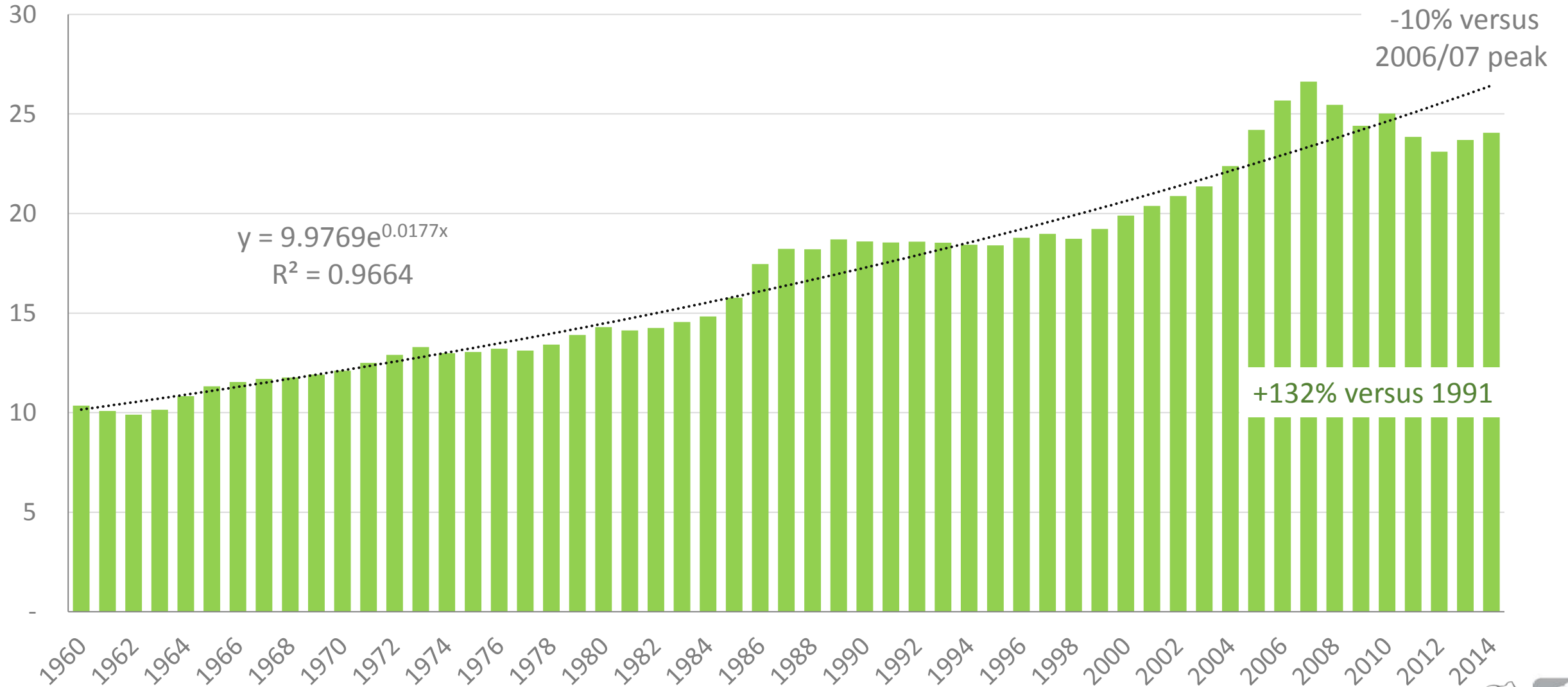


Overview

Cotton Fiber Consumption Remains Below Peak

million tons of mill-use



Drivers of Fiber Demand Growth

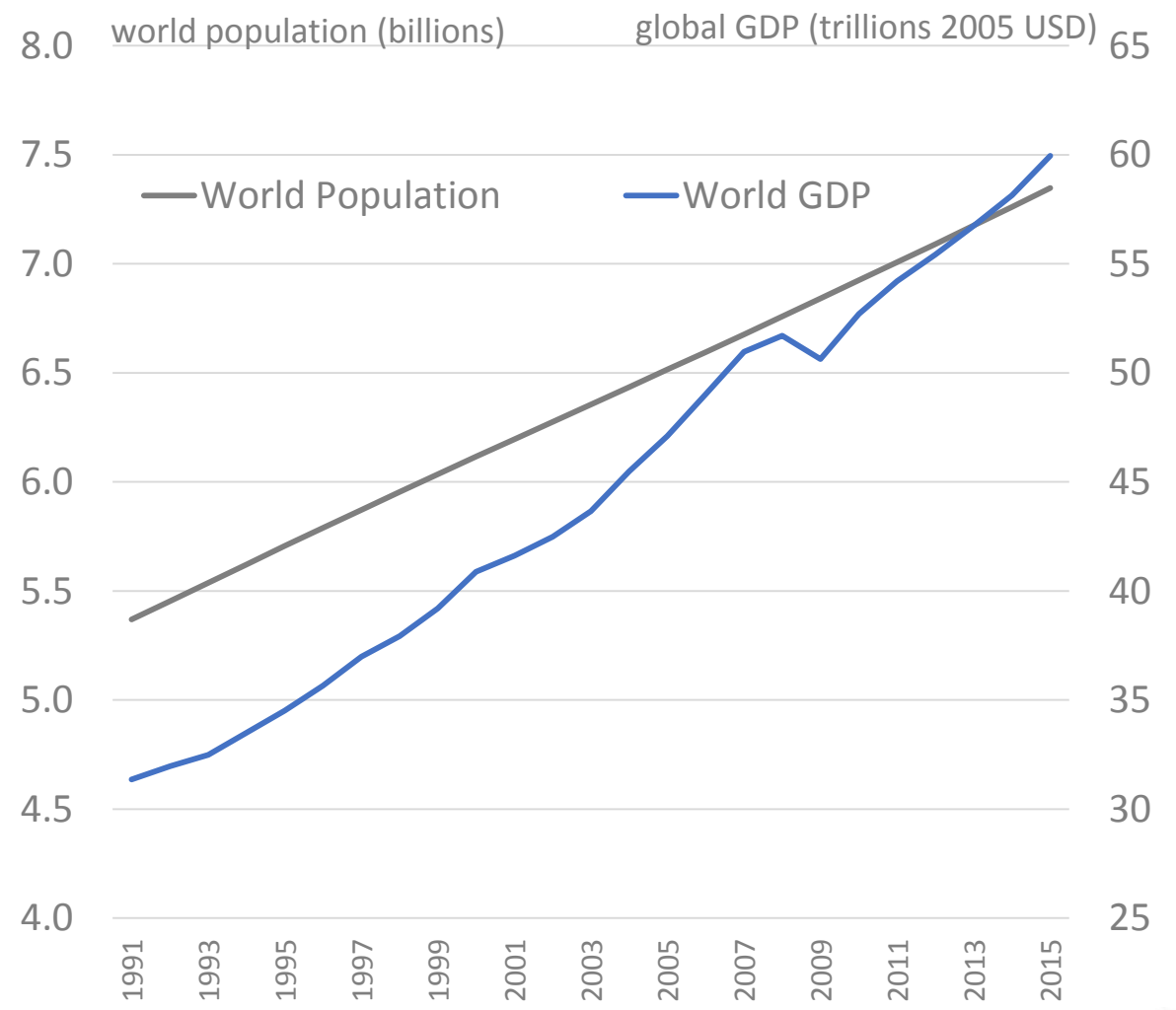
Population

Economic growth

Fiber price levels

Cotton prices relative to competing fibers

Principal Drivers of Fiber Demand

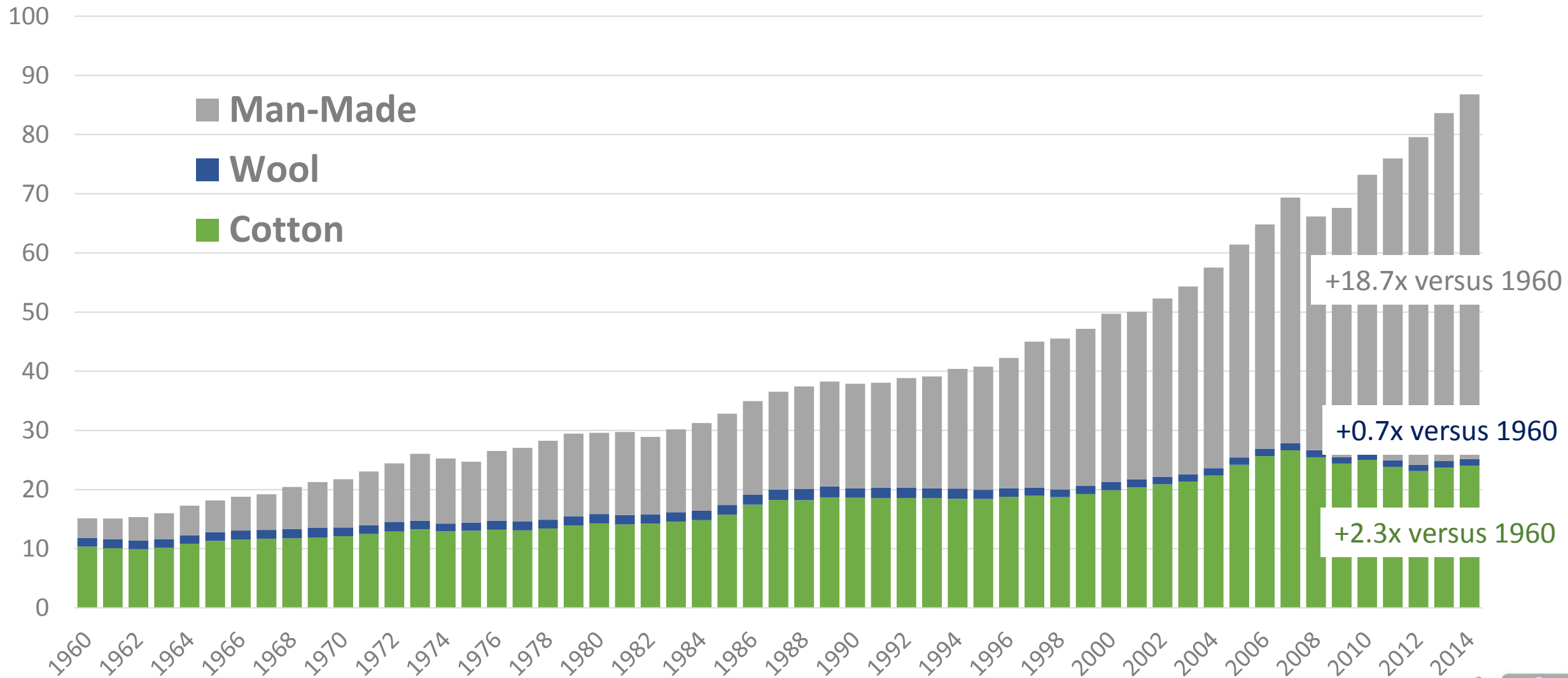


Source: World Bank



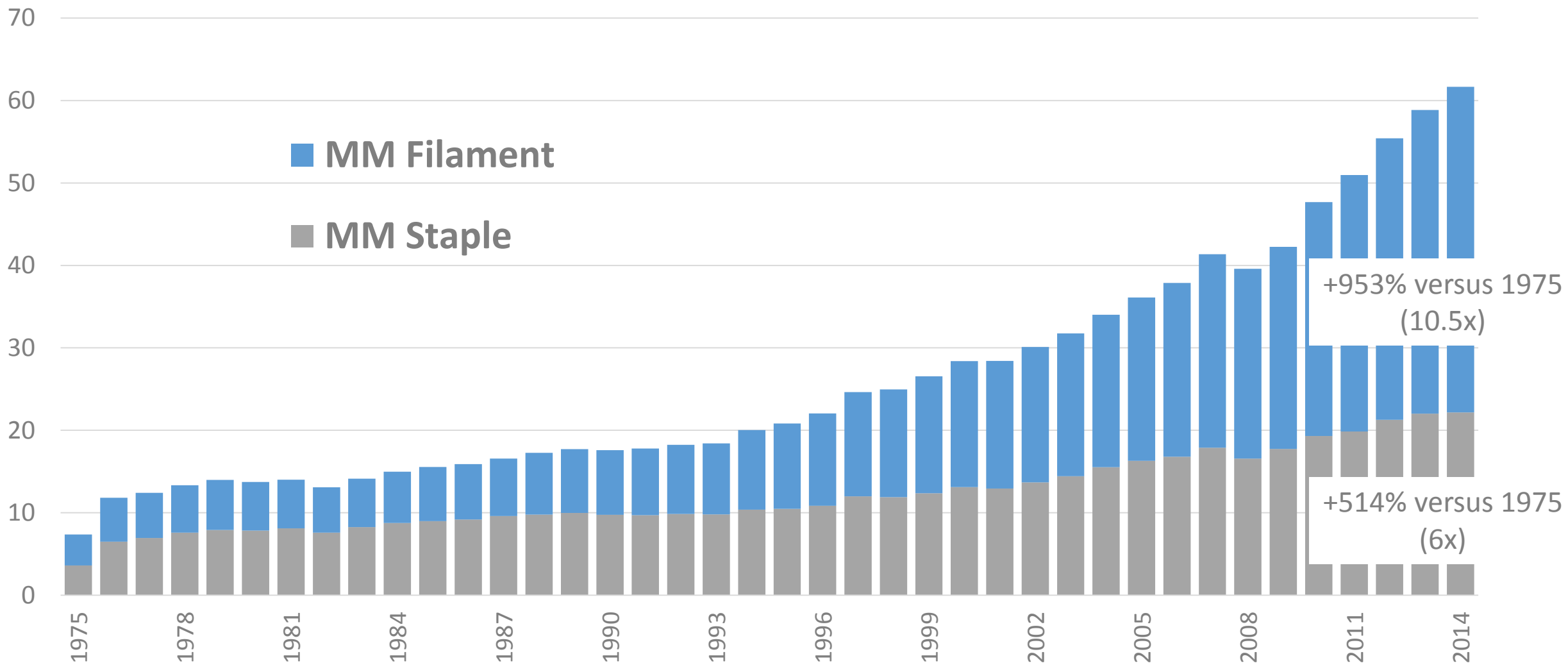
Growth in Global Fiber Demand

million tons of mill-use



Man-Made Fiber Mill-Use

million tons of mill-use

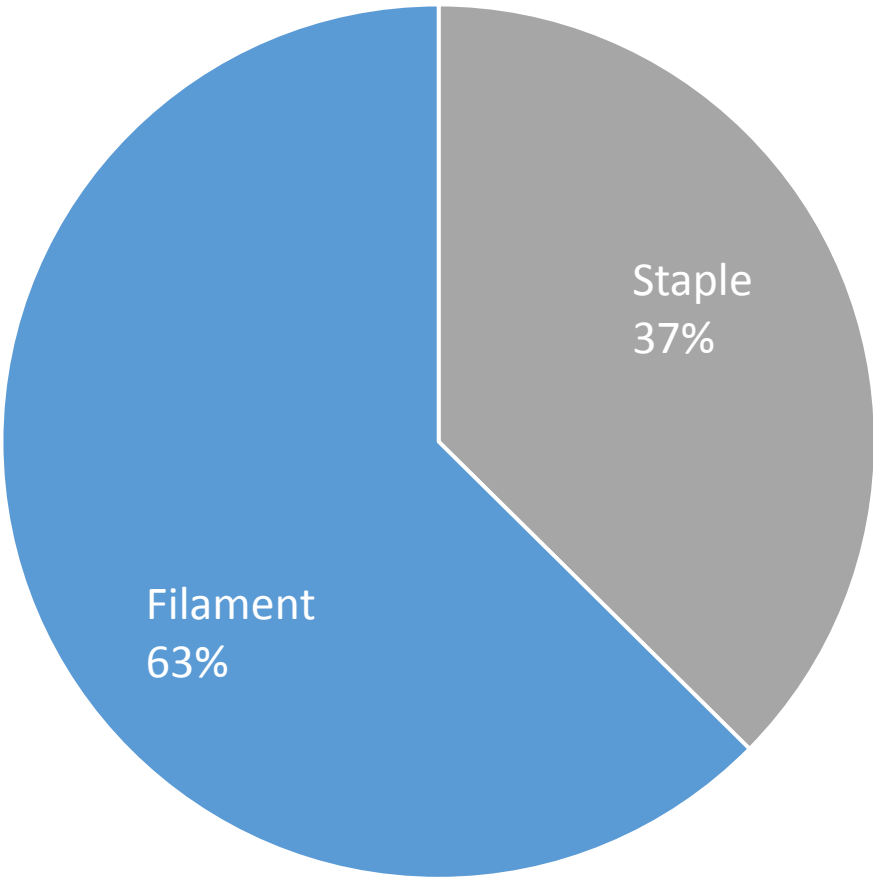


Source: Fiber Organon

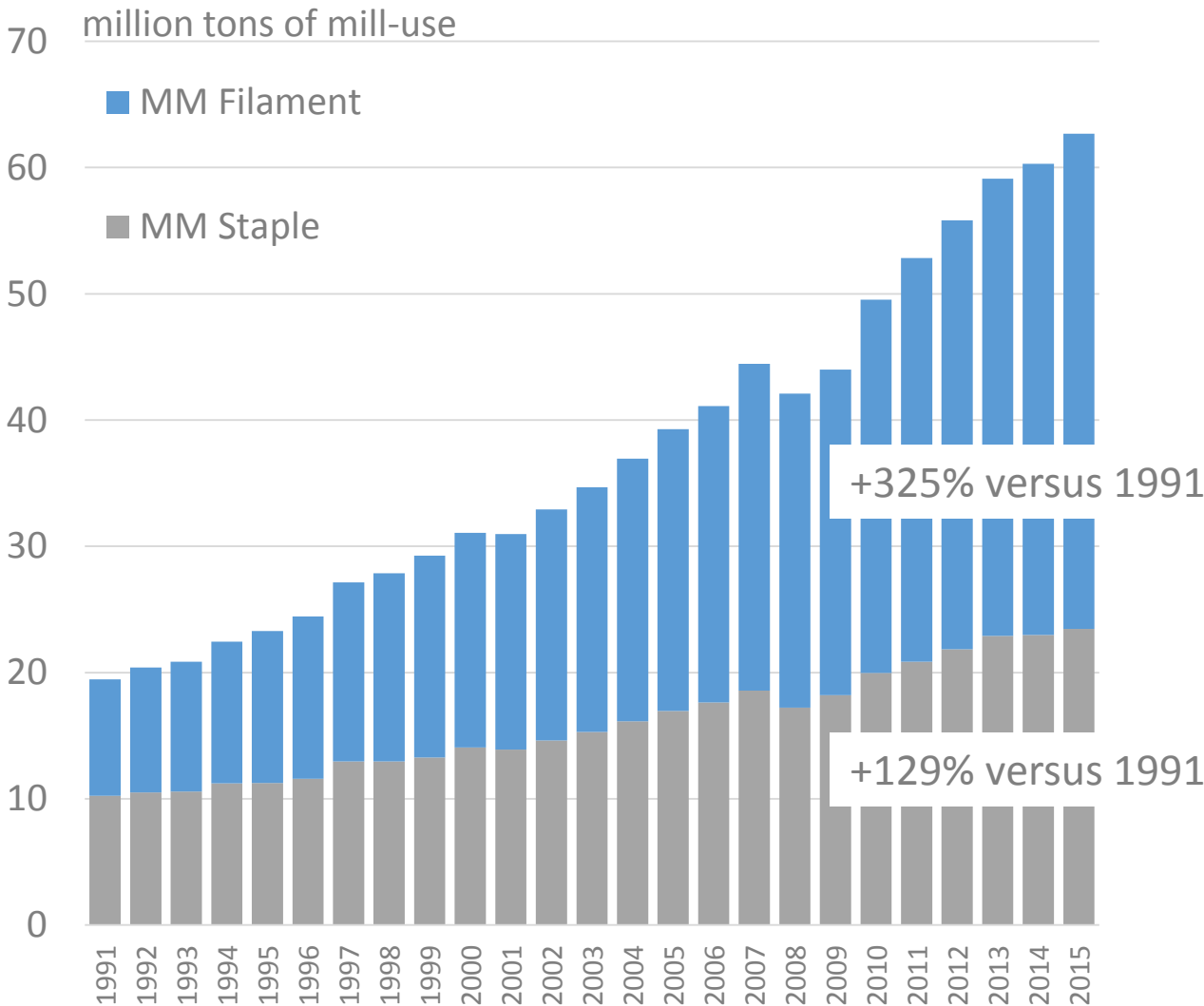


Man-Made Fiber Mill-Use

Composition of Man-Made Fiber Mill-Use in 2015



