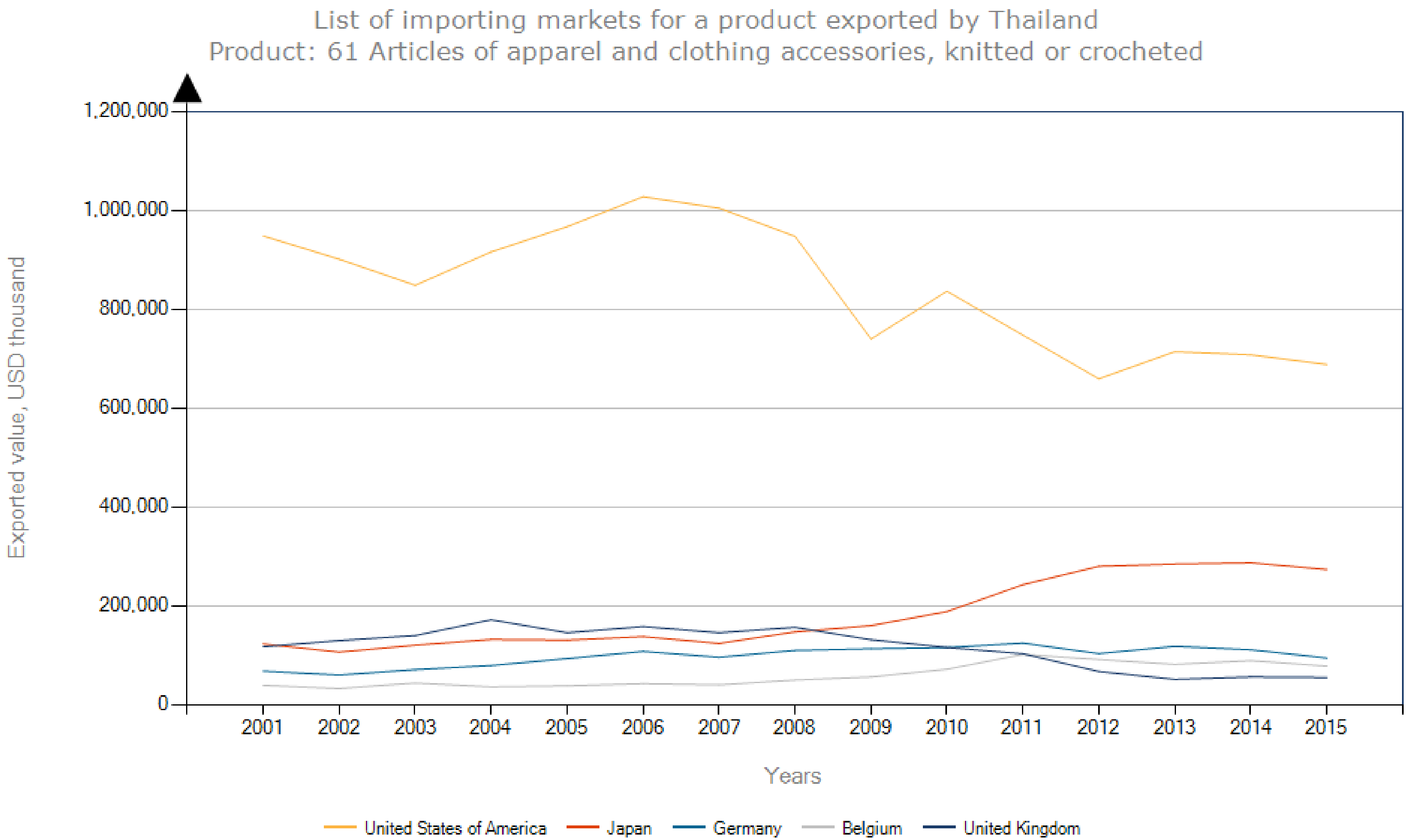
Why exporting to low-income countries?



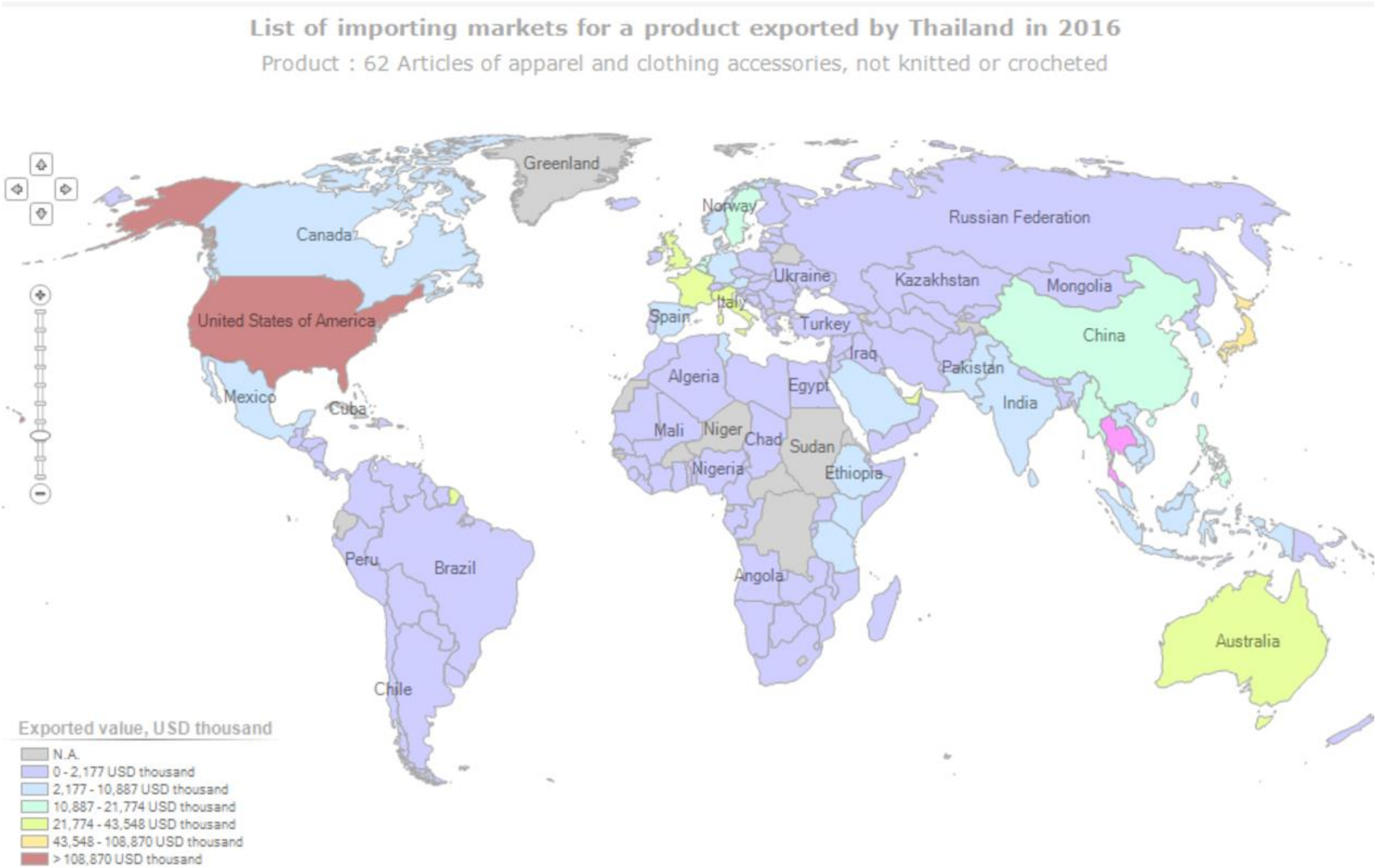
Product 61: Market diversification of Thailand's apparel exports



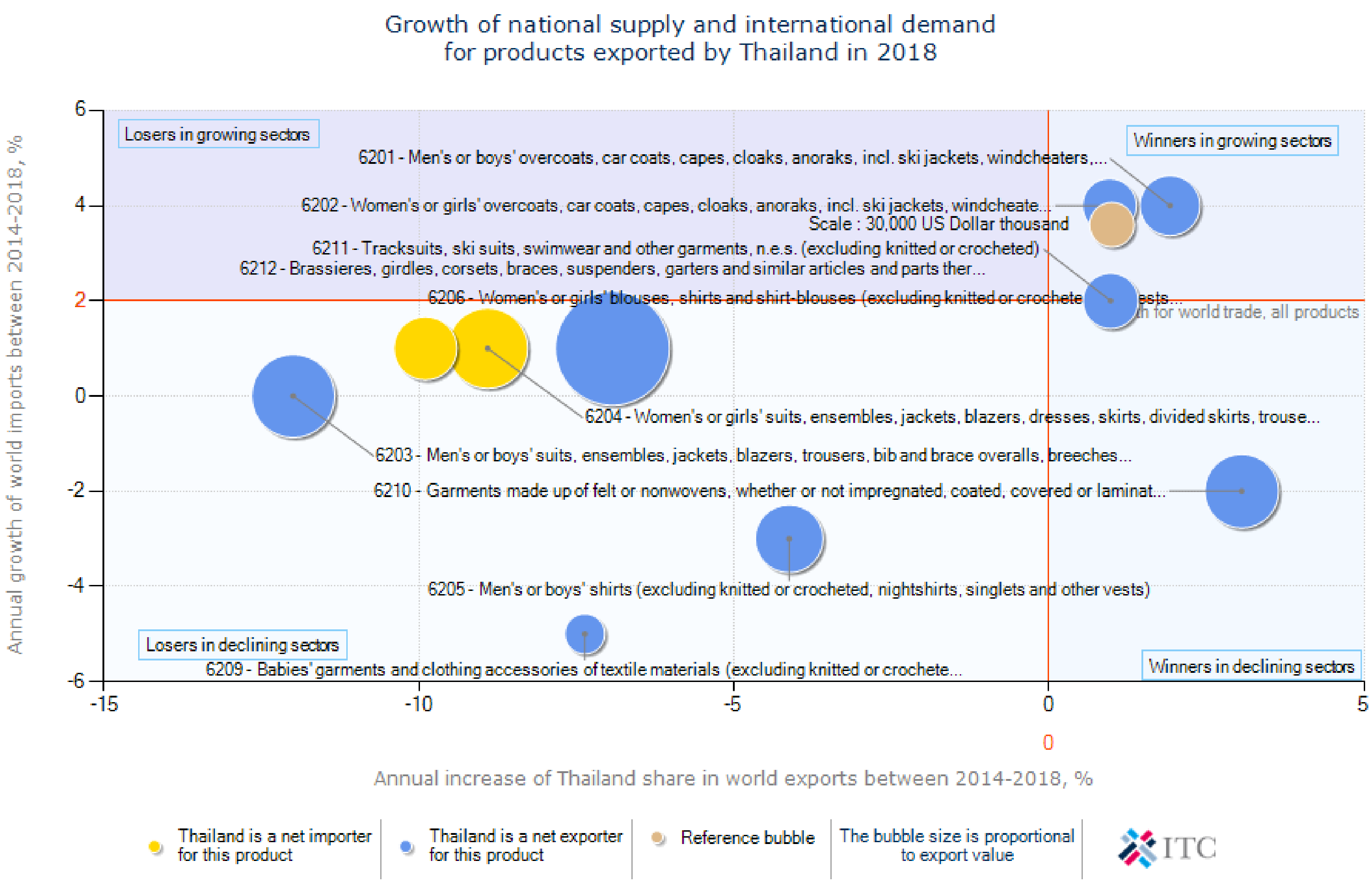
Export markets of apparel and clothing (product 61)
Why exporting to high-income countries?



