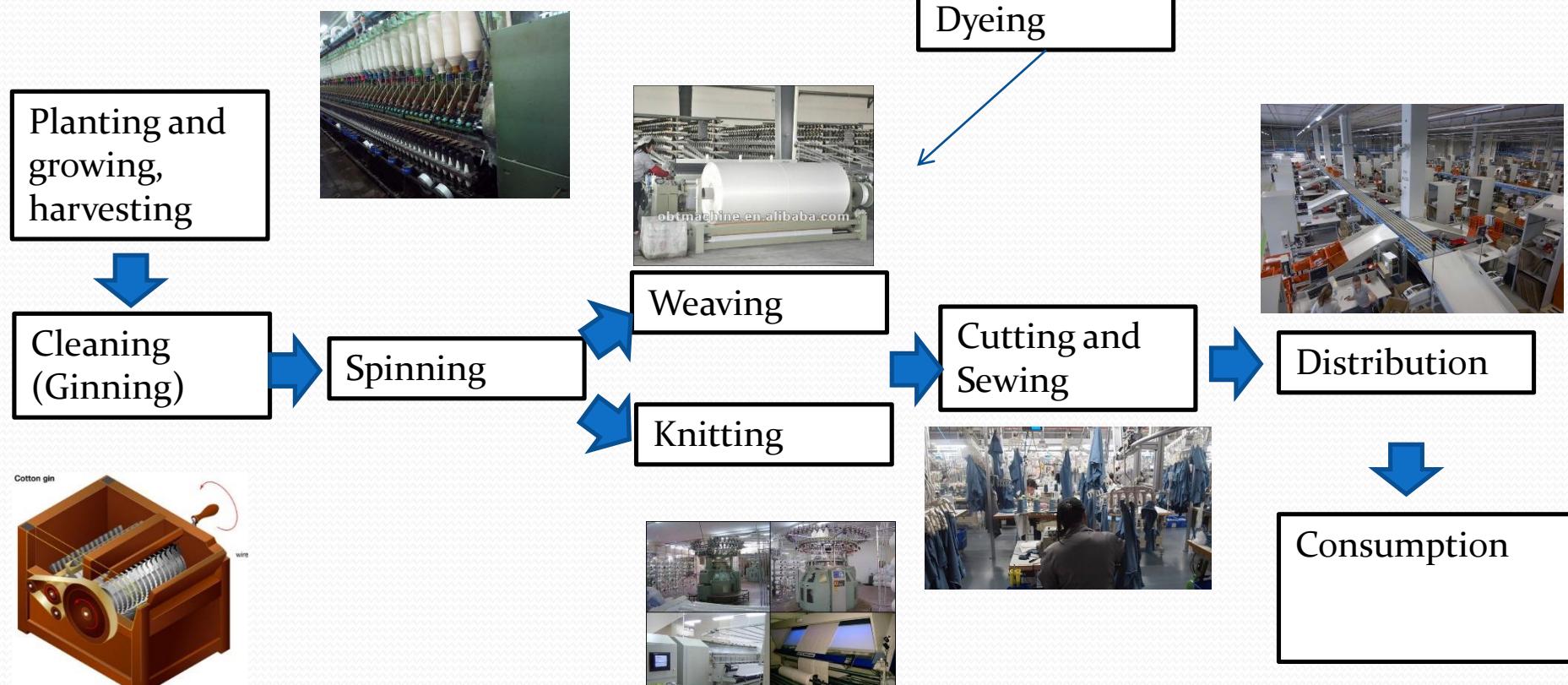


Apparel Industries

Production Circuits

For Example. . .