Growth in Man-Made Fiber Mill-Use 1991-2015

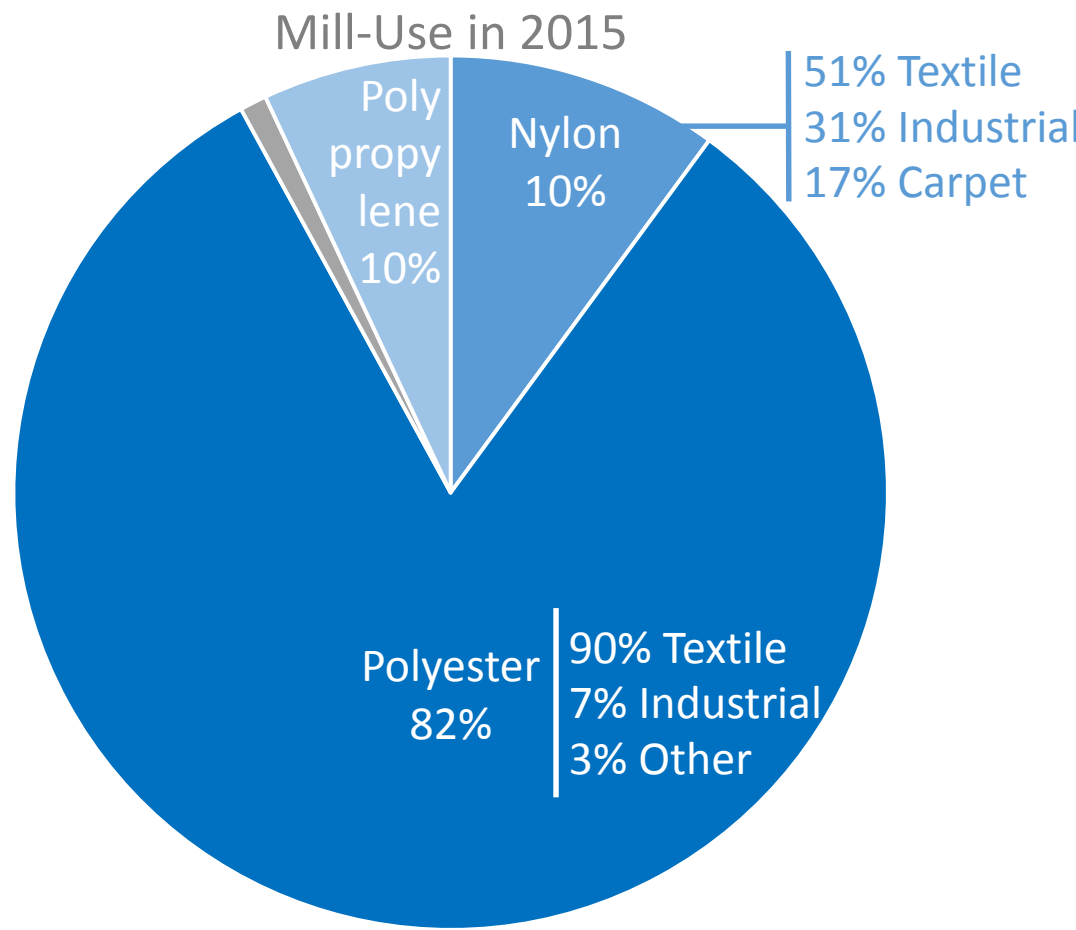


Source: PCI Fibres

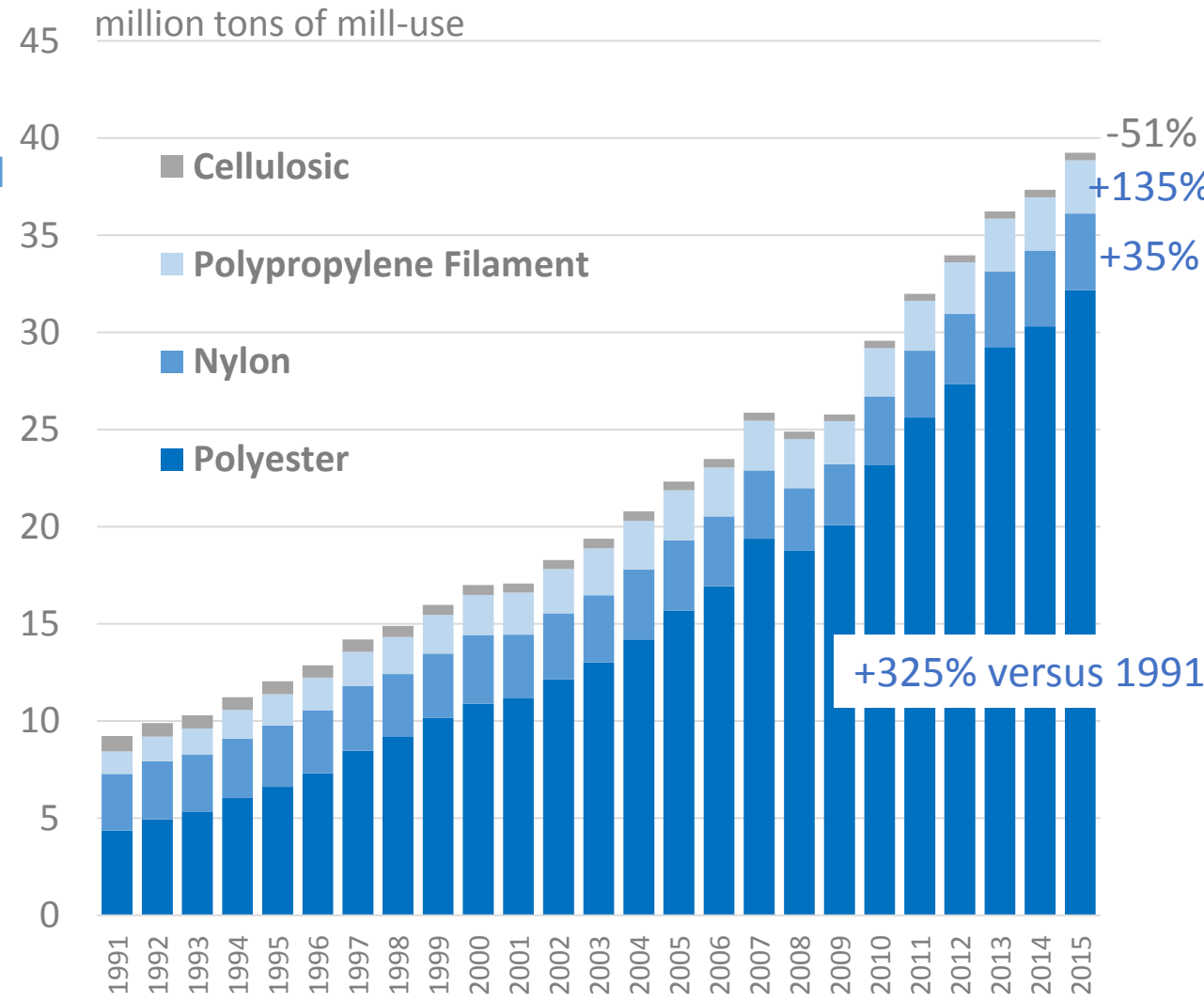


Man-Made Filament Mill-Use

Composition of Man-Made **Filament**



Growth in Man-Made **Filament** Mill-Use 1991-2015

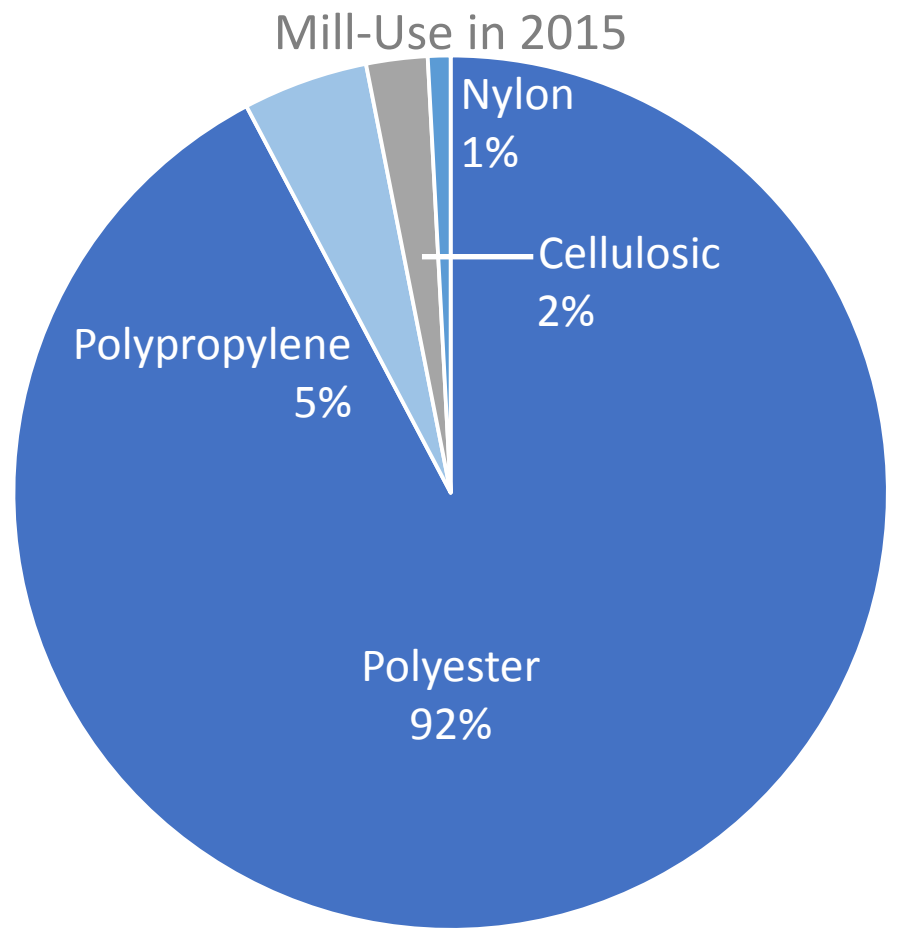


Source: PCI Fibres

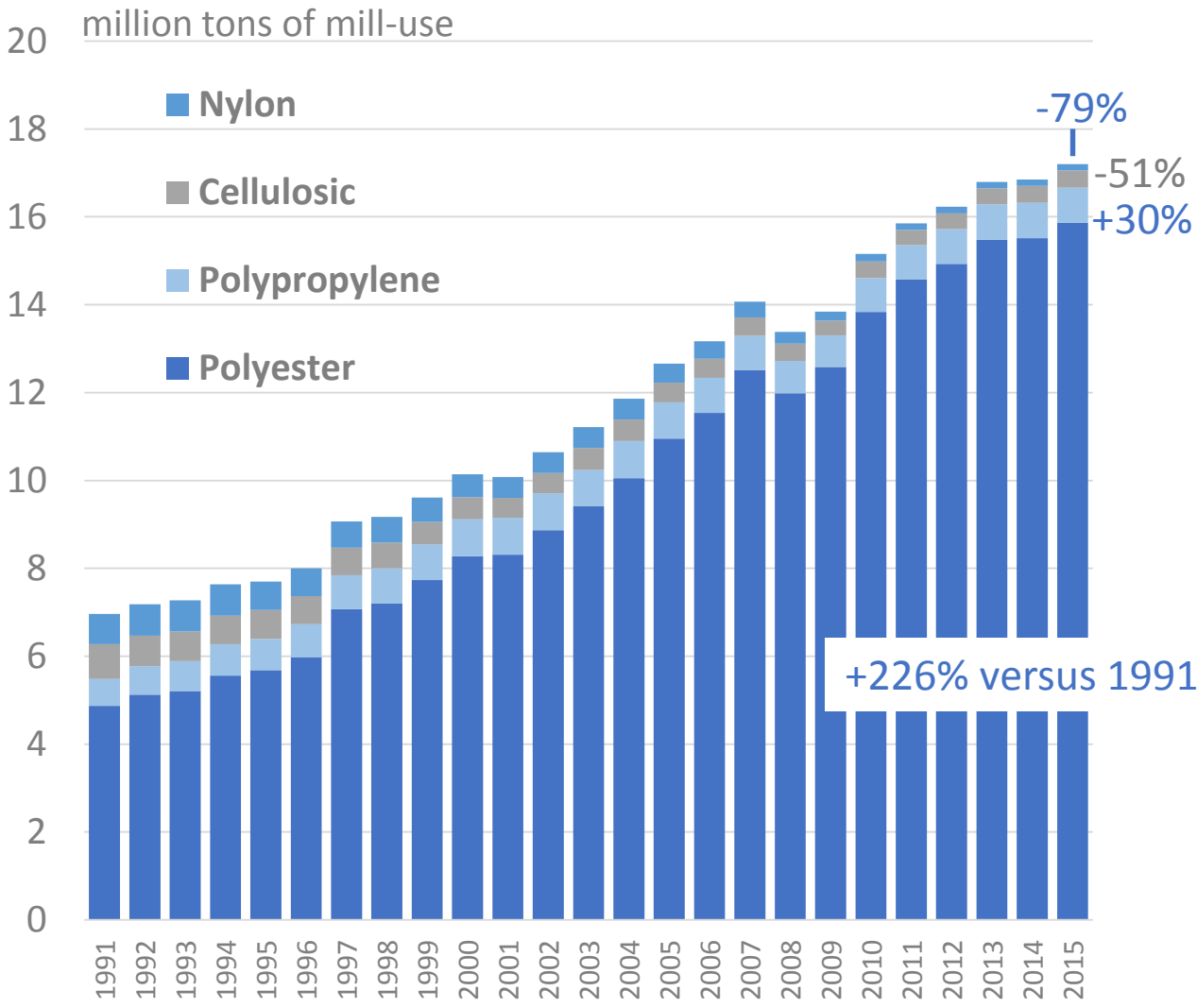


Man-Made Staple Mill-Use

Composition of Man-Made **Staple** Mill-Use in 2015



Growth in Man-Made **Staple** Mill-Use 1991-2015



Source: PCI Fibres



Determining Cotton's Share

Many different fibers to measure against

What is the fiber universe to compare cotton usage against to determine share?