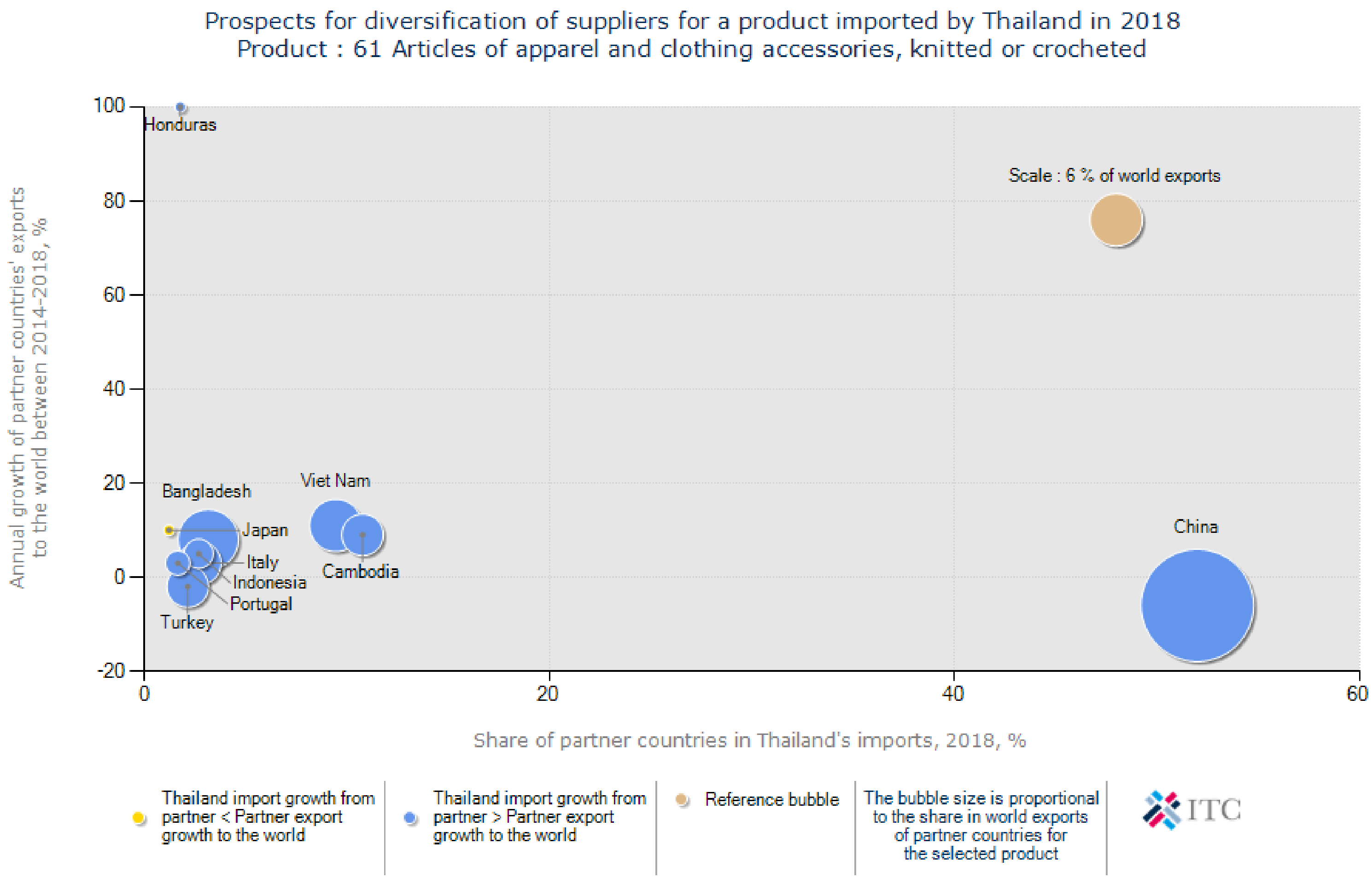
Thailand's market for product 62: Apparel in 2016



Product 62: Thailand’s exports of apparels and clothing accessories: ***Retreating*** (losers in declining industry)



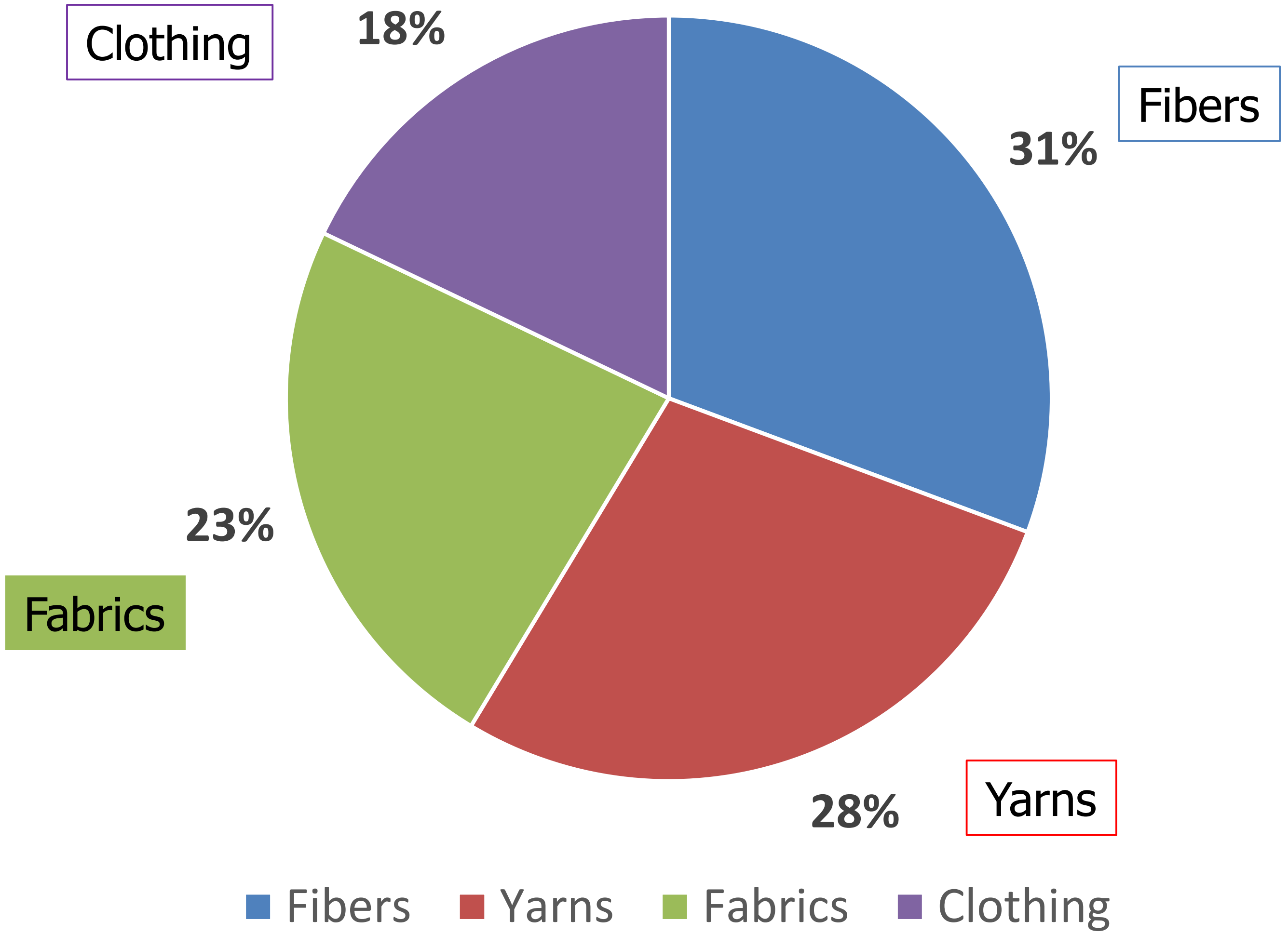
Thailand's Imports of product 62
Dominated by China



Vertical integration and logistics cost

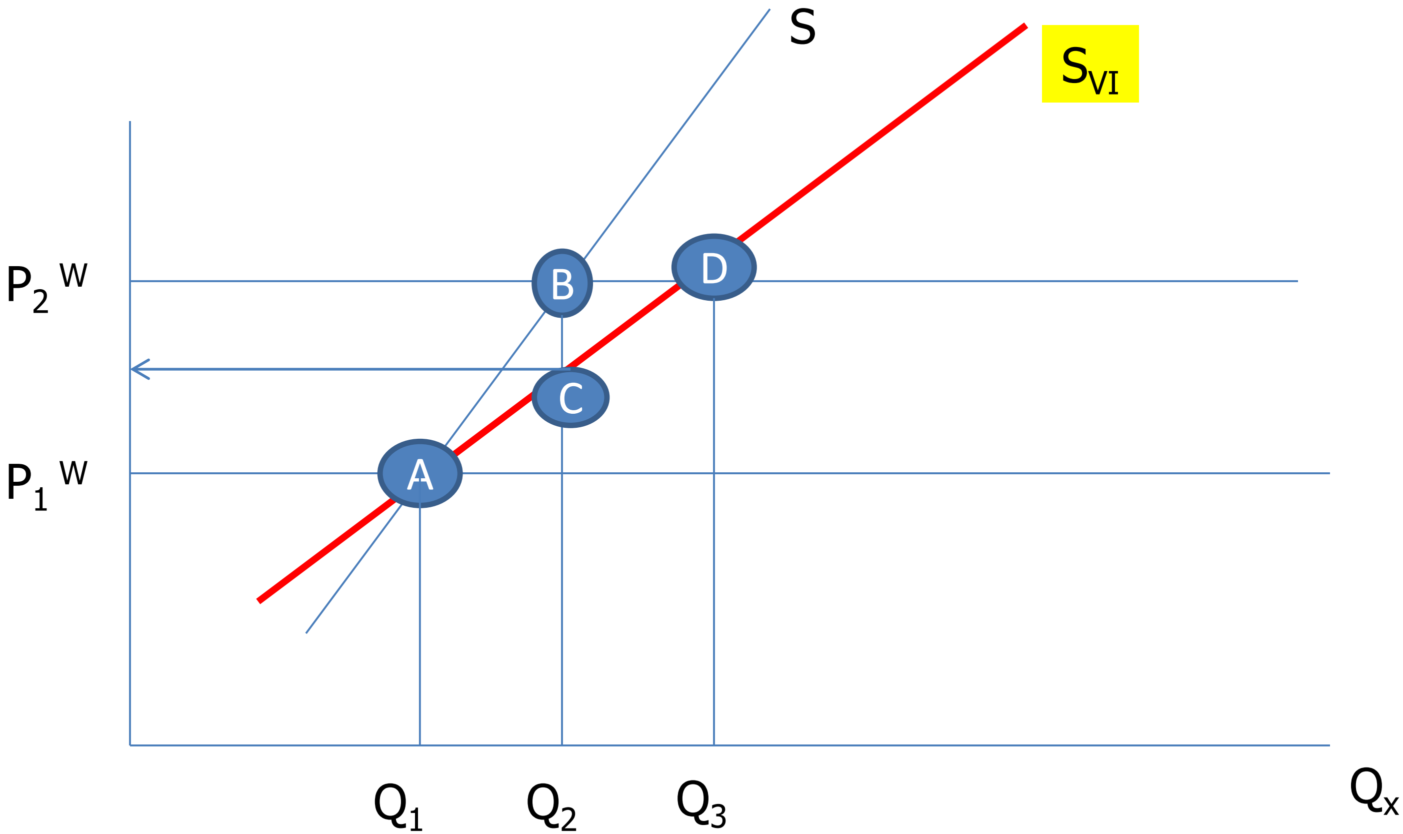
- From spinning to fabrics, from fabrics to garments: integrated textile business
- The Thai factories spin, weave, dye, finish and fabricate products for consumers in Thailand and abroad in the US and Europe, such as Wal-Mart and Calvin Klein.
- By integrating production from spinning to fabrics, Thai firms are able to cut ***logistics cost and inventories.***
- It can ***react quickly*** to any change in customer needs.

Textile and Clothing Production in 2016 (1,000 tons)



Vertical integration (from textile to apparel)has lower logistic and inventory cost

It also provides rapid supply response (from textile to apparel)

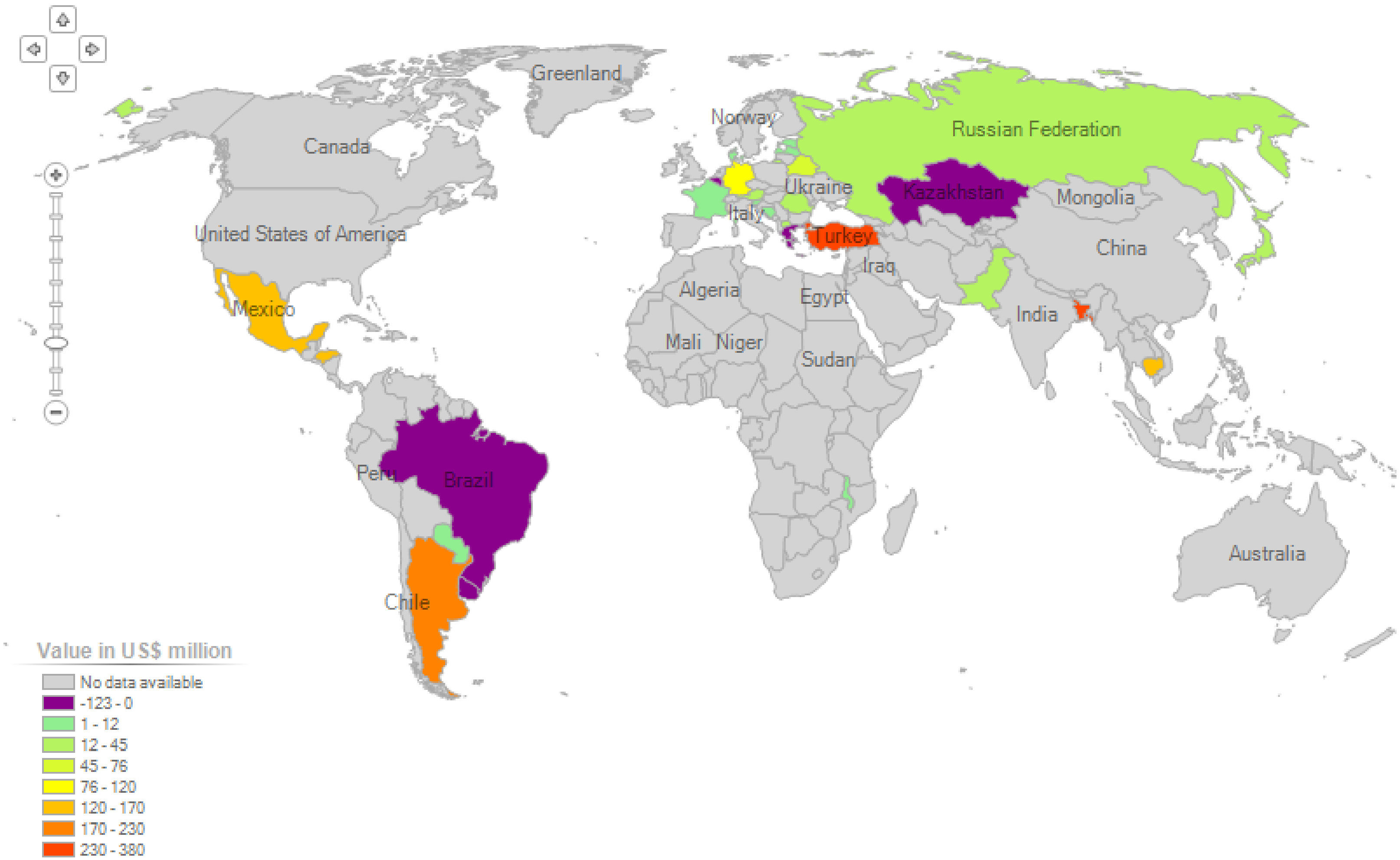


Dynamic supply response is good, but cost control is also important
Otherwise supply Sv shifts upward. Hence Labor productivity must be raised

Surviving strategy

- The industry faces rising wage rates, losing its low cost advantage to other labor abundant economies.
- The textile and garment industry has lowered manufacturing costs by **moving labor-intensive** operations to neighboring countries in order to enjoy tax privileges for exporting to US and European markets.
- With high wages, the technology in **FDI host countries** must be different from home country's factory.
- In case of car industry, Nissan production plants in Japan use higher K/L than its' plants in India.
- There is a certain degree of elasticity of substitution between labor and capital goods.

Countries attracting FDI in textiles, clothing, and leather (in 2013)



A new strategy for the industry

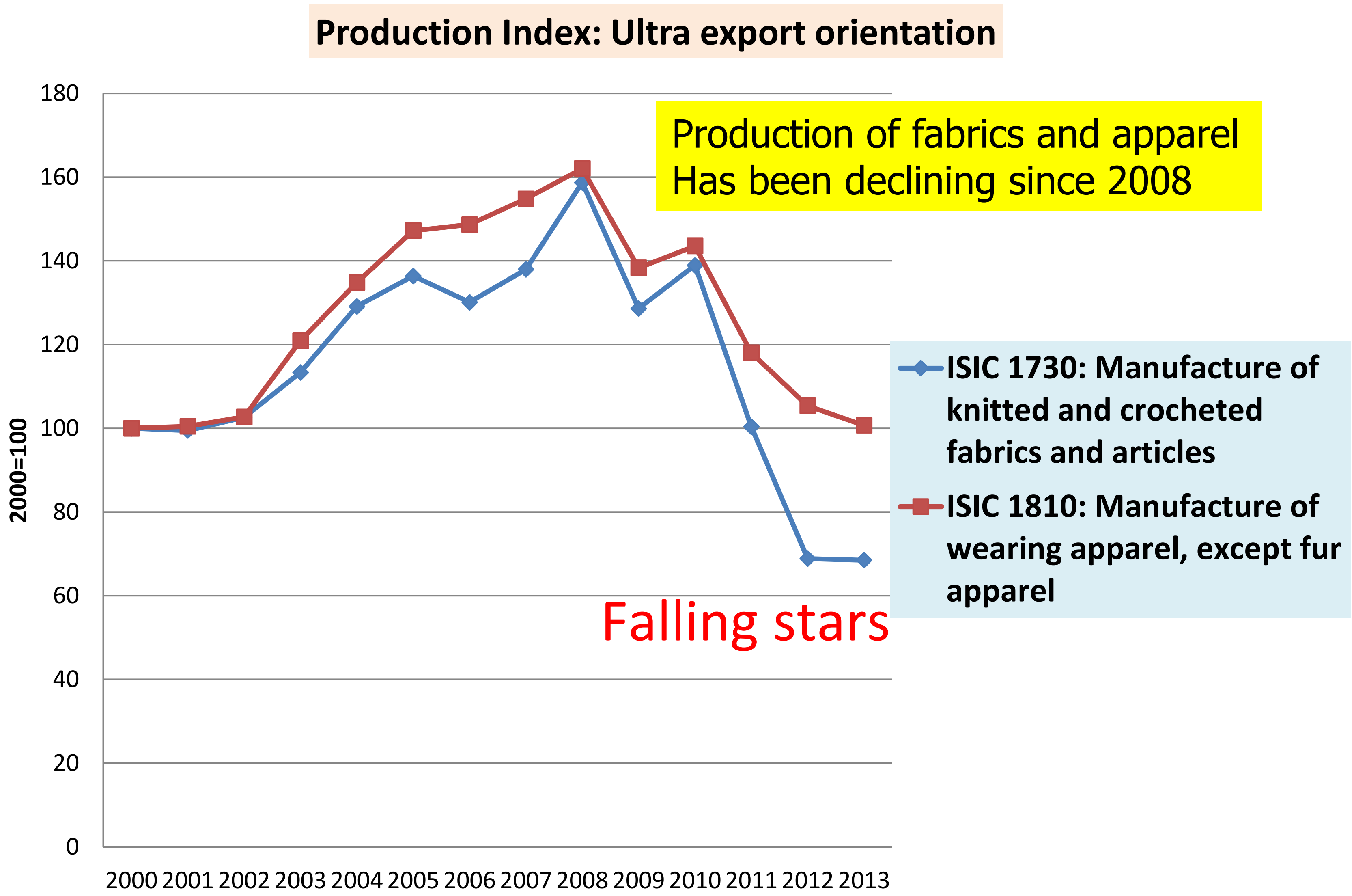
- Thailand is already the production base of upstream and downstream textile industry and what the industry must do is develop **value-added textile** and garment products.
- Should Thailand build up its brand name if it wants greater world recognition like Italian-made products?