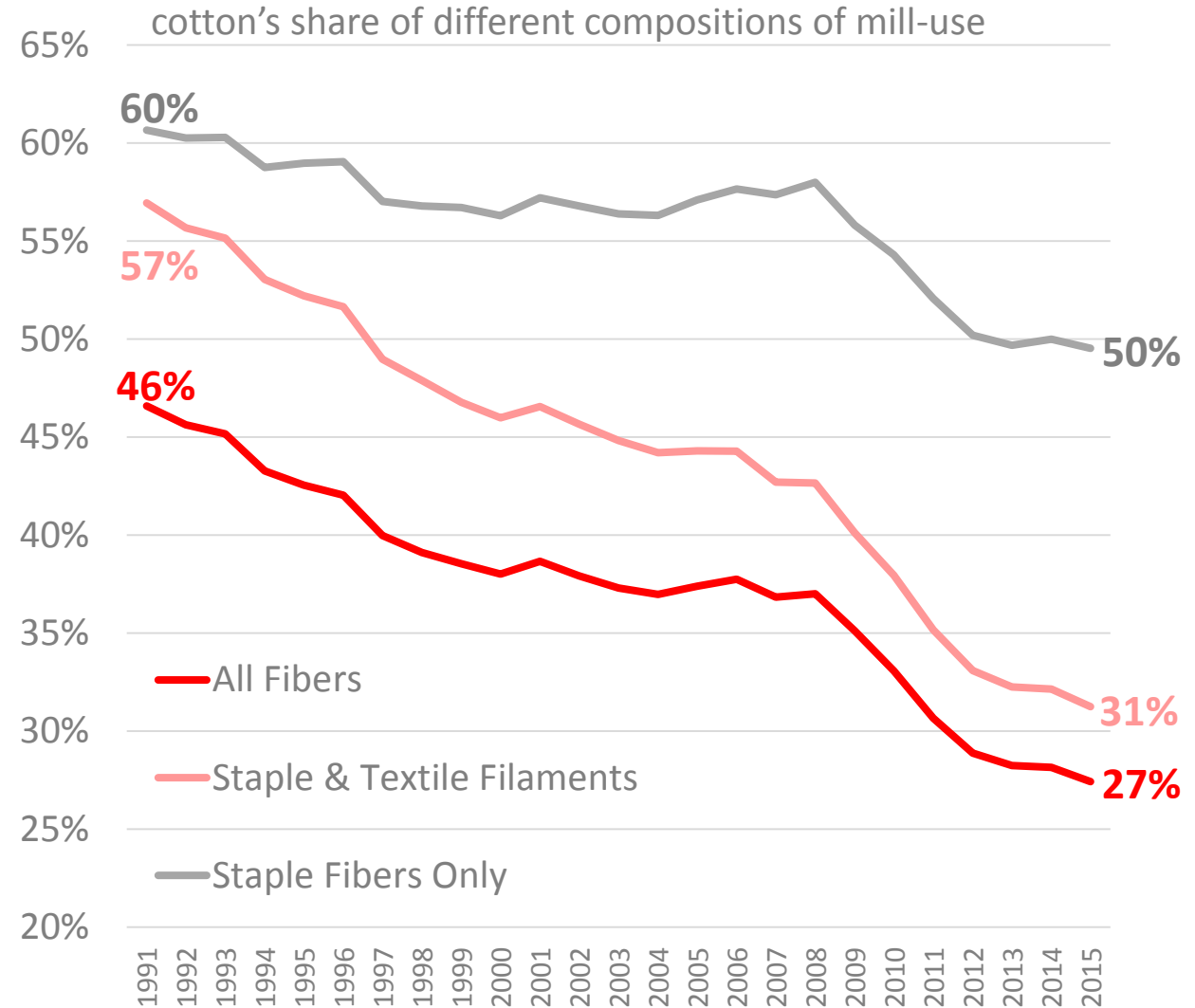
- Exclude industrial uses?
- Exclude filament?

PCI Fibres indicates certain end-uses for mmf staple and filament where cotton is not competitive

- Automotive applications, sacking/luggage, tarping/tenting, roping are examples

Future work could delineate these applications

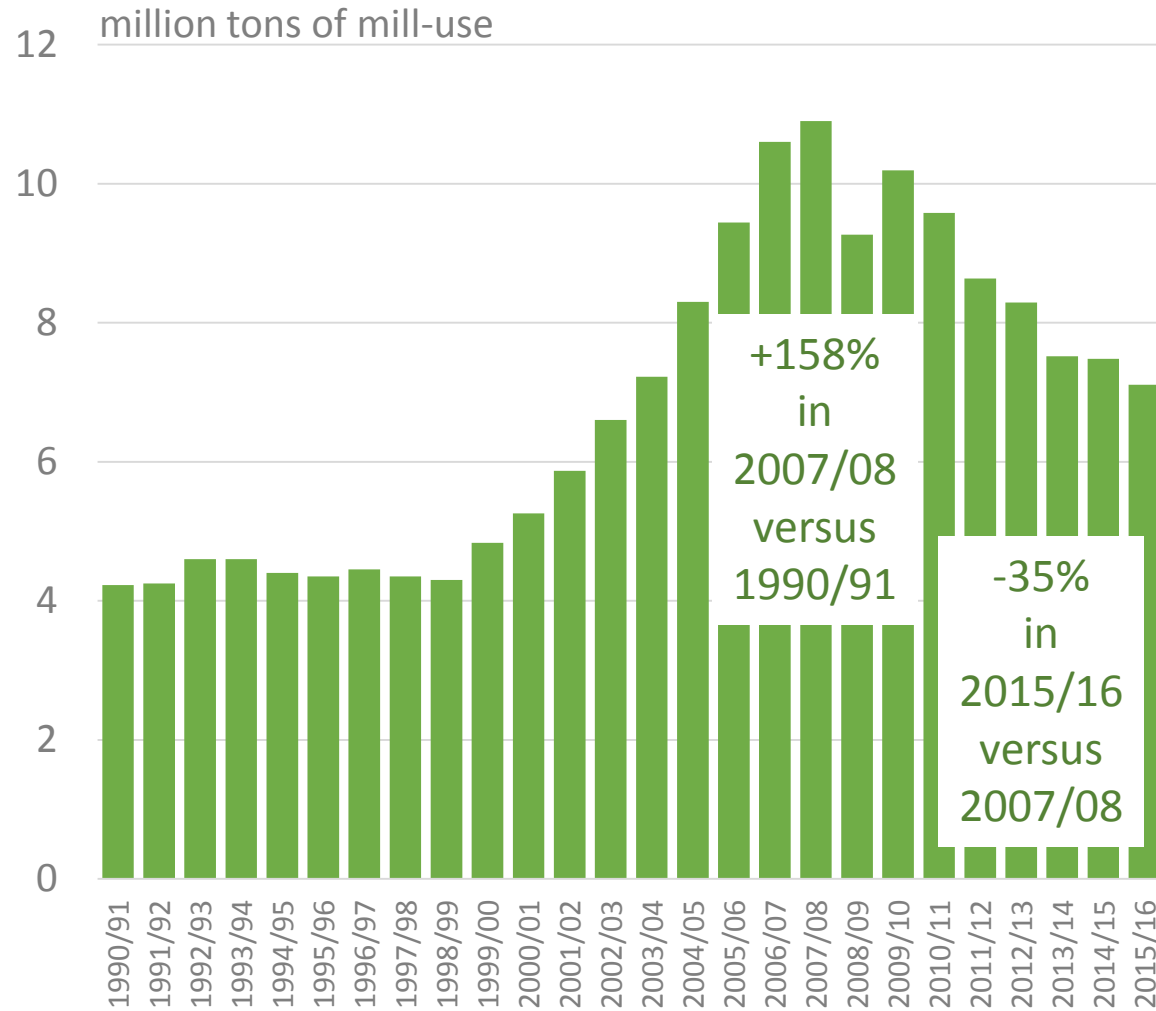
Change in Different Measures of Cotton's Share