The industry has already encountered problems more than a decade

- Textile and wearing apparel industries were severely affected by the *baht appreciation*
- Domestic market was threated by an influx of inferior quality *products from China*.
- Local producers tried to adjust by cutting costs and focusing more on export markets.
- Thai textile and garment exporters were committed to raising export revenue to 20 billion USD in 2016 and *shifting* their focus on producing more *fashion and design* products.

Product diversification

- Ready-made apparel exports declined due to the continued baht appreciation and exchange rate volatility, causing exporters reluctance to accept export orders.
- However, other textile products grew in 2007: brassieres, girdles and accessories, fabric, yarn and synthetic fiber, household and furnishing textiles, synthetic fiber and embroidered and lace fabrics.


Production Index: Ultra export orientation
Production of fabrics and apparel
Has been declining since 2008
ISIC 1730: Manufacture of knitted and crocheted fabrics and articles
ISIC 1810: Manufacture of wearing apparel, except fur apparel
Falling stars
2000=100
180
160
140
120
100
80
60
40
20
0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013

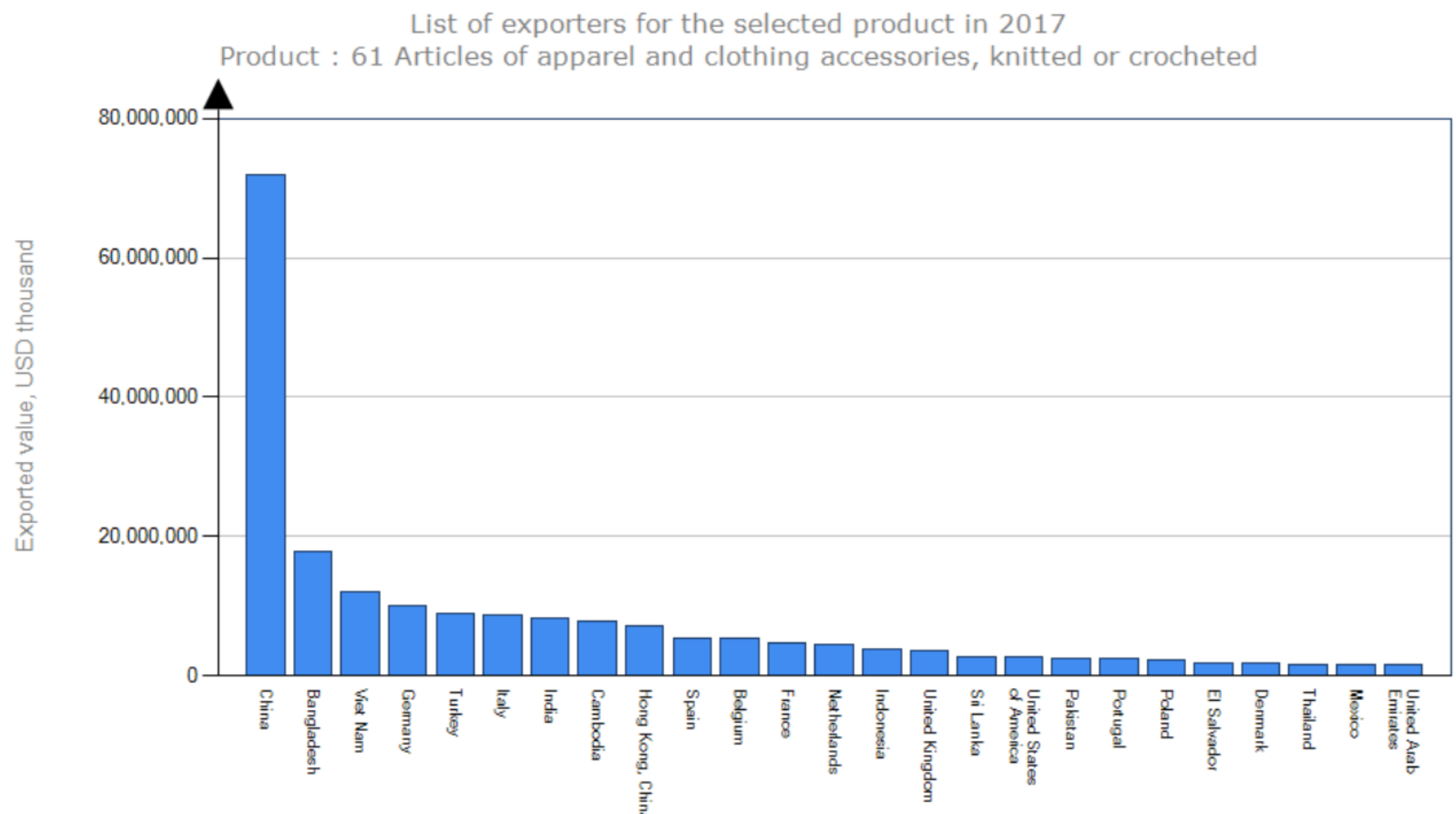
Moving clothing factories to neighboring countries: seeking new export platforms

- In Laos, Cambodia, Myanmar, and Vietnam, factories are **exempt from taxes**, so they can export to Europe with cost advantages compared to manufacturers in China, where they have to pay 15% tariff.
- The Japan-Thailand Economic Partnership Agreement (JTEPA) has allowed Thai manufacturers to export to **Japan** with a 15% handicap against Chinese manufacturers.

Trade preferences and competition

- Those tariff preferences help strengthen price competitiveness of Thai products against rivals from China in the key export markets.
- China is the world's biggest exporter, facing increases in production costs.
- China, Bangladesh and India are the world’s top textile producers and are also major consumers.
- Pakistan and Southeast Asia are important and growing players.
- **Given a shortage of labor in Thailand, more investment expansion by Thai producers is likely in Myanmar, Lao PDR, and Cambodia.**

China, Bangladesh, Vietnam, Indonesia, *Product 61*

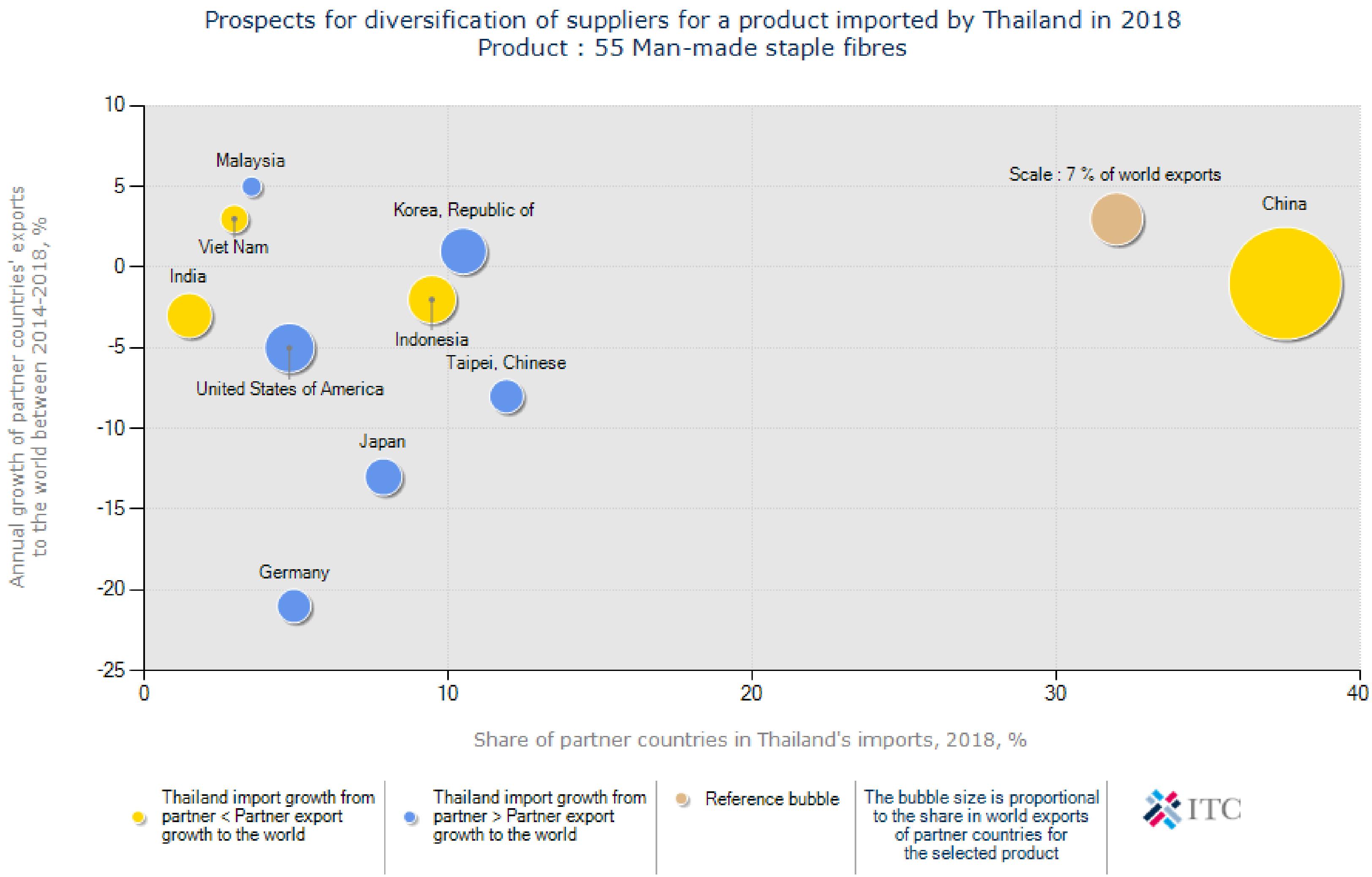


Chemicals and textile dyes: Why imports?

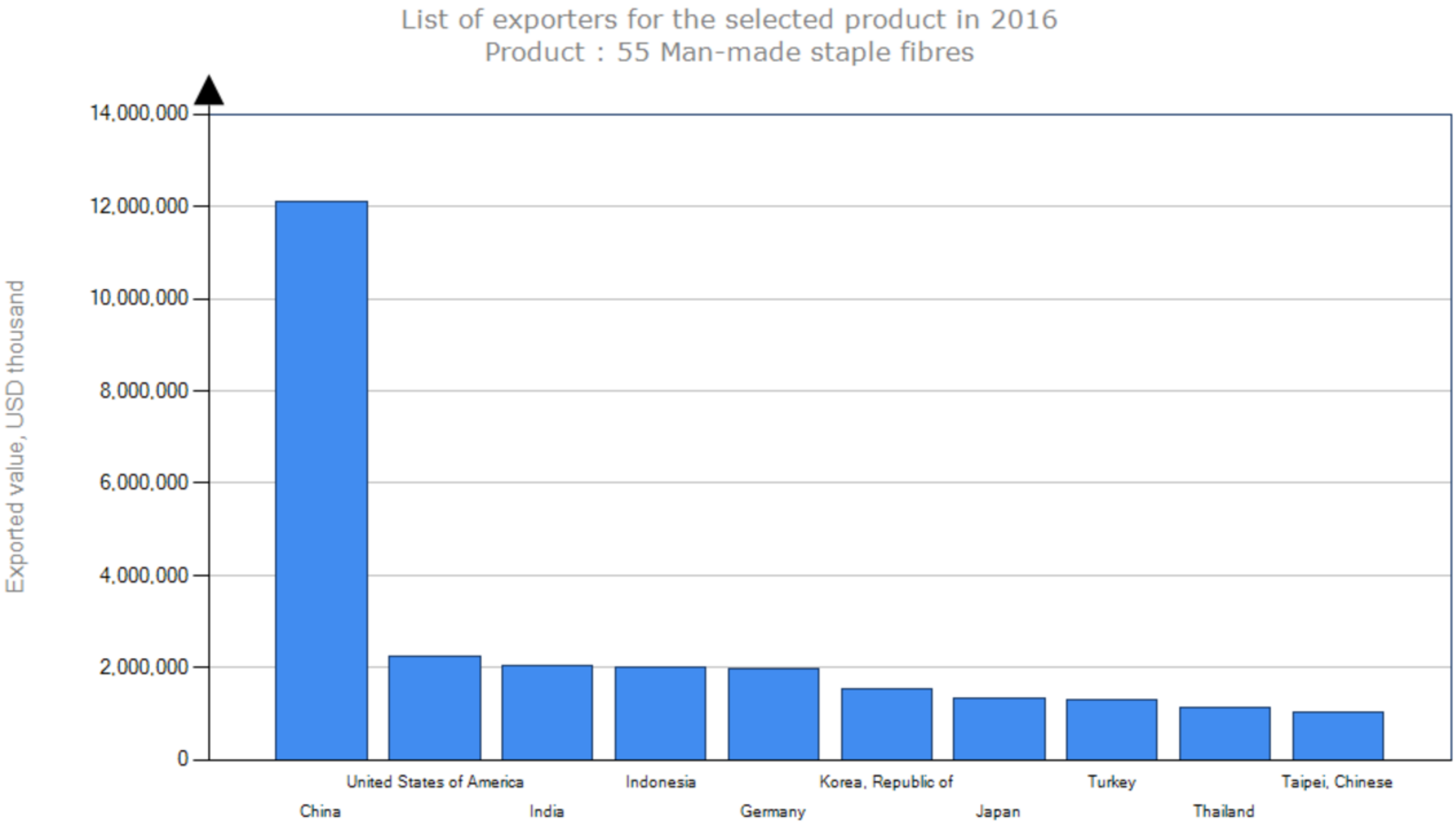
To avoid strict environment standards

- The global textile dyes and chemicals market was worth $16 billion, and Asia accounts for some 45 percent of total consumption, much of it destined for export markets.
- ***Stricter environmental standards*** required by Western countries are prompting consolidation and innovation in the industry, which requires imported textile dyes and chemicals.

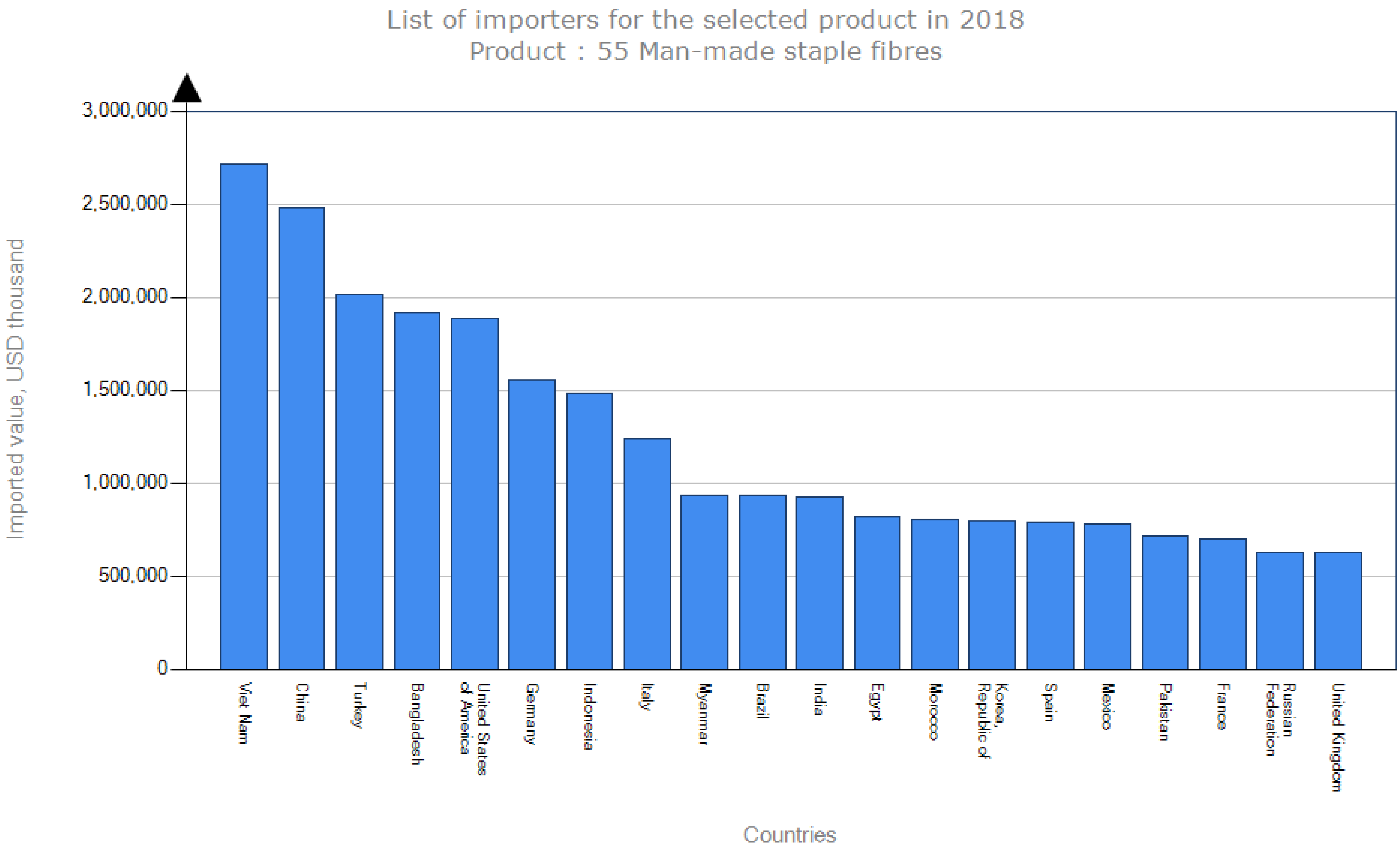
Upstream industry: man-made fibers



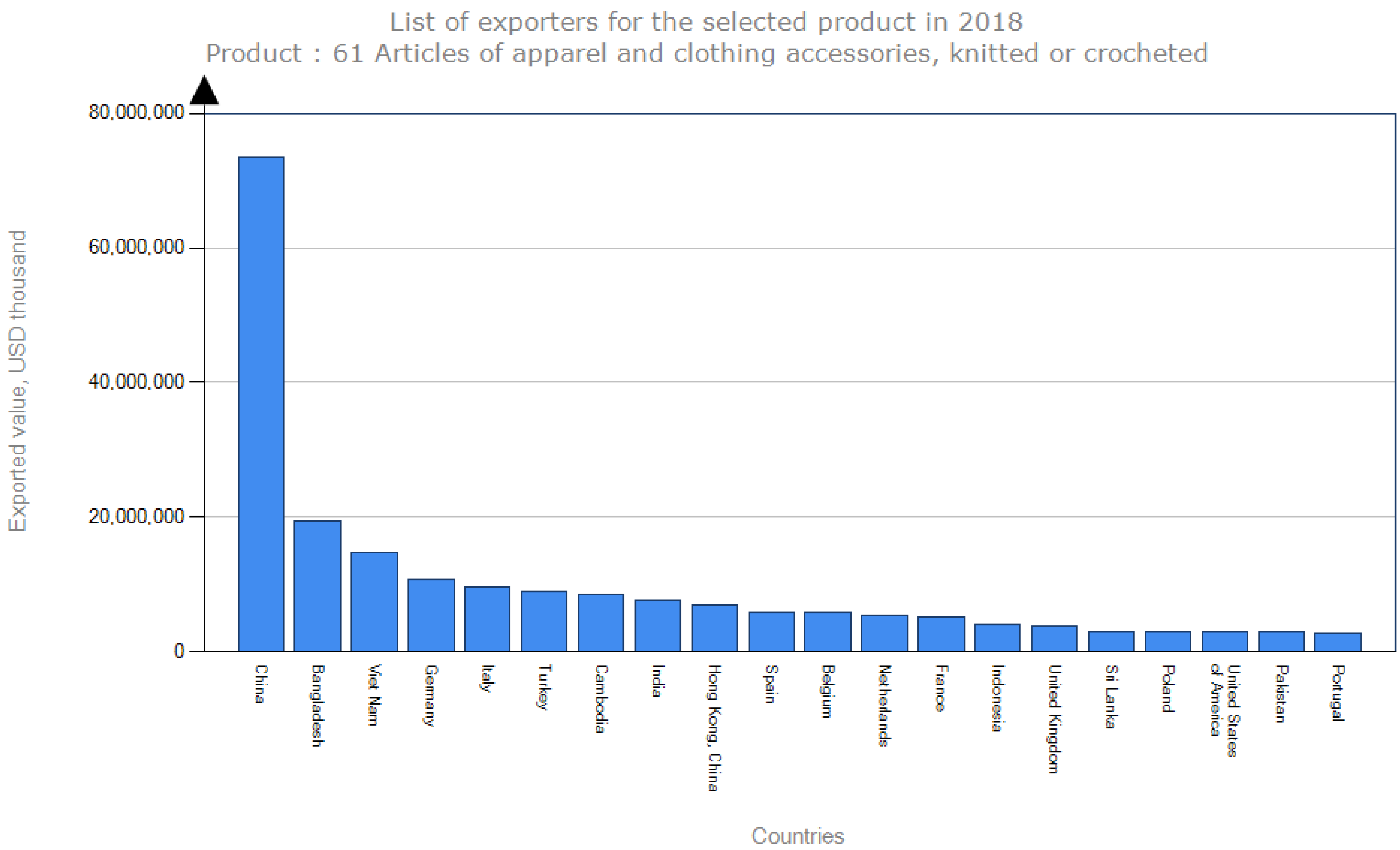
Top-10 world Exporters of Product 55: Man-made fibers