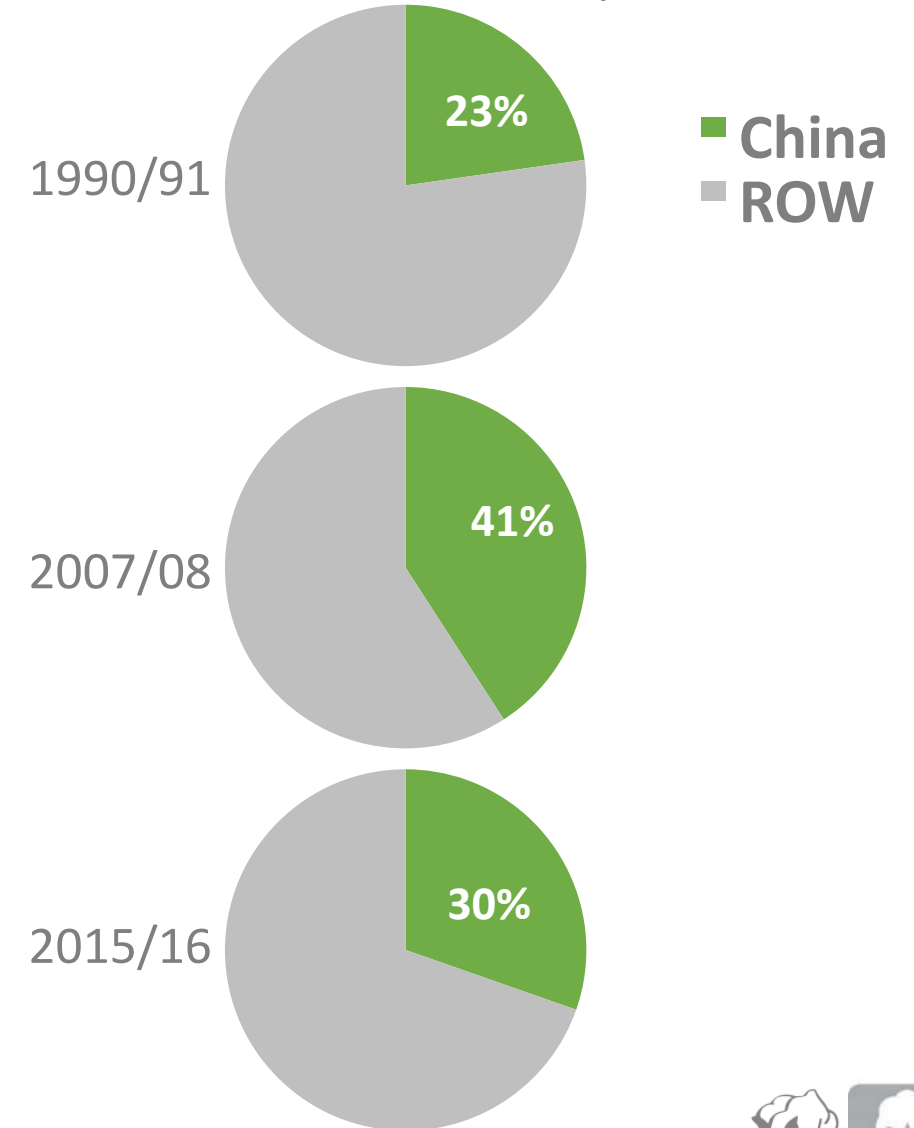
China

Chinese Cotton Mill-Use

Growth in Chinese Cotton Mill-Use 1991-2015

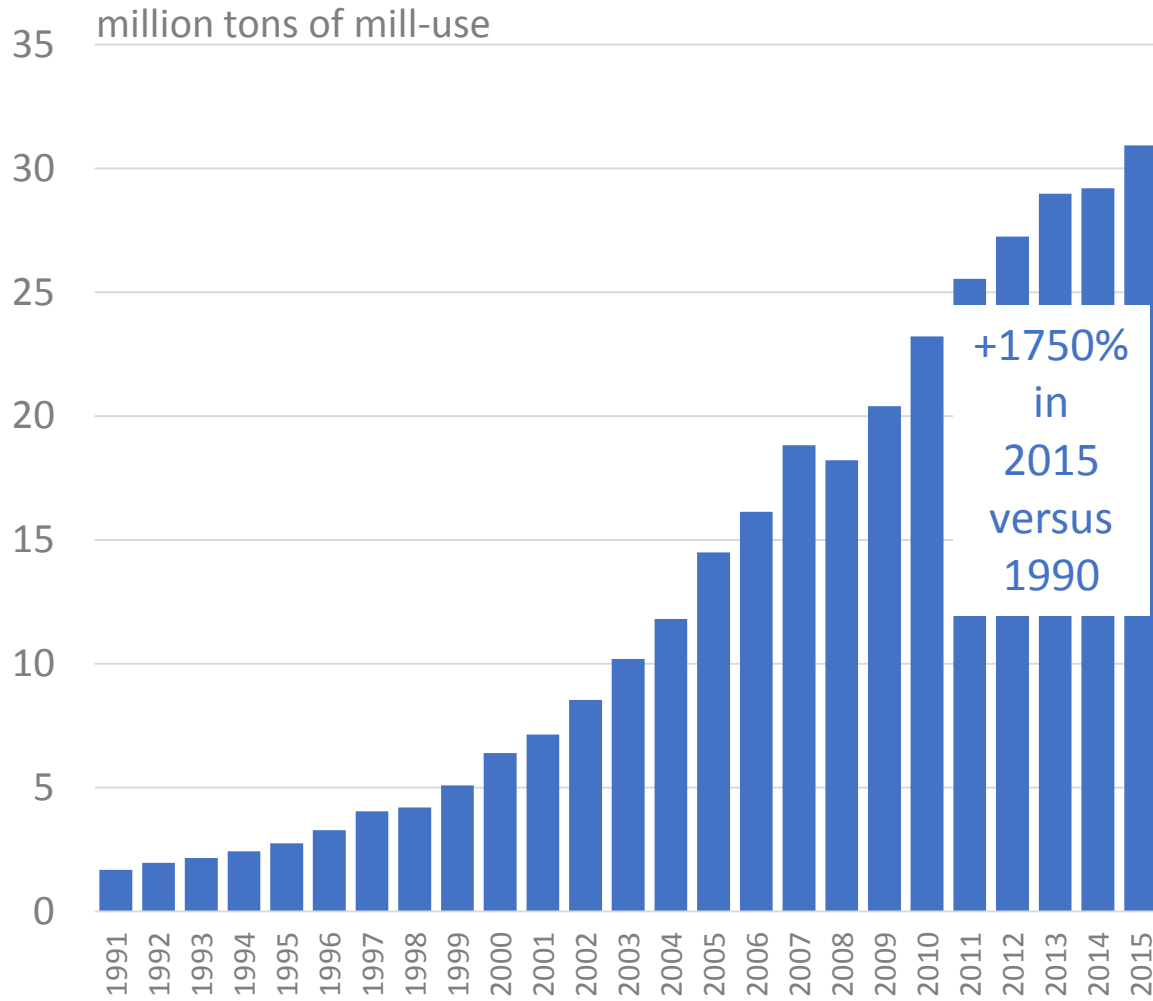


China's Share of Global Cotton Consumption

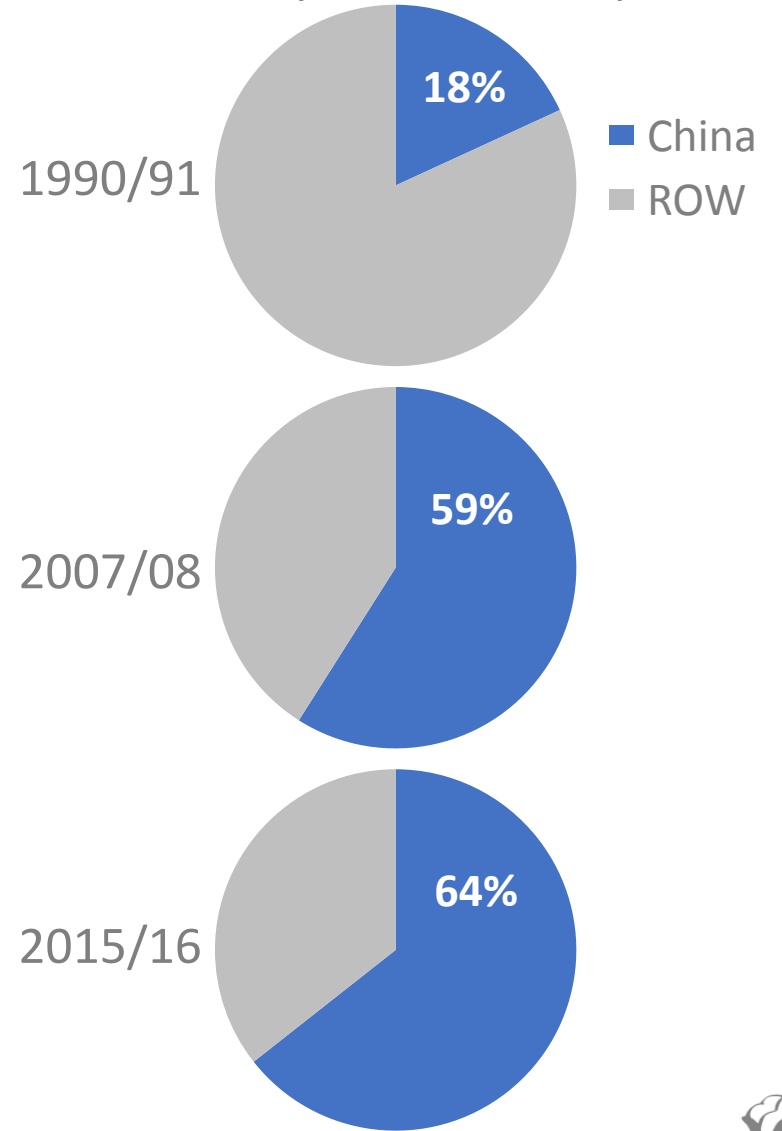


Chinese Polyester Mill-Use

Growth in Chinese Polyester Mill-Use 1991-2015



China's Share of Global Polyester Consumption

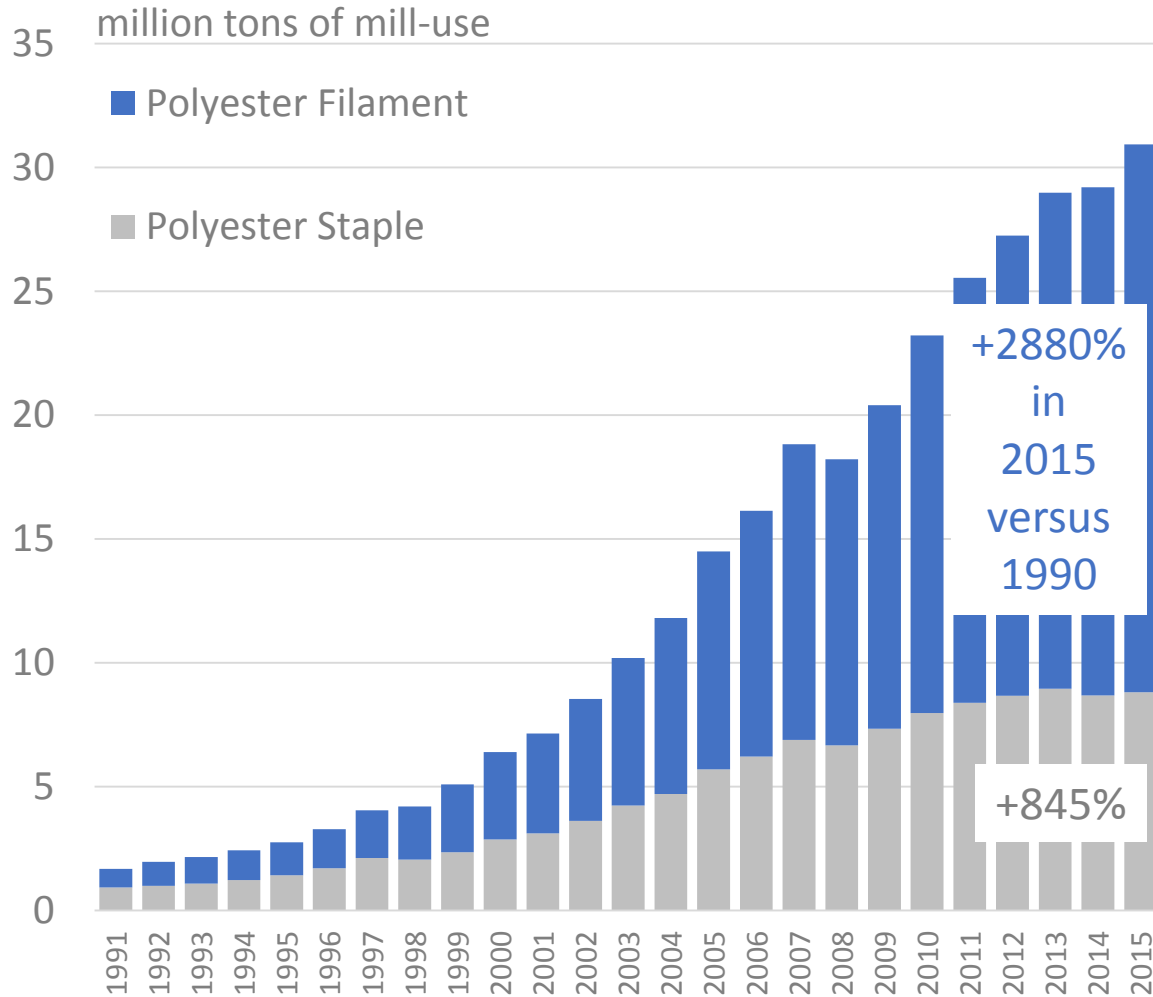


Source: PCI Fibres

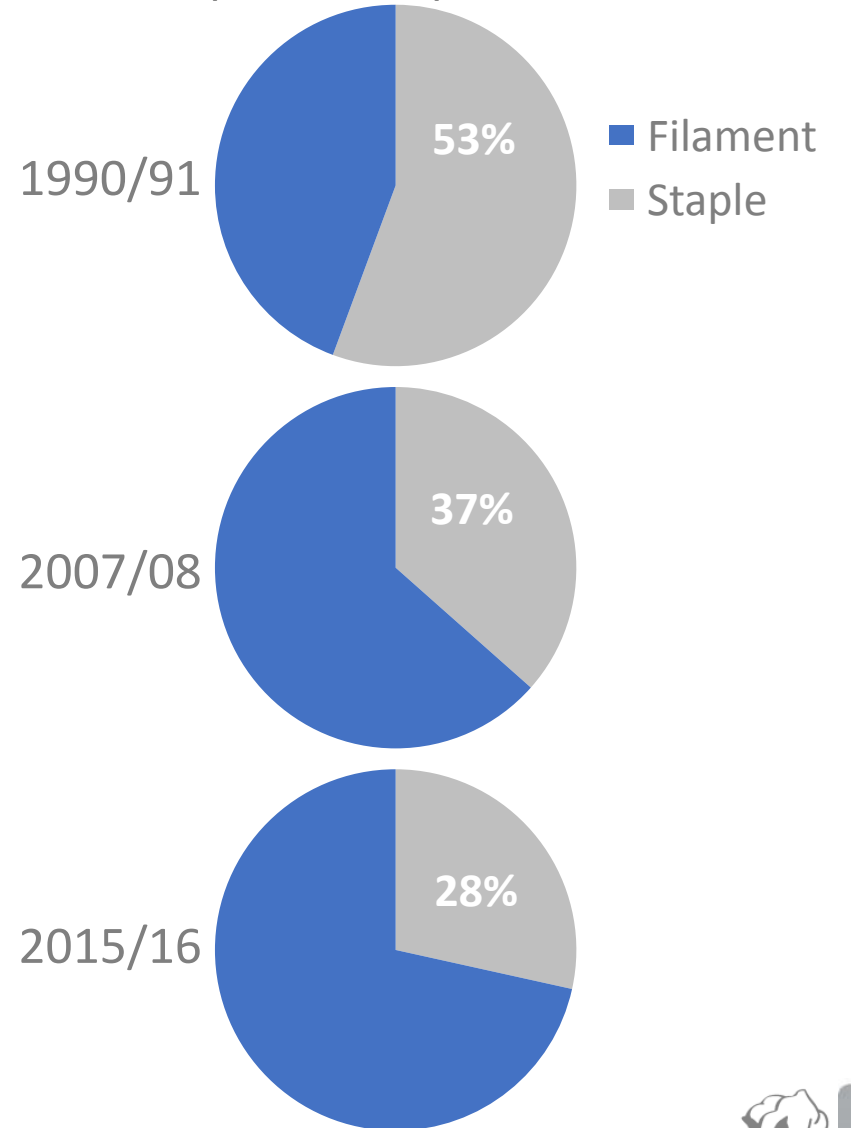


Chinese Polyester Mill-Use

Growth in Chinese Polyester Mill-Use 1991-2015

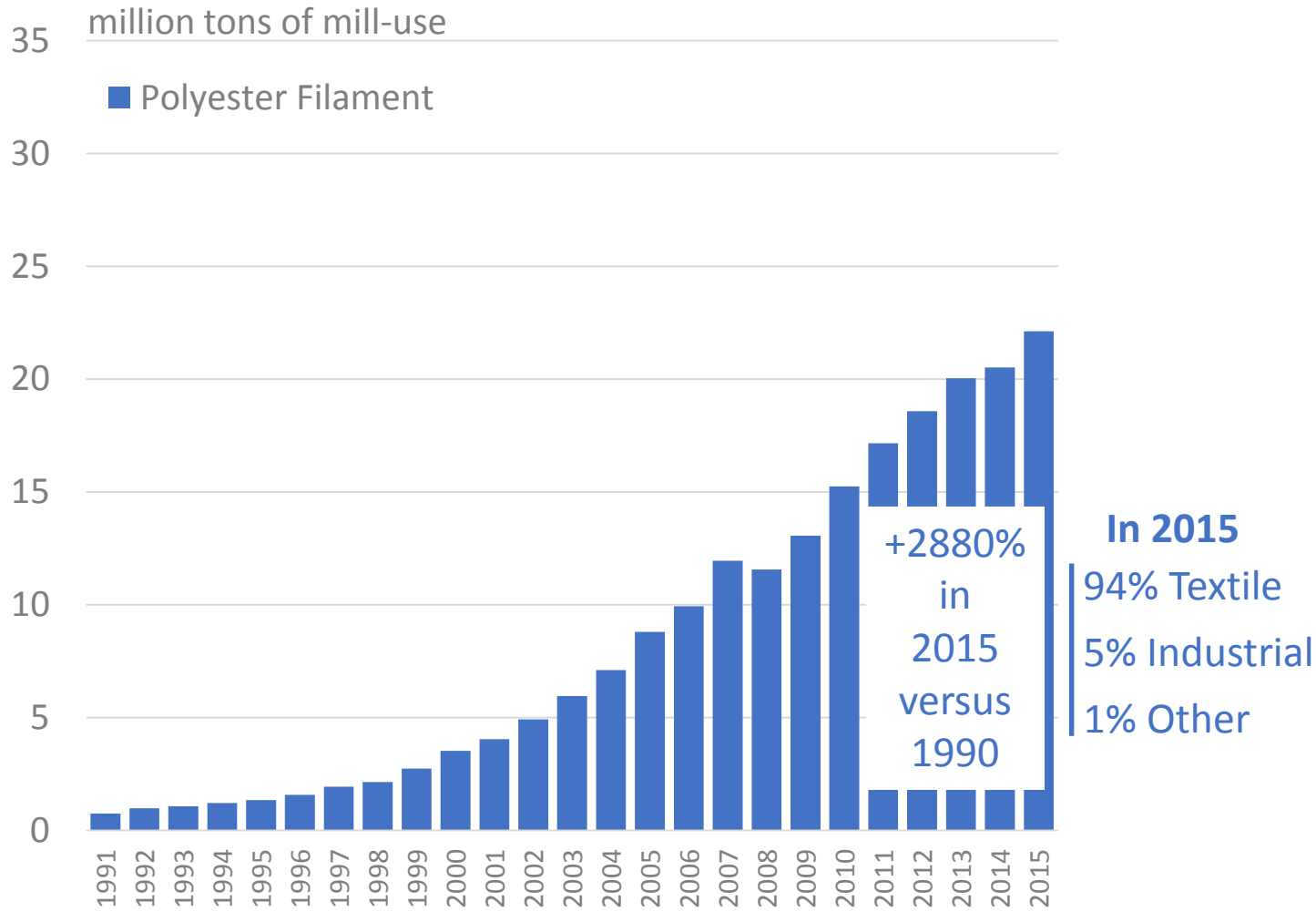


Shares of Chinese Polyester Consumption - Staple vs. Filament

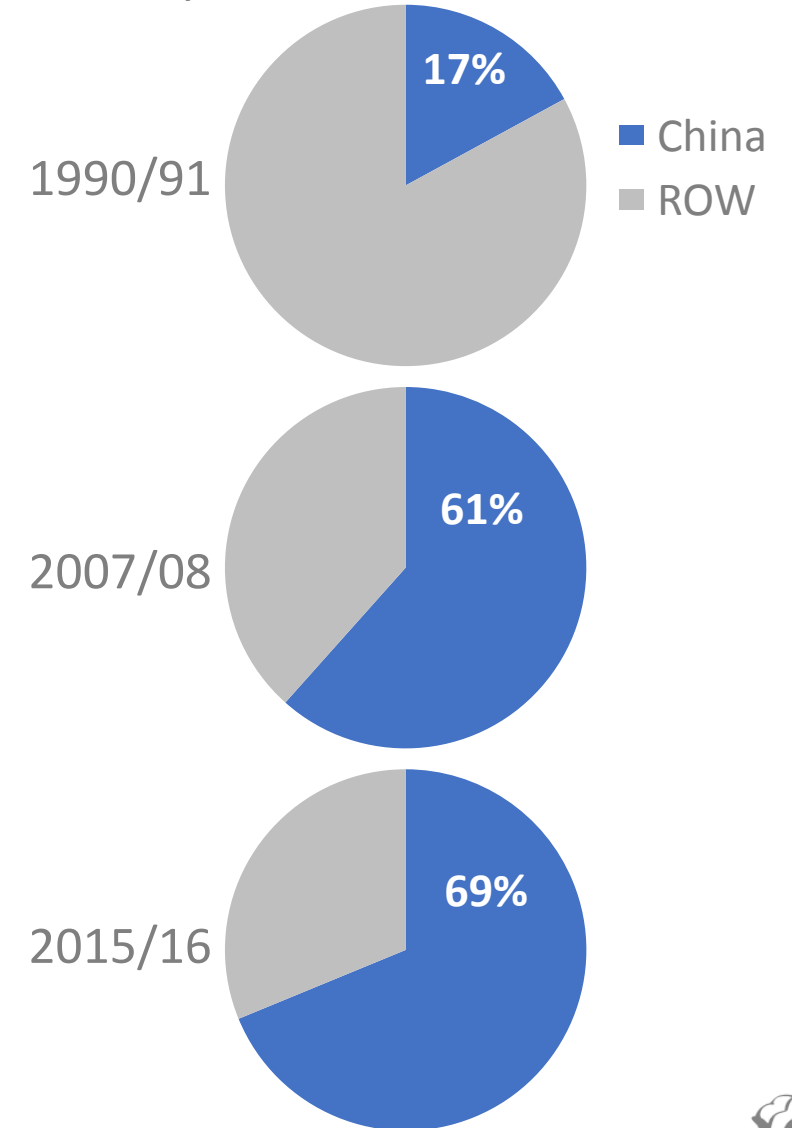


Chinese Polyester Filament Use

Growth in Chinese Polyester **Filament** Use 1991-2015