World top importers of man-made fibers



World Top products of product 61



Technical textiles:

Other textiles
(ISIC 1729)

- Apart from apparel, a major driver for the industry is demand for "technical textiles" or fabrics used in cars, mattress covers, bags, tents and parachutes, among others.
- In the medical field, *chemicals are incorporated* in surgeons' gowns to repel blood and dirt, raising the hygiene level.
- As Asia's spending power rises, "people want different products and that's going to lead to the development of a whole new market for technical textiles which didn't exist before"
- The market for ***technical textiles*** is likely to grow by 20 percent per year over the next decade.
- Thai companies must ride the growth by moving up to higher value-added products.

Nonwovens

- Innovation in the textile industry has led to **two new growth categories** — **nonwovens** and **technical textiles**.
- **Nonwovens** are fiber-based products made of fabric that is *compressed, heated or tangled*.
- For examples: Envelopes, facial wipes, mops and medical scrubs are nonwovens.

Exports of Textile and Clothing
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
Million USD
Clothing
Fabrics
yarns
Fibers
Technical Textile
Home textile
2013
2014
2015
2016
Home Textile
Technical Textile
Fibres
Other Textile
Yarns
Fabrics
Clothing

Technical textiles

- **Technical textiles** are manufactured for **non-aesthetic purposes**, where **function is the primary criterion**.
- Products include the followings:
- Protective clothing for firefighters, welders and astronauts;
- medical applications such as implants;
- geotextiles that include reinforcements for embankments.
- Technical textiles have become one of the hottest growth categories for the industry.

Revealed Comparative Advantage (Specialization Index)

- **Balassa's** measure of relative export performance by country and industry, defined as a country's share of world exports of a good divided by its share of total world exports.
- The Balassa index measures the degree of specialisation of export products.
- If the index for a product is more than 1, it means that product involves specialisation.
- ***If it is less than 1 it means that no specialisation is involved in the product***.

Specialization index (RCA) Greater or less than unity

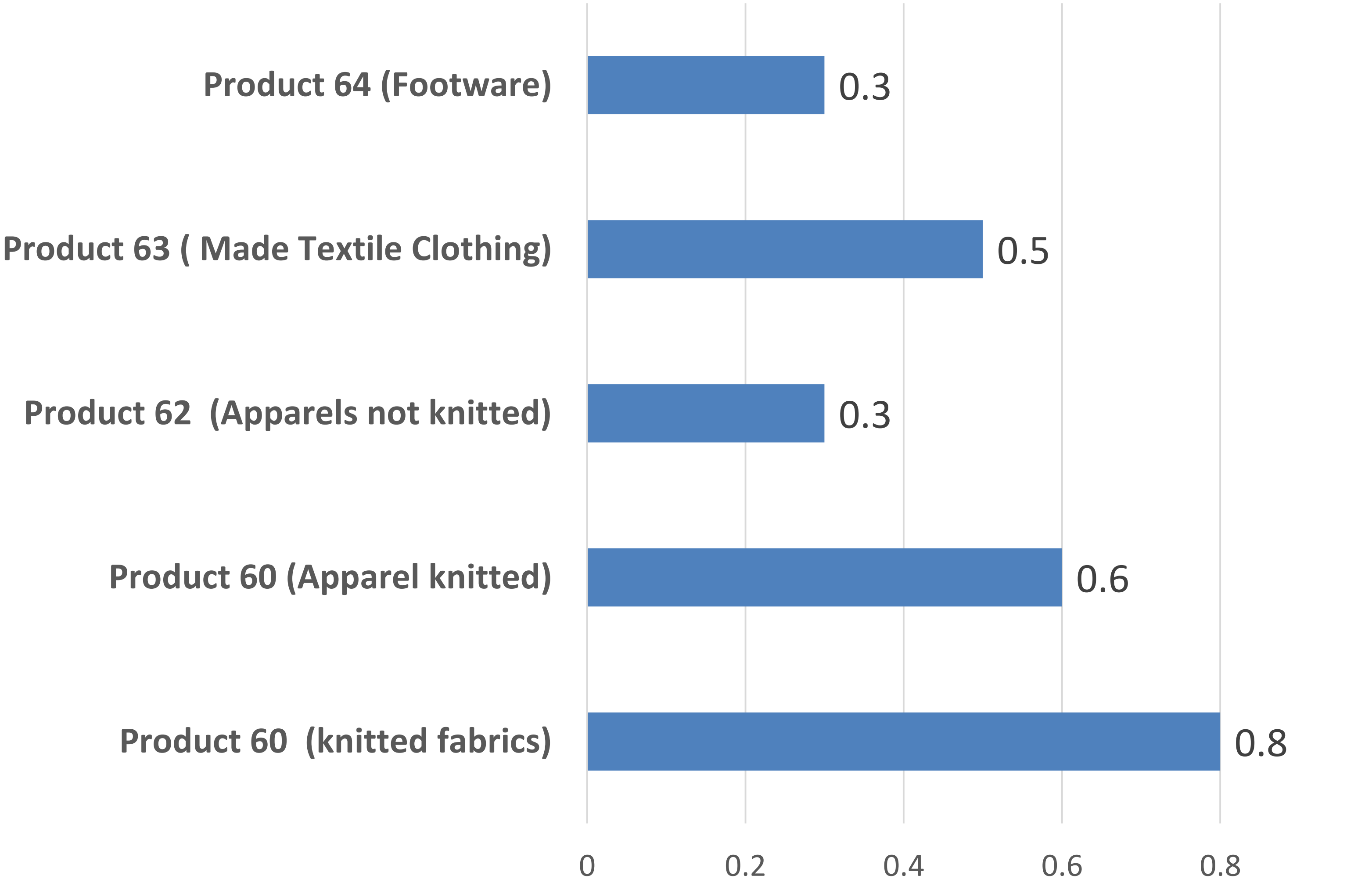
$$RCA = \frac{\mathit{Share} \text{ of textile in total exports of Thailand}}{\mathit{Share} \text{ of textile trade in total world trade values of all commodities}}$$

If RCAj >1, the country is said to have a *revealed* comparative advantage in industry *j*, since this industry is more important the country 's exports than for the exports of the world.

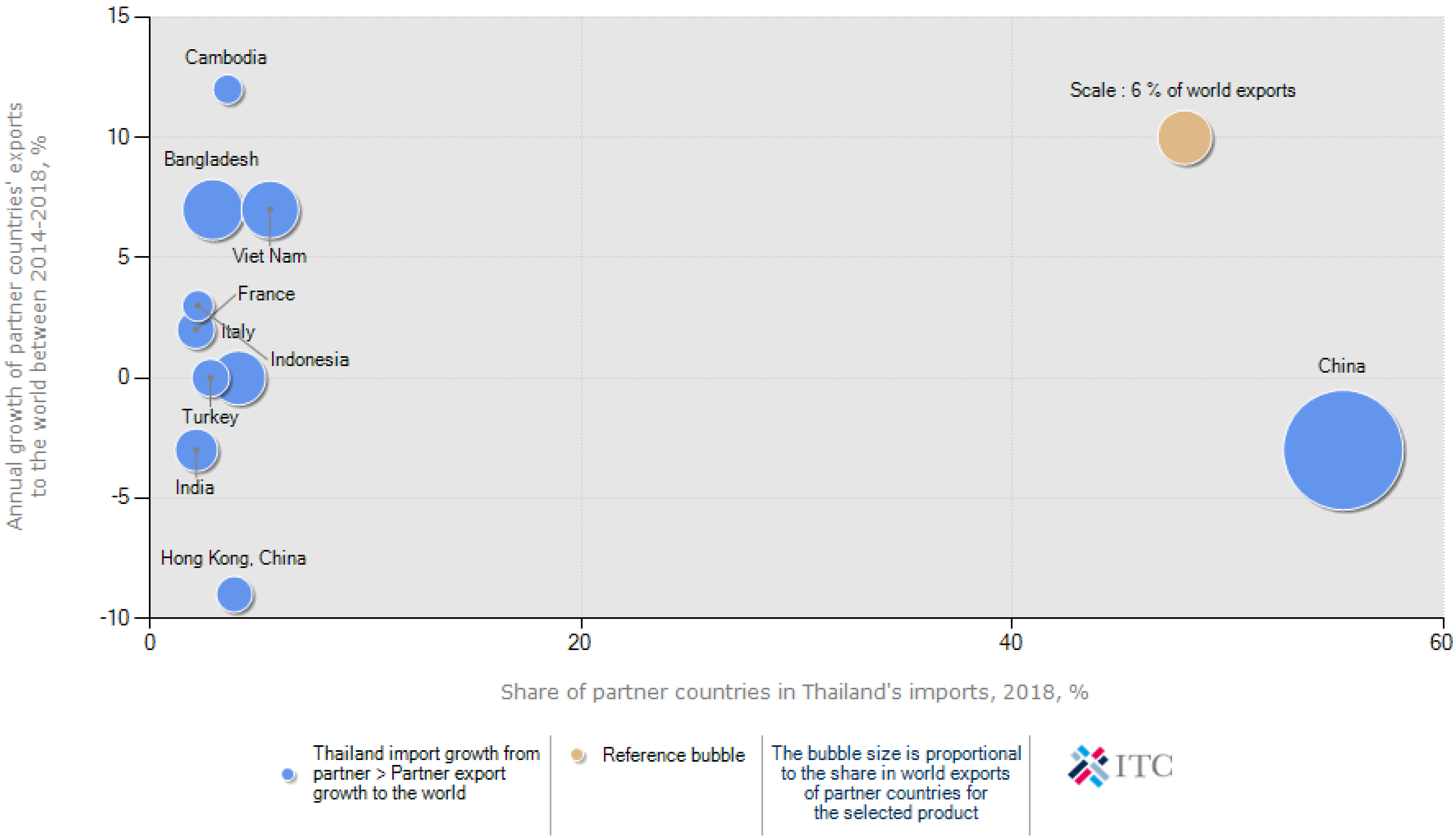
One should compare the share of textile exports in Thailand's total exports with the share of textile exports in the world's total exports.

The Balassa index is therefore essentially an export share of the commodity in the country' total export normalized by that commodity's share in total world trade.

Revealed Comparative Advantage Index: 2016



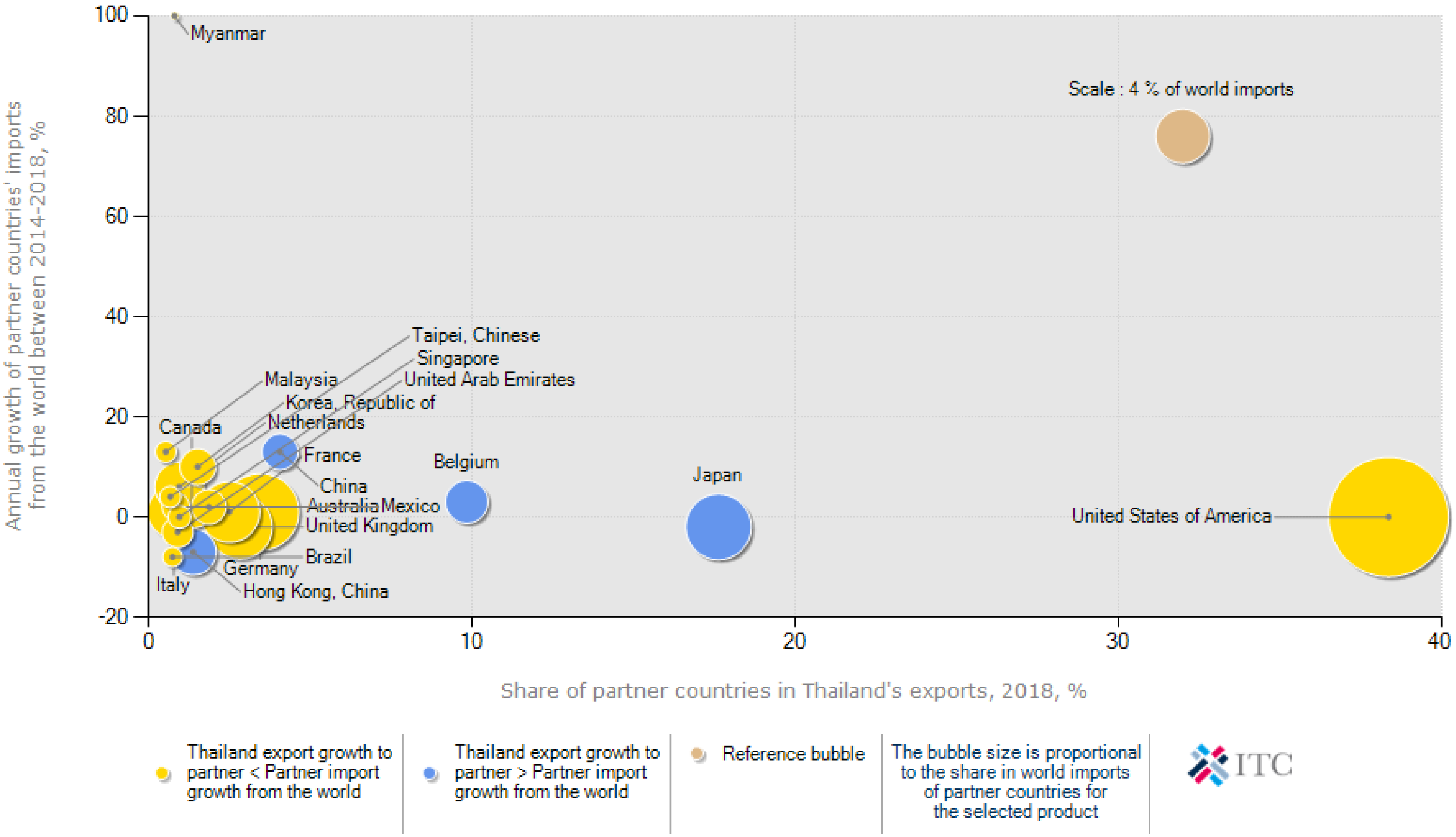
Prospects for diversification of suppliers for a product imported by Thailand in 2018
Product : 62 Articles of apparel and clothing accessories, not knitted or crocheted



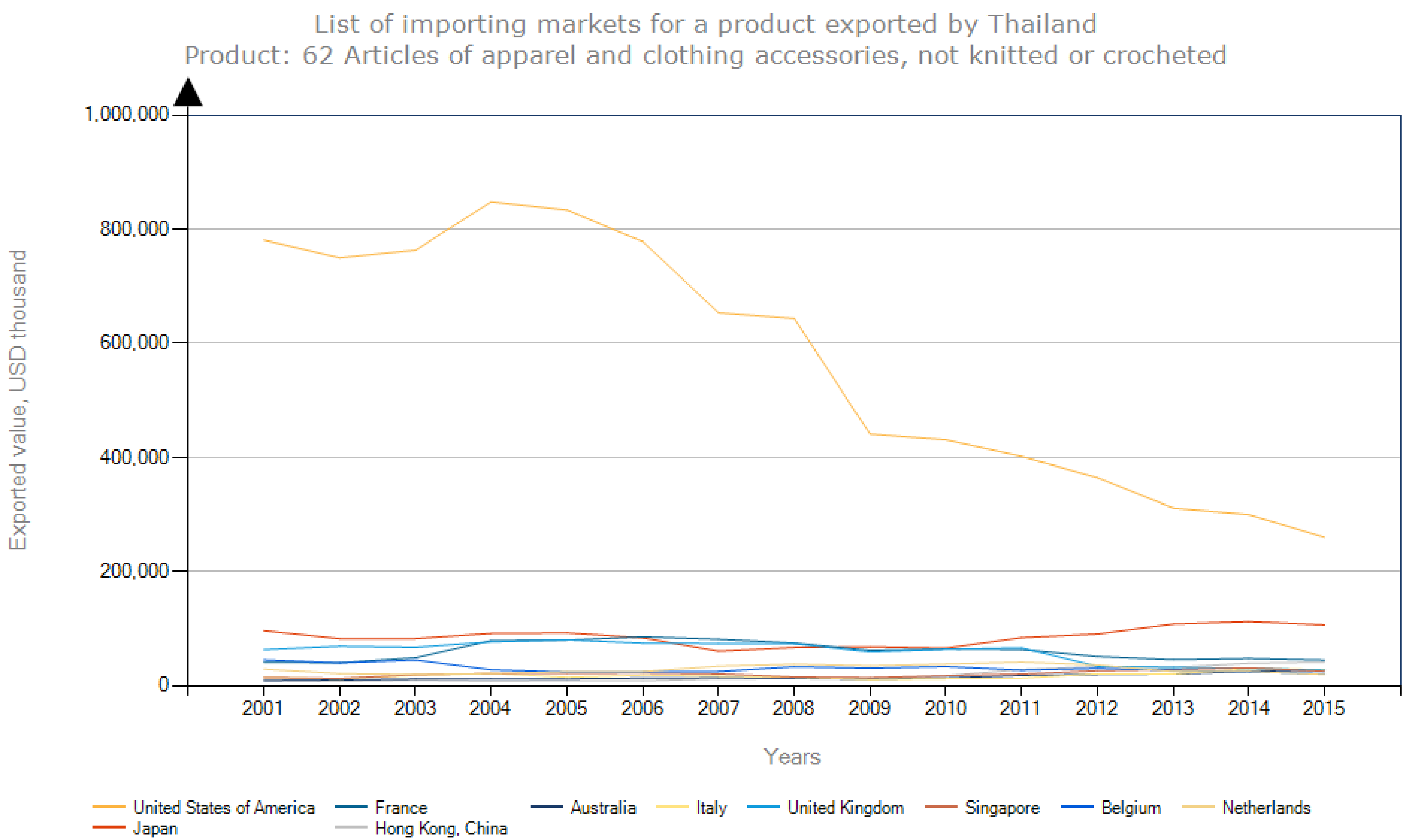
Textile: A falling star

- **The booming garment industry in China had led Chinese producers to focus more on their home market, which would create opportunities for Thai businesses.**
- More than 90% of Japan's garment imports come from China, leaving the Japanese market open if China switches focus away from Japan.