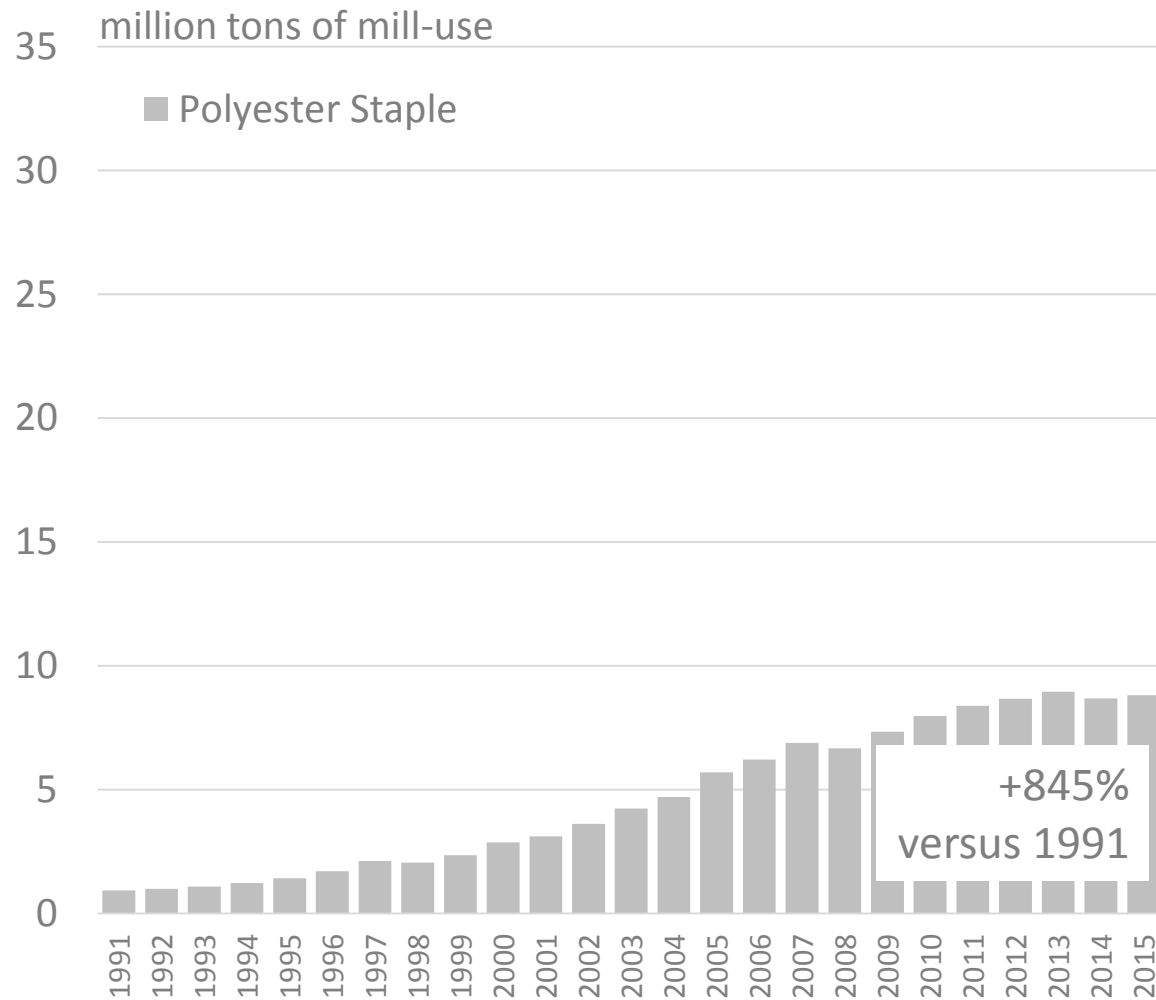


China's Share of Global Polyester **Filament** Mill-Use

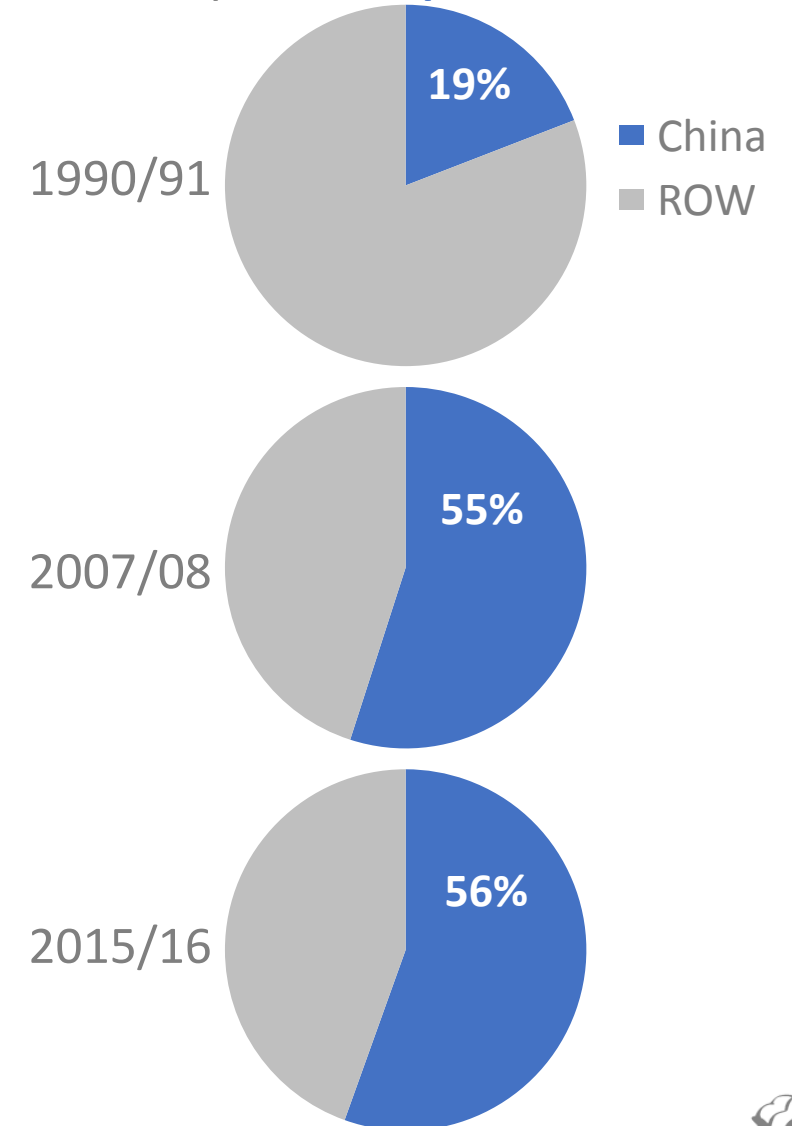


Chinese Polyester Staple Use

Growth in Chinese Polyester **Staple** Use 1991-2015

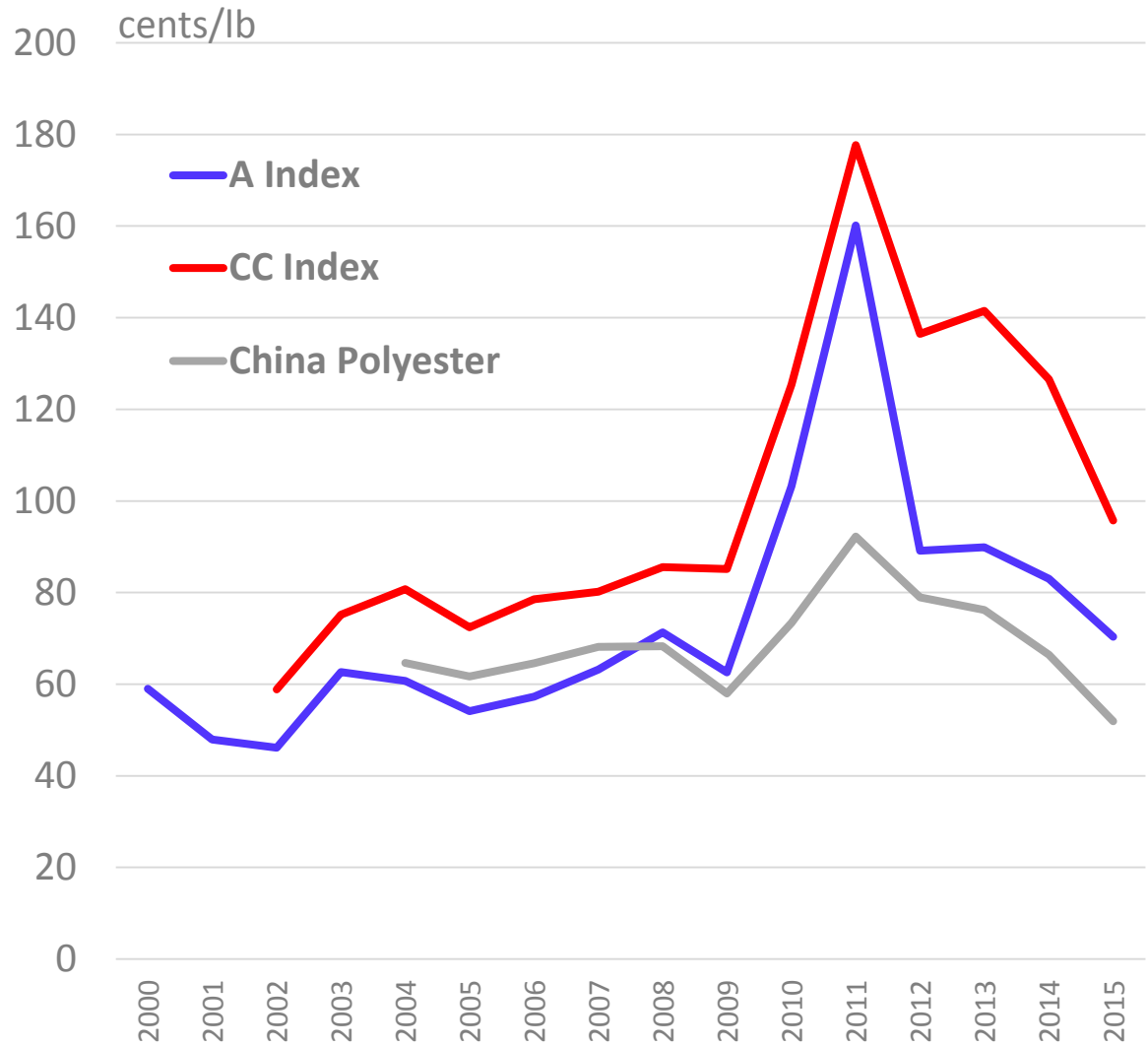


China's Share of Global Polyester **Staple** Mill-Use

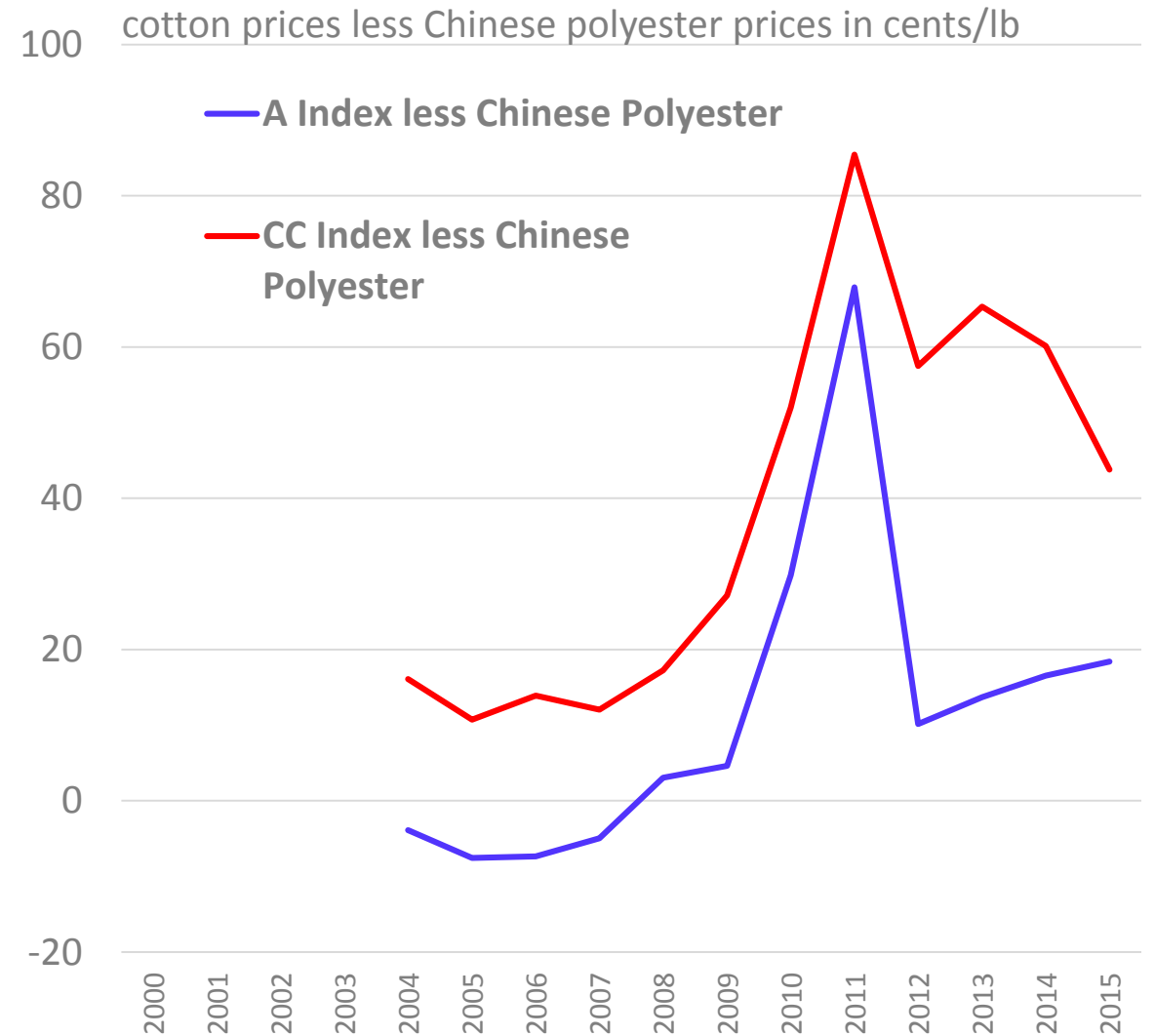


Cotton and Polyester Prices

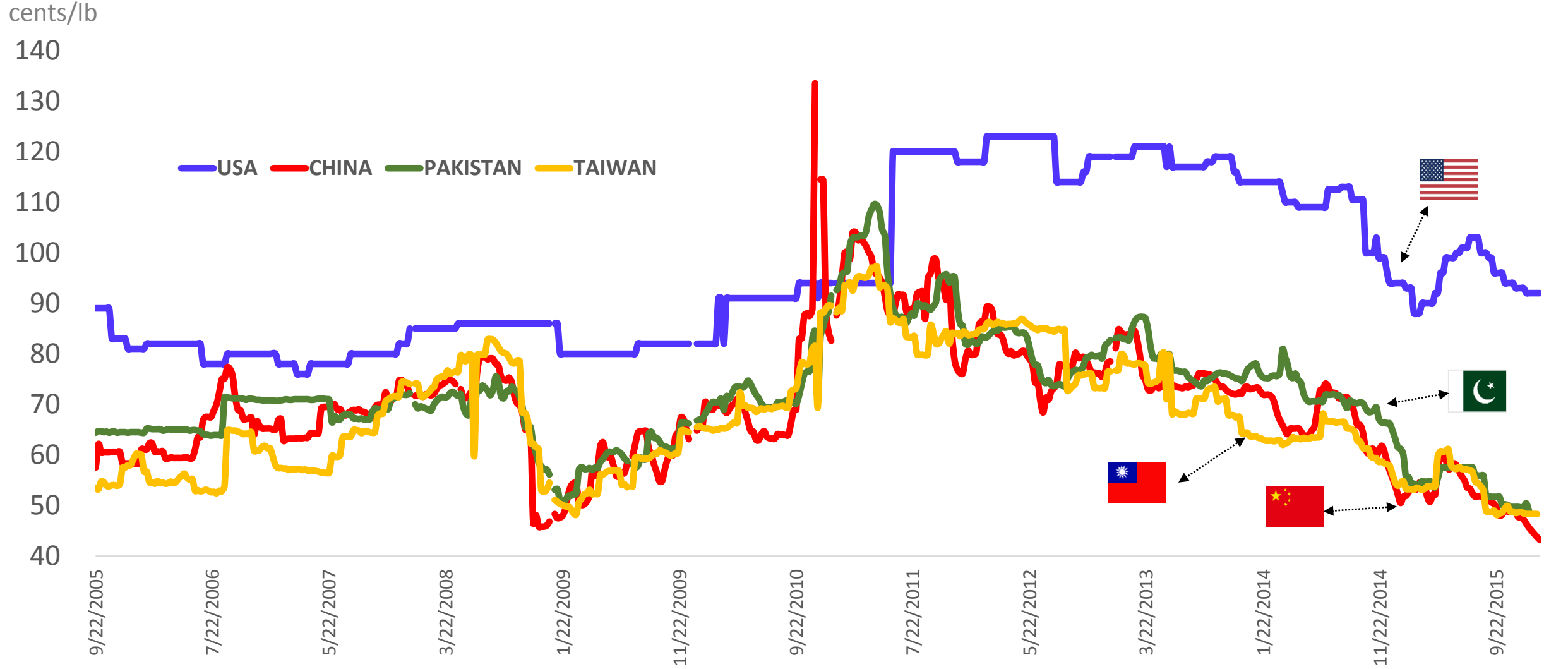
Cotton and Polyester Staple Prices



Separation Between Cotton & Chinese Polyester Prices



Polyester Prices in different countries

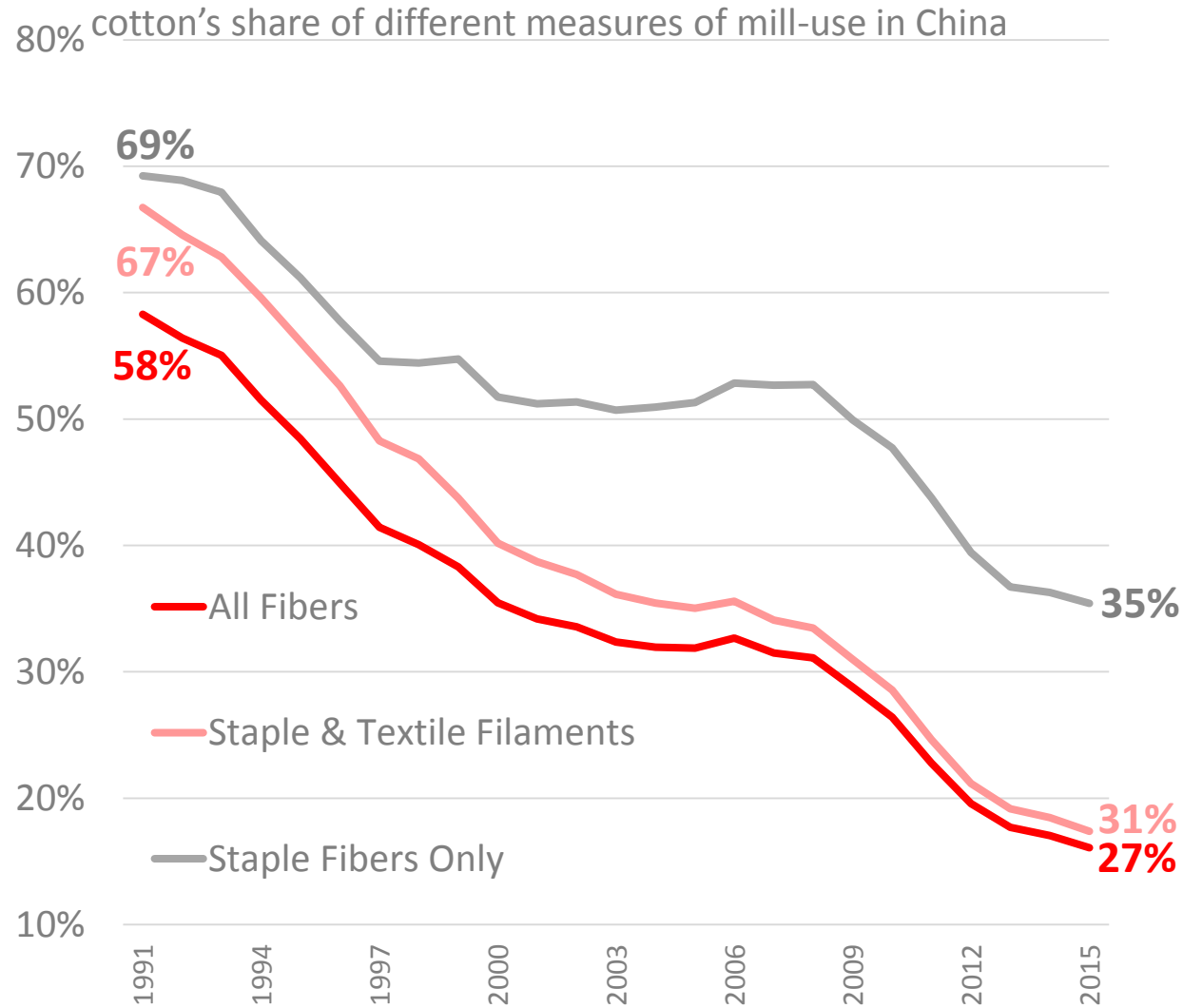


Sources: Cotlook & Emerging Textiles

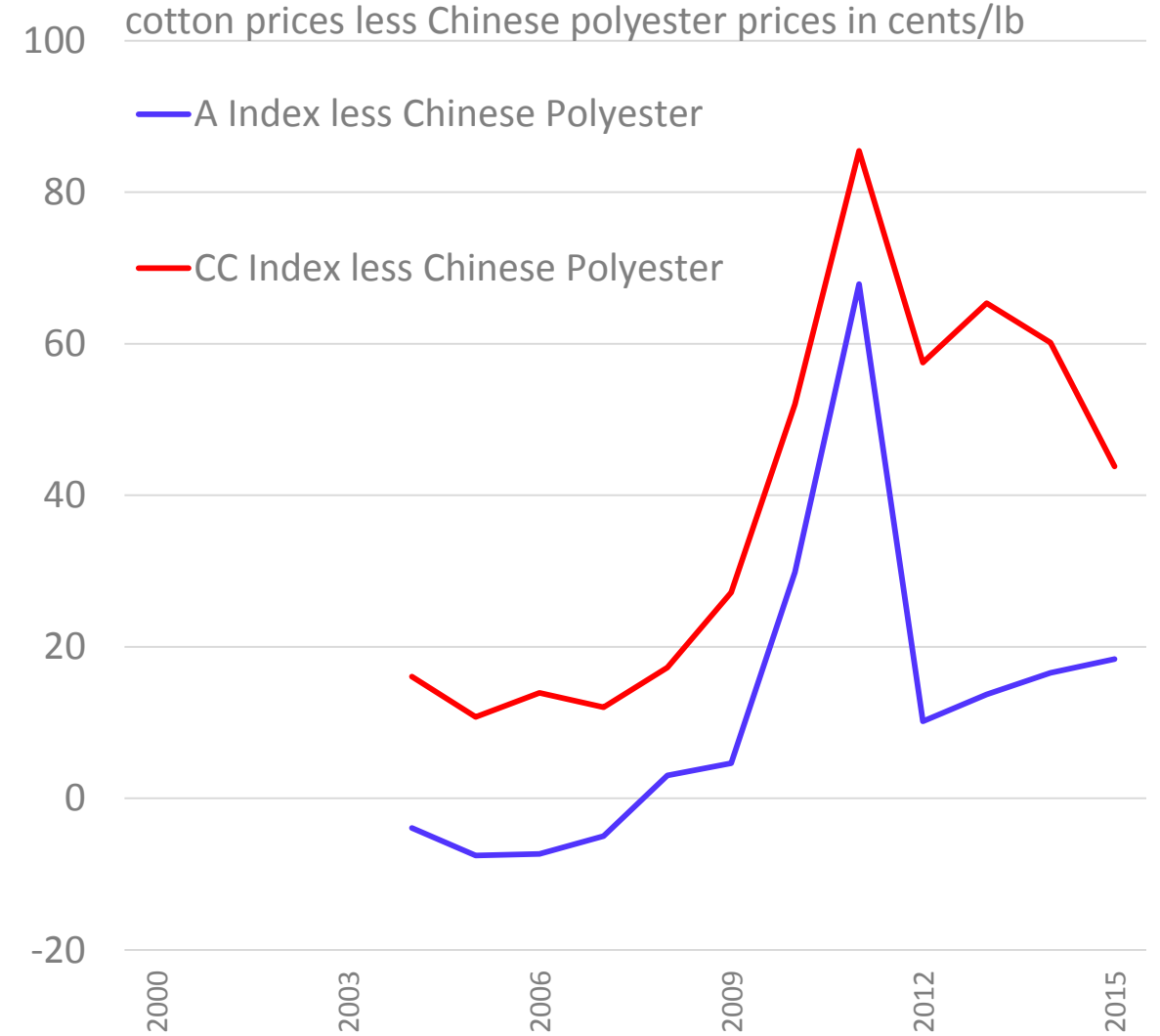


Cotton's Share - China

Change in Different Measures of Cotton's Share



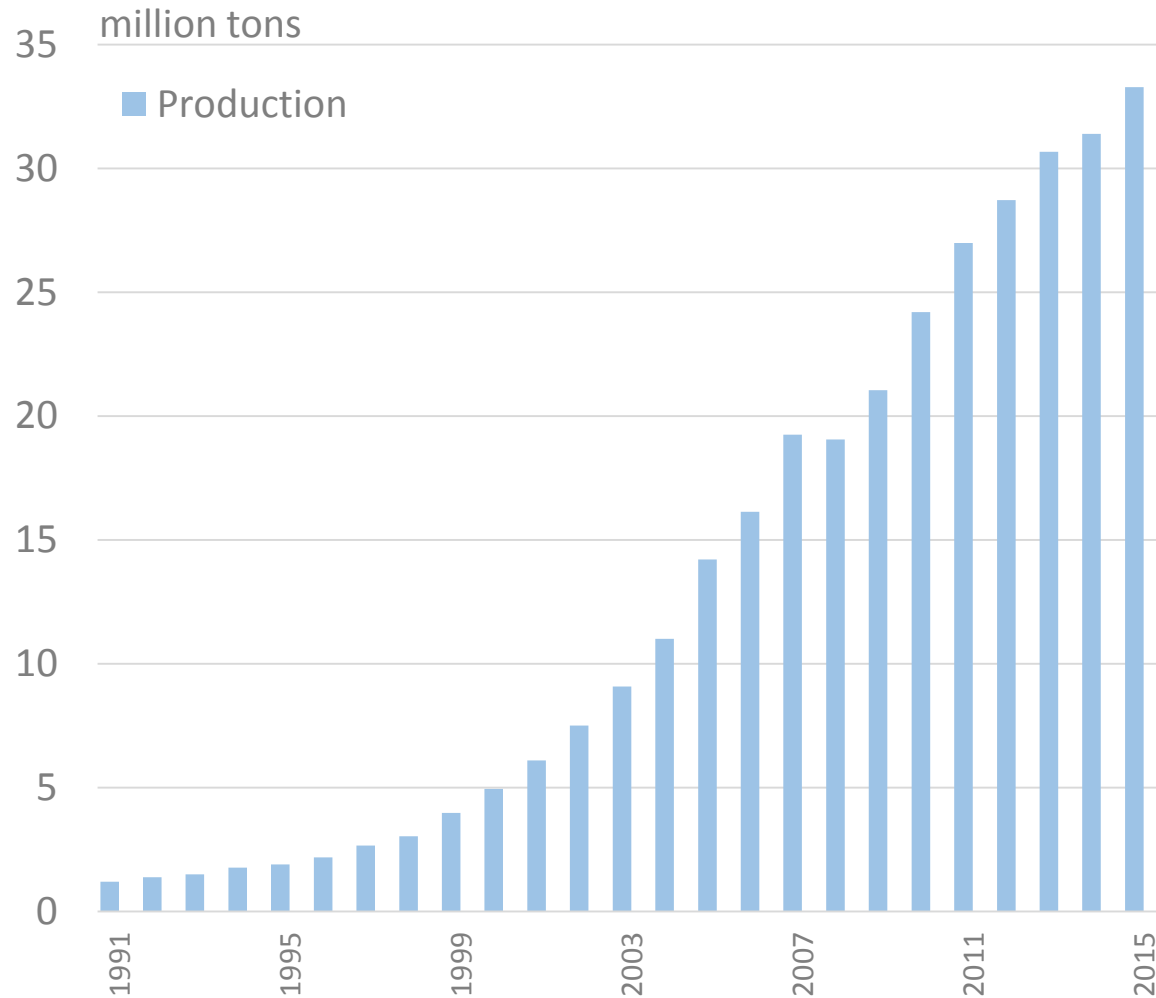
Separation Between Cotton & Chinese Polyester Prices



Trade – Fiber & Yarn

Chinese Polyester Production

Chinese Polyester Production & Mill-Use 1991-2015



China produces 7x as much polyester as the next largest country – India (4.5 mil. tons in 2015)

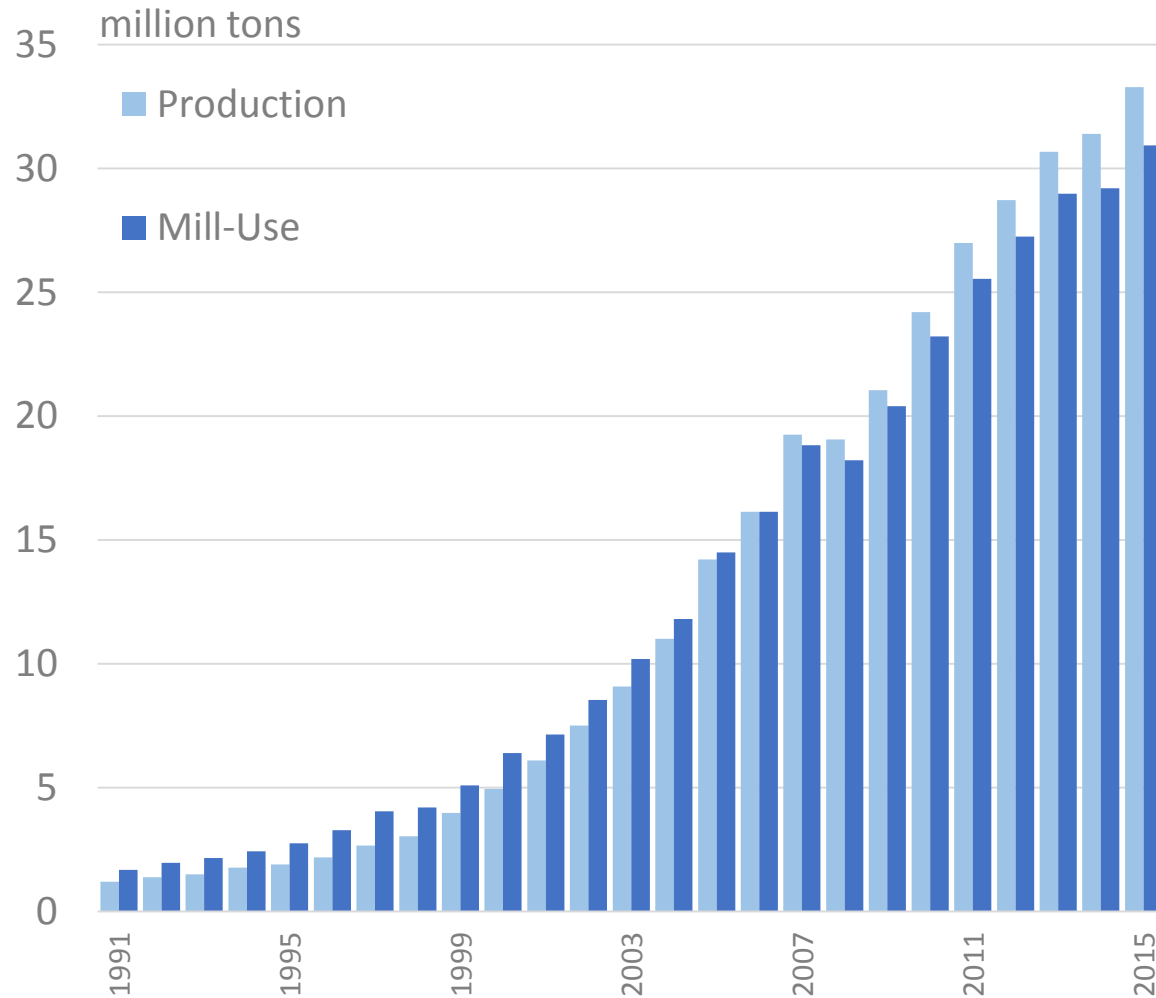
India produces 3x as much polyester as the next largest country – Indonesia (1.5 mil. tons)

Three countries have production near the level in Indonesia – Taiwan, Korea, U.S.



Chinese Polyester Production & Use

Chinese Polyester Production & Mill-Use 1991-2015



China's mills consumed more polyester than it produced until 2007

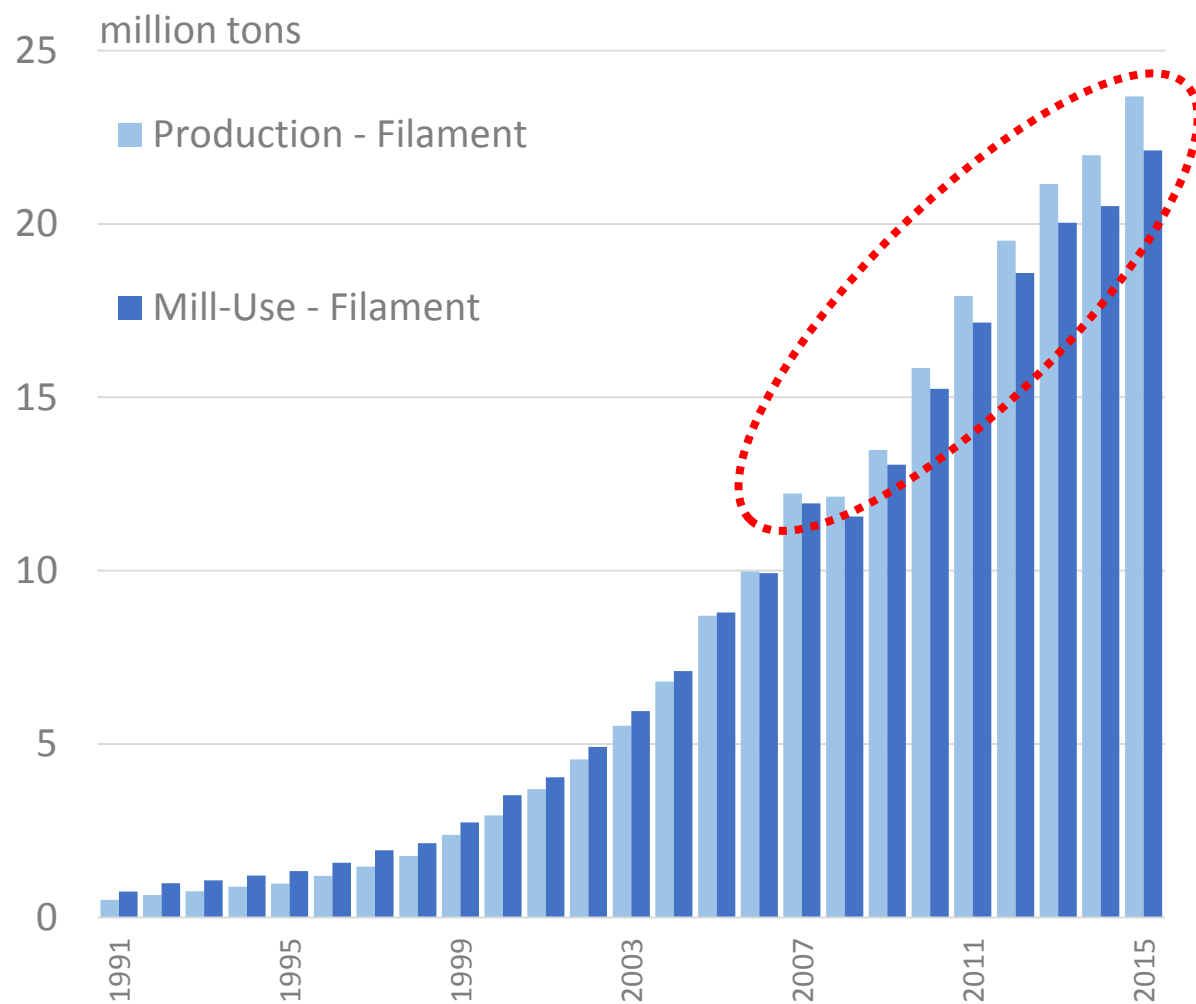
Since 2007, China's polyester production surplus has grown to 2.4 million tons (2015)