Prospects for market diversification for a product exported by Thailand in 2018
Product : 61 Articles of apparel and clothing accessories, knitted or crocheted



Thailand's exports of apparel and clothing (Product 62 not knitted) 2001-2015

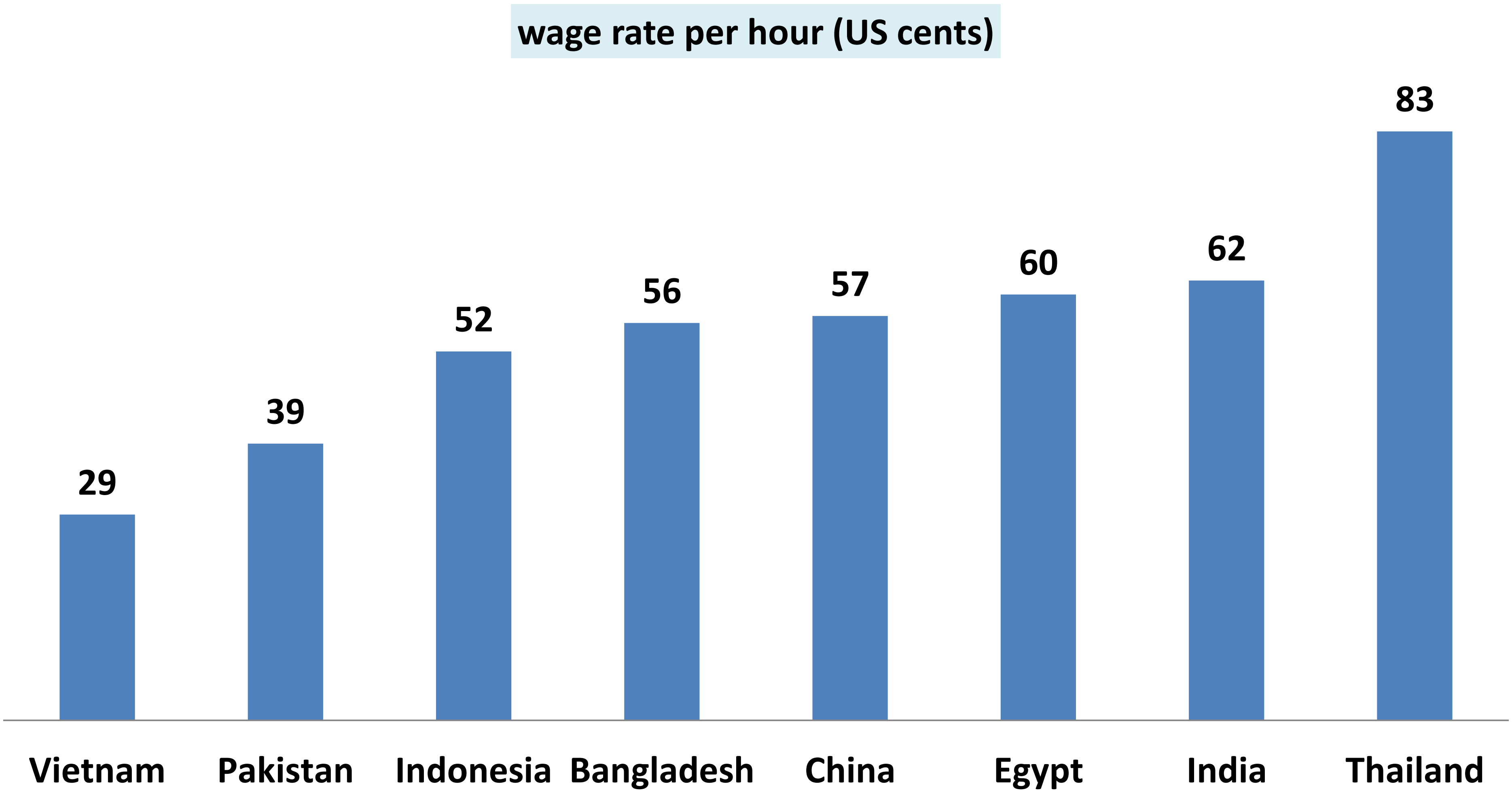


How to attract FDI

- Textile production costs in Vietnam were 19.5 per-cent lower than those in Thailand, because of import-duty exemptions for raw materials, cheaper labor and lower energy costs.
- Thai workers in all sectors earn average wages of US$14 (Bt479) per day
- The hourly minimum wage in the US is 15 dollars.
- Workers in Vietnam and Pakistan earn the least: $3.7 a day.
- Depreciation of the dong and appreciation of the baht divert FDI from Thailand to Vietnam.

Thai Garment Manufacturers Association (TGMA): **labor shortage crisis**

- "We would call this period a labor crisis. Right now we have a shortage of 50,000 to 60,000 people in the industry, and it should definitely reach 60,000 by next year," said the TGMA president.
- A main contributor to the shortage is the fact that prices of agricultural products have been increasing, shifting labor from the garment sector to farming.
- Thailand has 400,000 people working in the garment industry.
- Can immigrant workers ease Thailand's labor shortage?


wage rate per hour (US cents)
29
39
52
56
57
60
62
83
Vietnam
Pakistan
Indonesia
Bangladesh
China
Egypt
India
Thailand

China’s success story

- China and India, despite having higher production costs and fewer tax privileges than Vietnam, are more attractive in terms of larger-sized markets and infrastructure.
- What are other factors attracting foreign direct investment?
- Exchange rate and GSP.

Subsidized research can create product differentiation

- Board of Investment (BoI) approved incentives for *Innovation Textile Research* Co for its 20-million-baht investment in a research and innovation factory in Samut Prakarn.
- Innovation Textile Research will develop textiles and garments, with distinctive features such a

UV protection, Free air flow and a cotton-like ability to absorb perspiration easily.

- Technical spillovers deserve public subsidies on research and development (positive externality rule).

Innovation Textile Research Company

- In the first three years *the innovation textile research company* plans to develop garments using special materials that can ***reduce the wearer's urge to smoke.***
- It also manufactures fabric used for ***wound bandages.***
- In the future, the Thai company plans to develop and patent **garments** able to **capture solar energy** to serve travelers, and license the technology to other entrepreneurs.

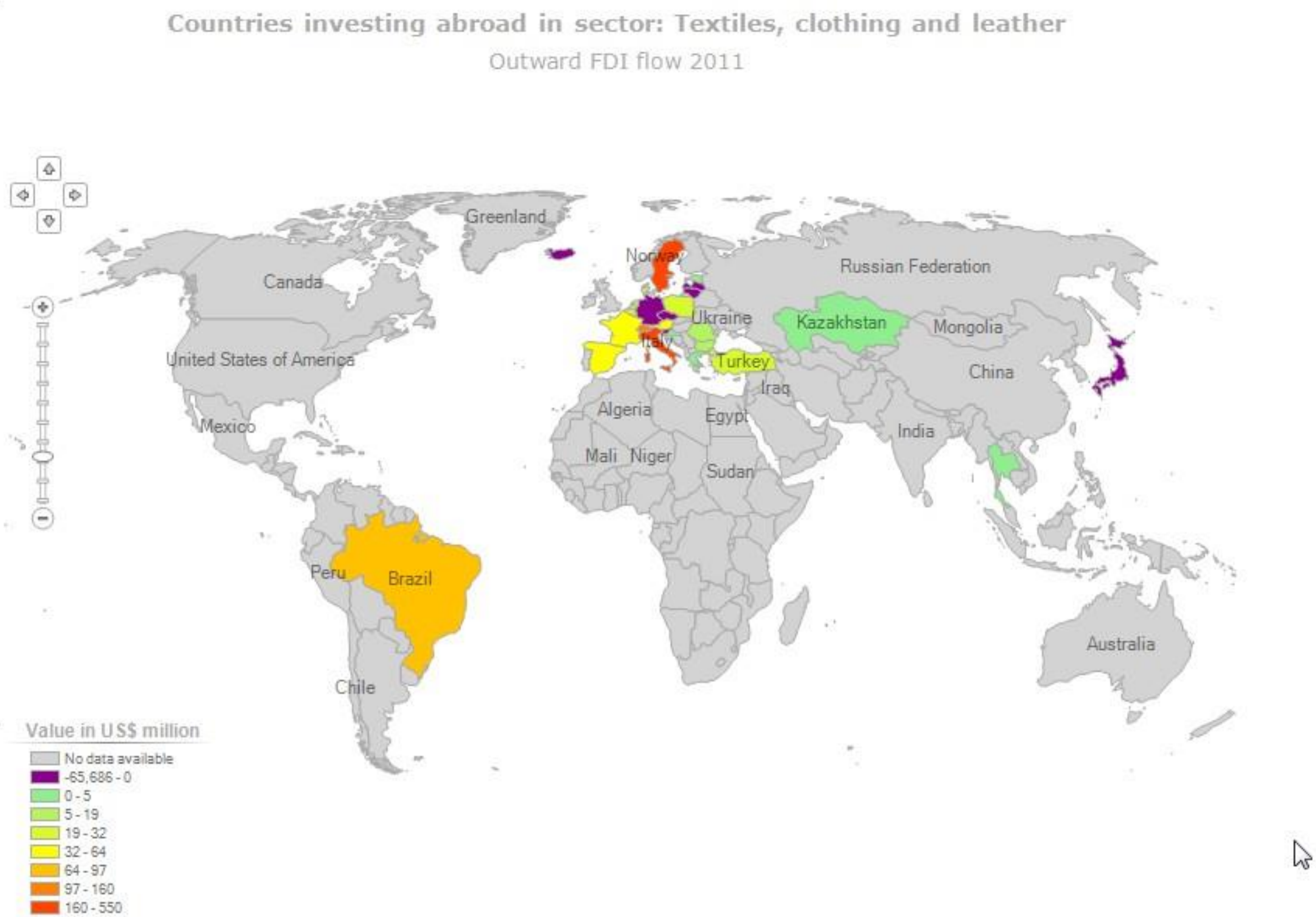
Retreat: Falling share of garments in the US market

- According to the Thailand Textile Institute, the market share of Thai-made clothing in the US has been falling steadily and is now 3.4%, down from **double digits** several years ago, due to ***intensified price competition*** from products shipped from China, Vietnam, Cambodia and Bangladesh.
- Nominal wages rise faster than labor productivity growth in garment industry (labor-intensive product).

Outflows of FDI

- *Myanmar, Laos and Bangladesh* are among the countries where the Thai Garment Manufacturers Association (TGMA) is encouraging members to invest
- Of the 1,600 factories in Thailand's garment industry, at least **five are moving to foreign countries**, where low-wage workforces are plentiful, with planned investments of 200 million baht each.
- Those five are among the 80 large-scale garment factories located in the country, including Cambodia.
- *But Cambodia will suffer from the Brexit, as the UK is its major market*.

FDI outflows in textile and clothing



Conclusion

- The importance of textiles and clothing industry reflects in mass employment, due to the nature of the industry: labor-intensive technology.
- Competitive characteristics are market and product diversification.
- Specialization index (RCA Index) shows losing competitiveness and lesser degree of specialization.
- The role of FDI has changed from increasing outflows, to declining inflows and increasing outflows
- Cost disadvantages in the industry are labor shortage, high wage rate and the lack of labor productivity growth, caused by the slowdown of FDI.