This 2.4 million tons exceeds Indonesian production (ranked 3rd in 2015) by more than one million tons

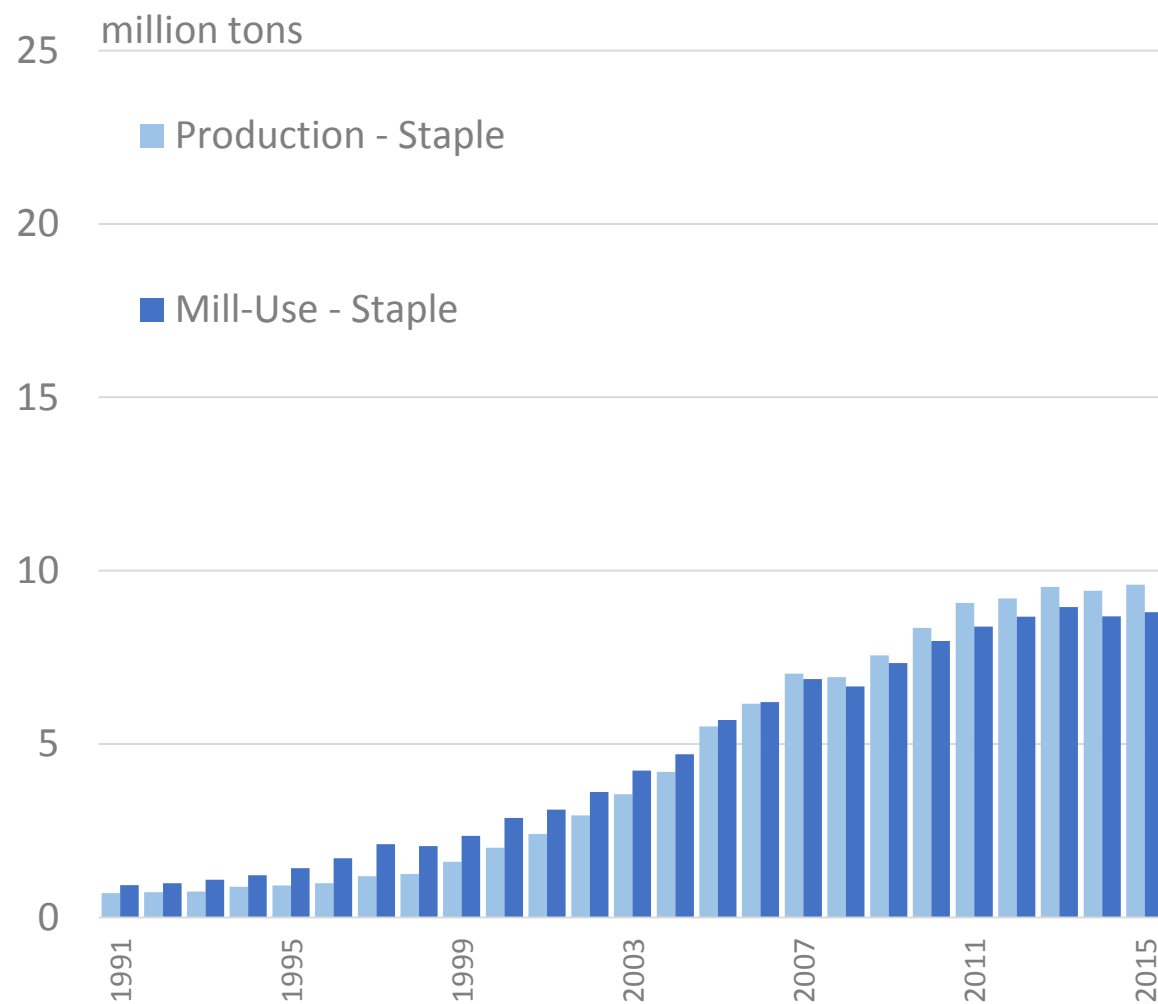
China is the world's top exporter of polyester

Chinese Polyester Production & Use – Filament & Staple

Chinese Polyester Filament Production & Mill-Use

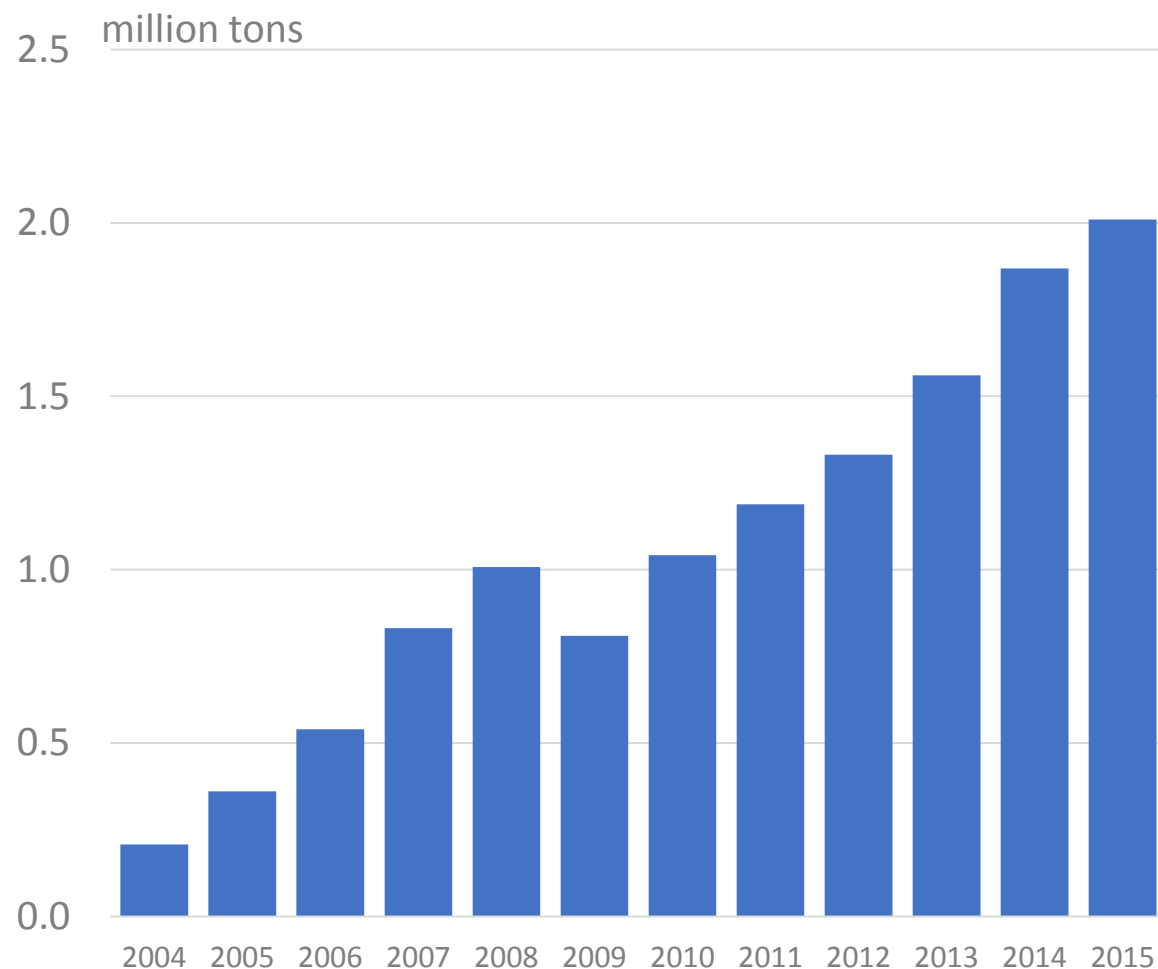


Chinese Polyester Staple Production & Mill-Use

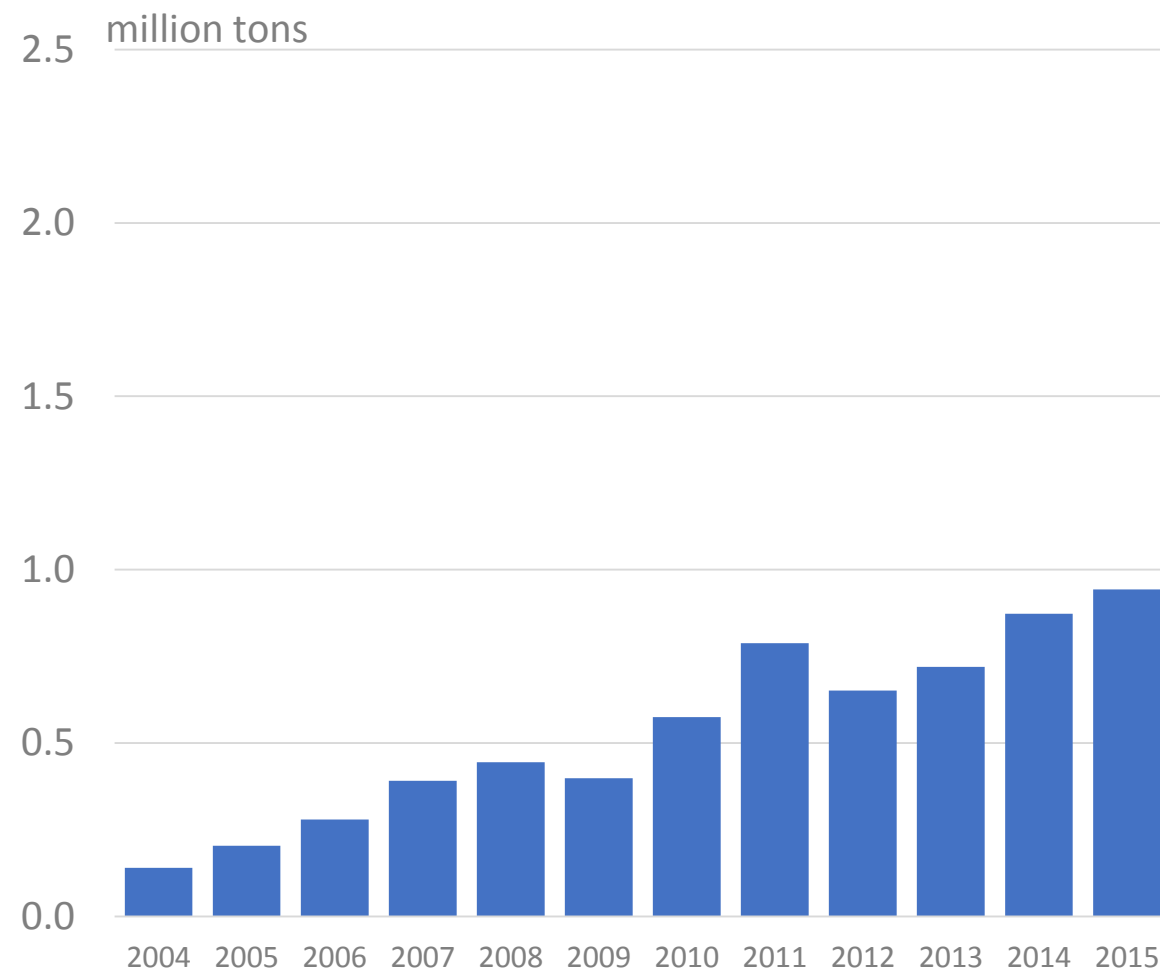


Chinese Polyester Filament & Staple Exports

Chinese Polyester Filament Exports



Chinese Polyester Staple Exports



Chinese Polyester Filament & Staple Exports

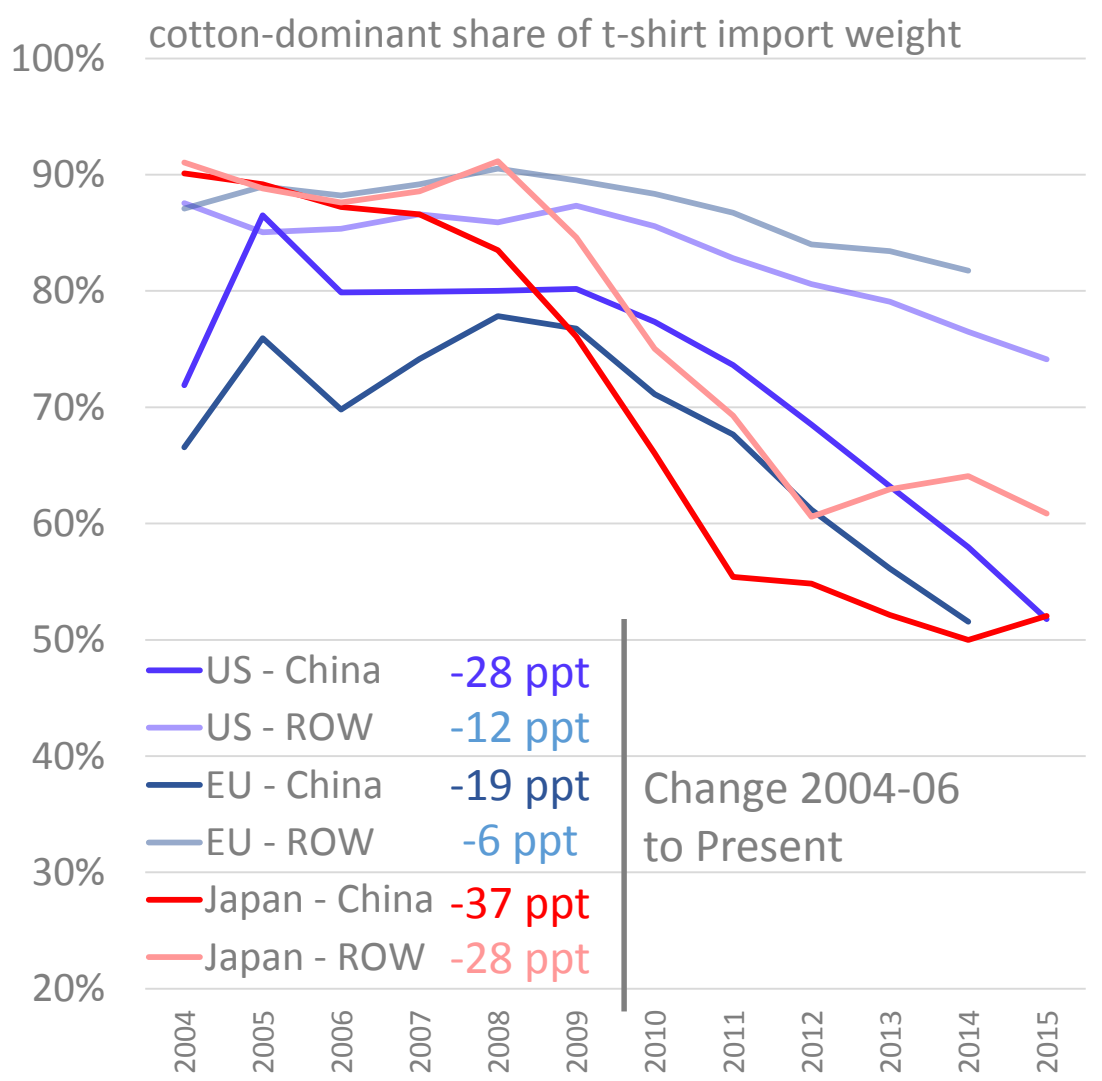
Chinese Polyester Filament Exports (2015)

Destination Country	Volume in Tons (share)
Turkey	242,000 (12%)
Vietnam	210,390 (10%)
South Korea	178,427 (9%)
Pakistan	166,466 (8%)
Egypt	135,671 (7%)
U.S.	115,513 (6%)
Brazil	74,653 (4%)
Indonesia	68,265 (3%)
Mexico	59,603 (3%)
Bangladesh	56,479 (3%)
Rest of World	702,500 (35%)

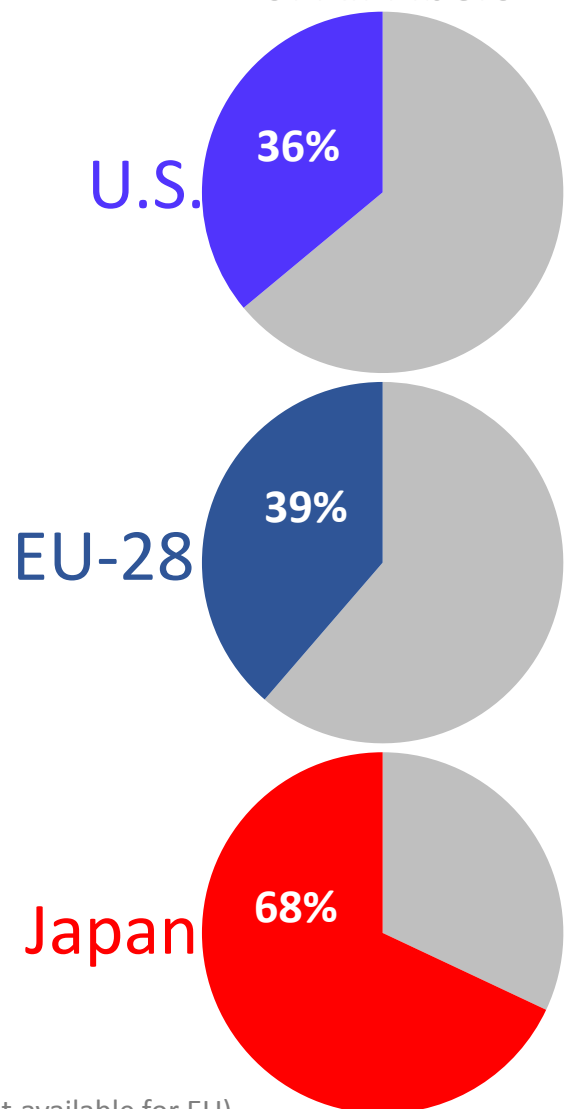
Chinese Polyester Staple Exports (2015)

Destination Country	Volume in Tons (share)
U.S.	208,150 (22%)
Pakistan	120,348 (13%)
India	70,065 (7%)
Indonesia	52,438 (6%)
Mexico	47,463 (5%)
Israel	40,140 (4%)
Vietnam	39,752 (4%)
Russia	31,708 (3%)
Brazil	31,576 (3%)
Turkey	28,318 (3%)
Rest of World	273,372 (29%)

Major Apparel Import Markets



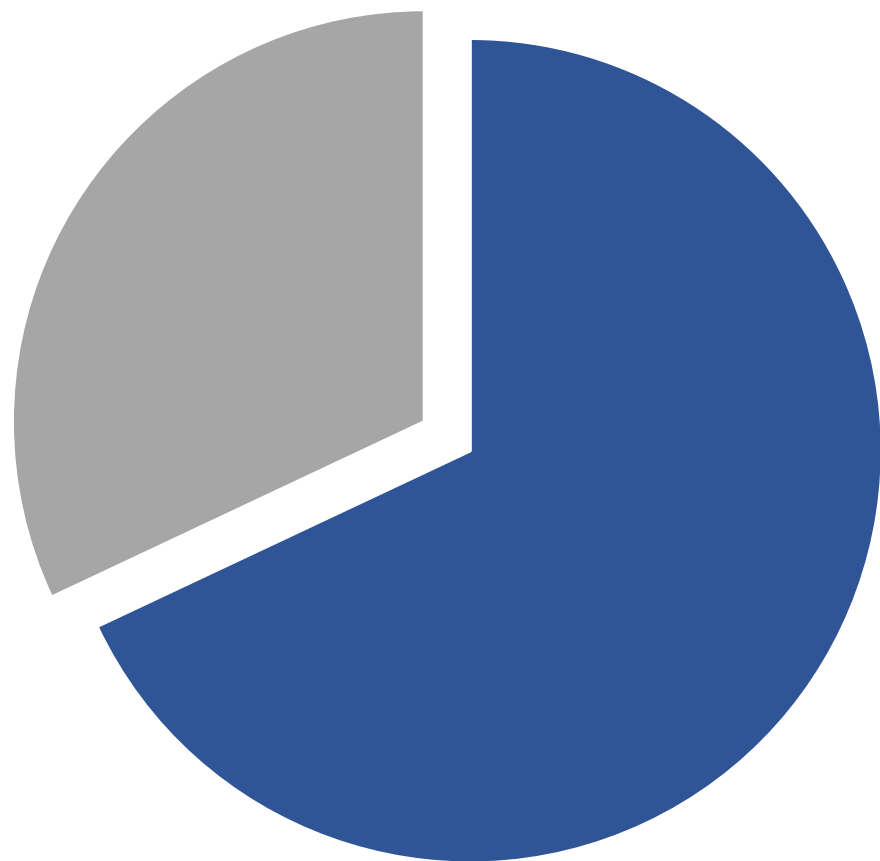
China's Share of All Apparel Imports of All Fibers



Note: China's share of total apparel derived from import values for HS chapters 61 & 62 in 2015 (US & Japan) or 2014 (latest available for EU).
 Sources: US ITC, EuroStat, Japan Customs. Share data are ratios of weight volumes of HS 610910 (cotton-dominant) and the sum of HS 610910 & HS 610990 (mmf-dominant).

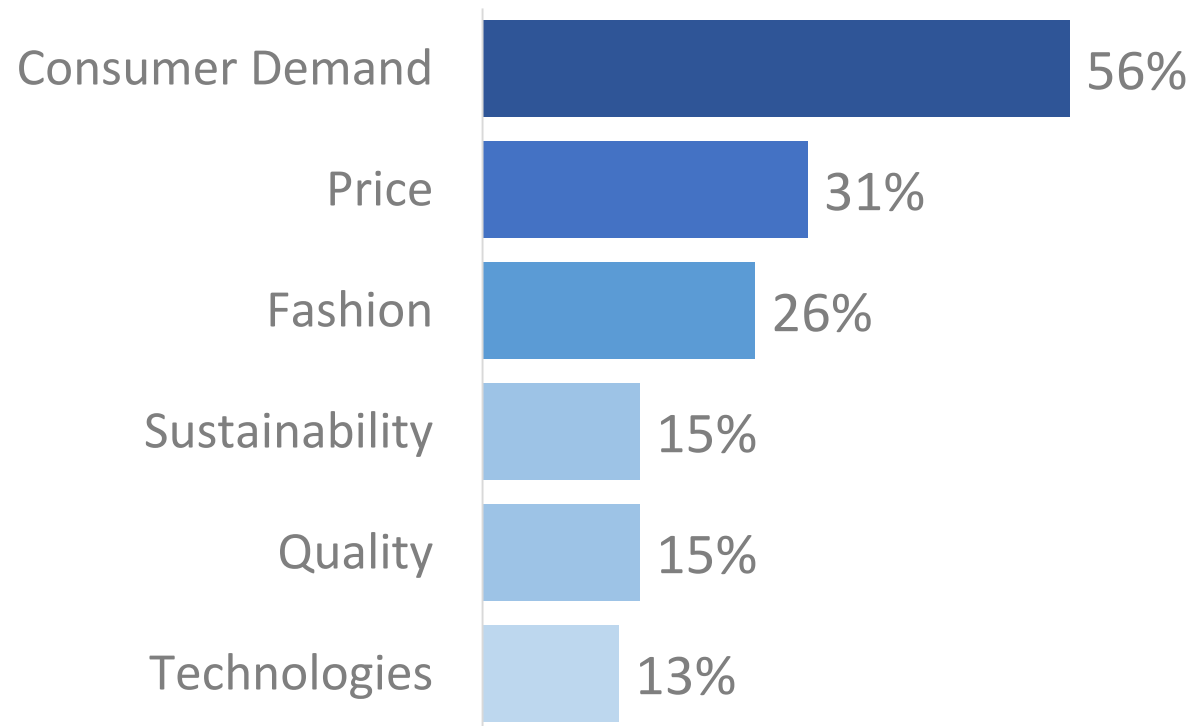


Cotton Incorporated Survey of Industry Expectations



68% of industry contacts plan to use more cotton in 2016

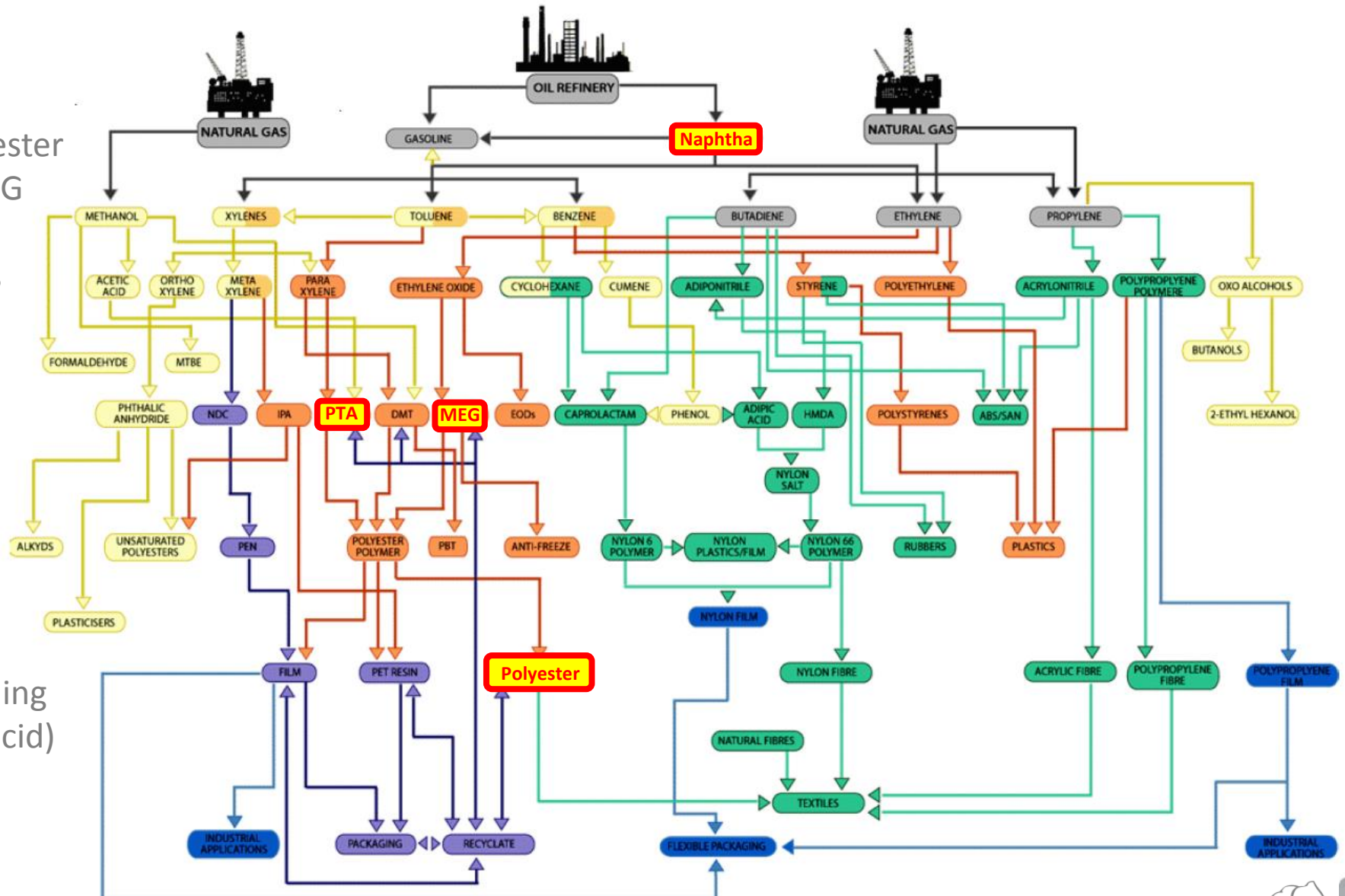
Top Reasons for Companies with Plans to Use More Cotton



Where Polyester Comes From

Polyester – What is it?

- Both are derived from naphtha
- The only end-use for PTA is polyester
- There are other end-uses for MEG
- Both PTA and MEG are actively derived and are not by-products of other processes

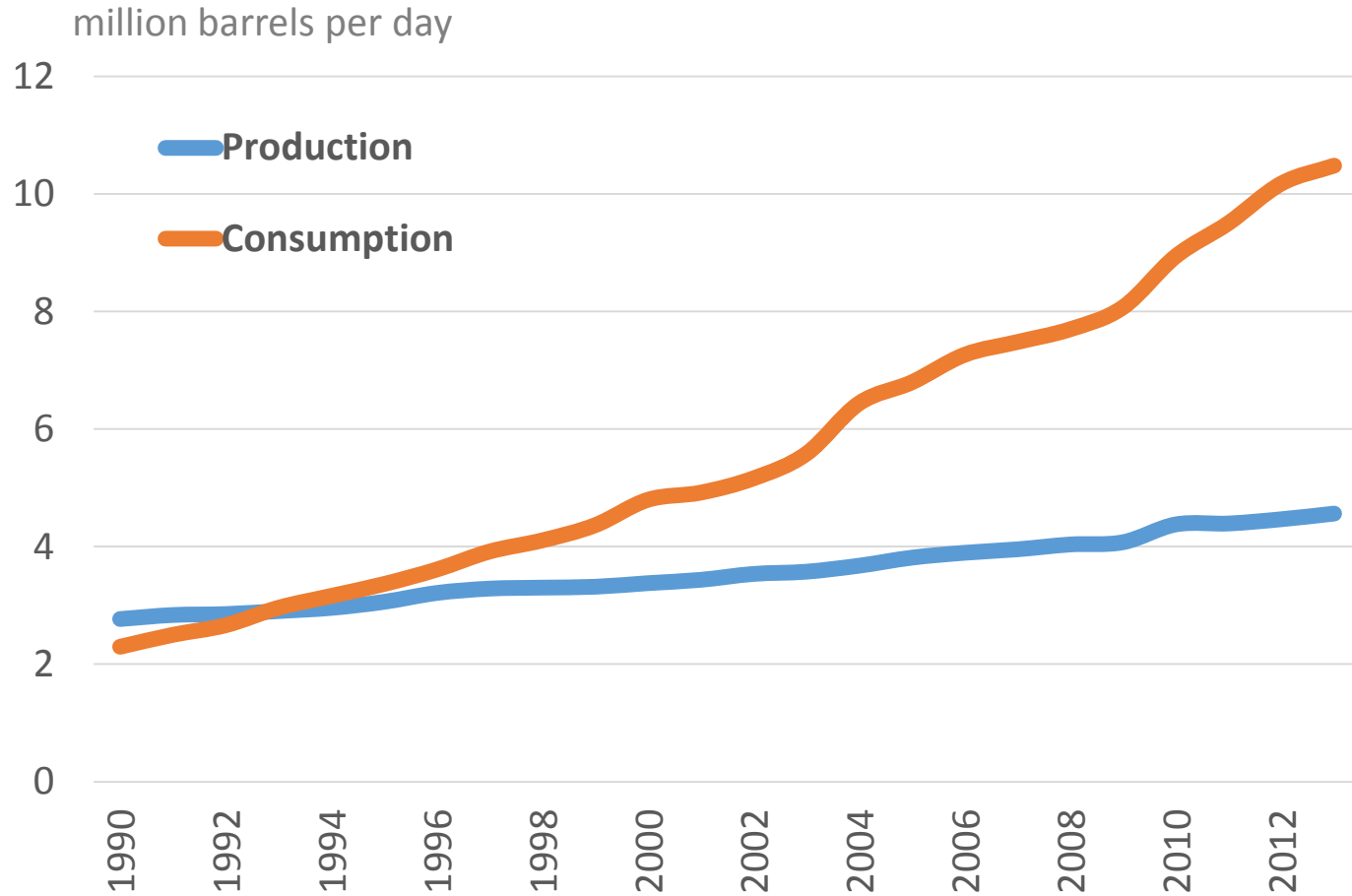


Polyester fiber is made by combining
 71% PTA (purified terephthalate acid)
 29% MEG (monoethylene glycol)

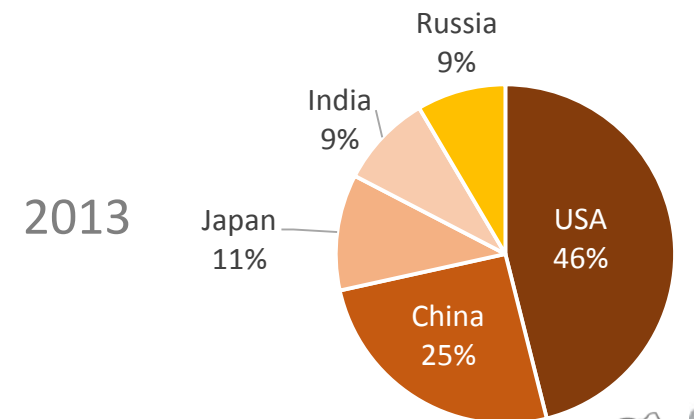
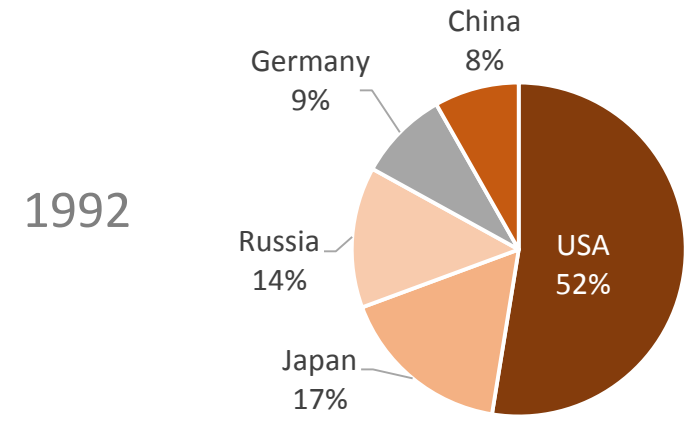
Note: Image and polyester derivation information provided by PCI Fibres



China Oil Production and Consumption



China's Share of Global Oil Consumption



In 2014, China became the largest net importer of crude oil in the world