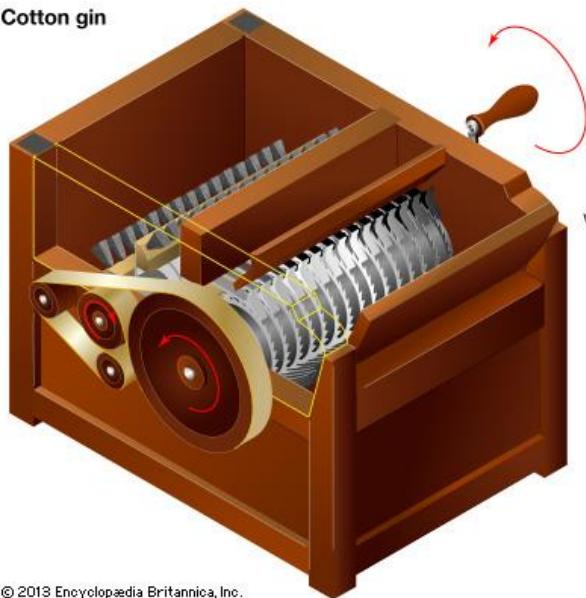
Cotton Clothes Production Chain



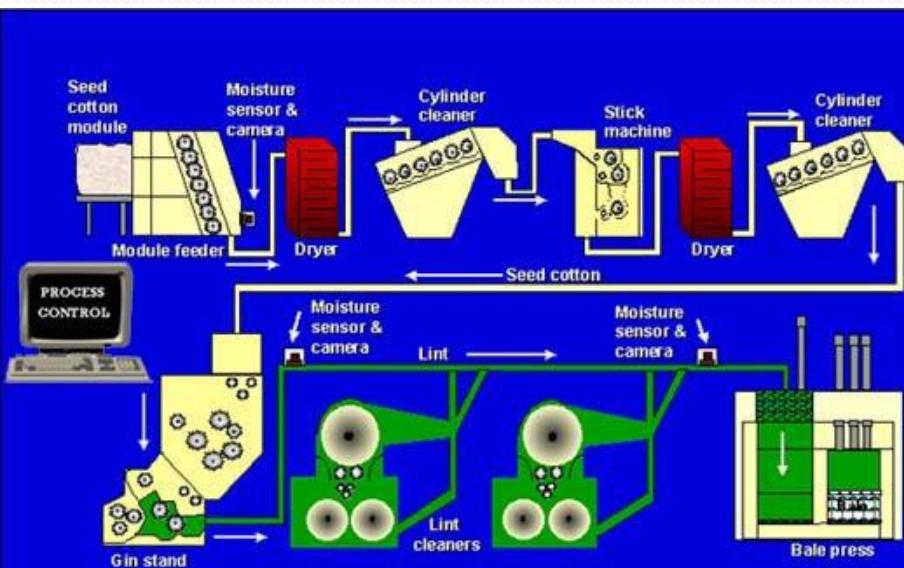
Different places have different technological needs and environmental risks

Ginning

Cotton gin



© 2013 Encyclopædia Britannica, Inc.



Spinning



Weaving



obtmachine.en.alibaba.com

Knitting



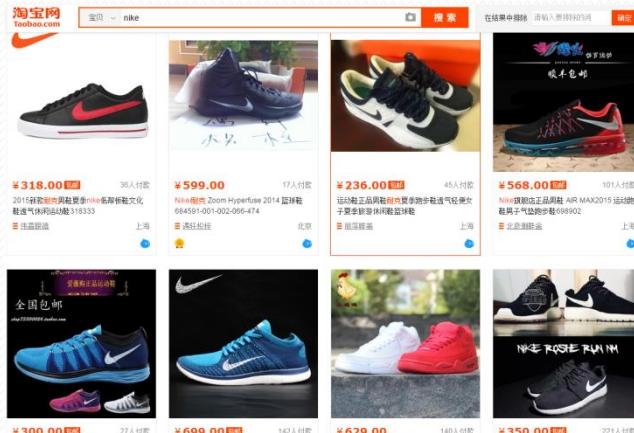
Dyeing



Cutting and Sewing



Distribution



Production Circuit

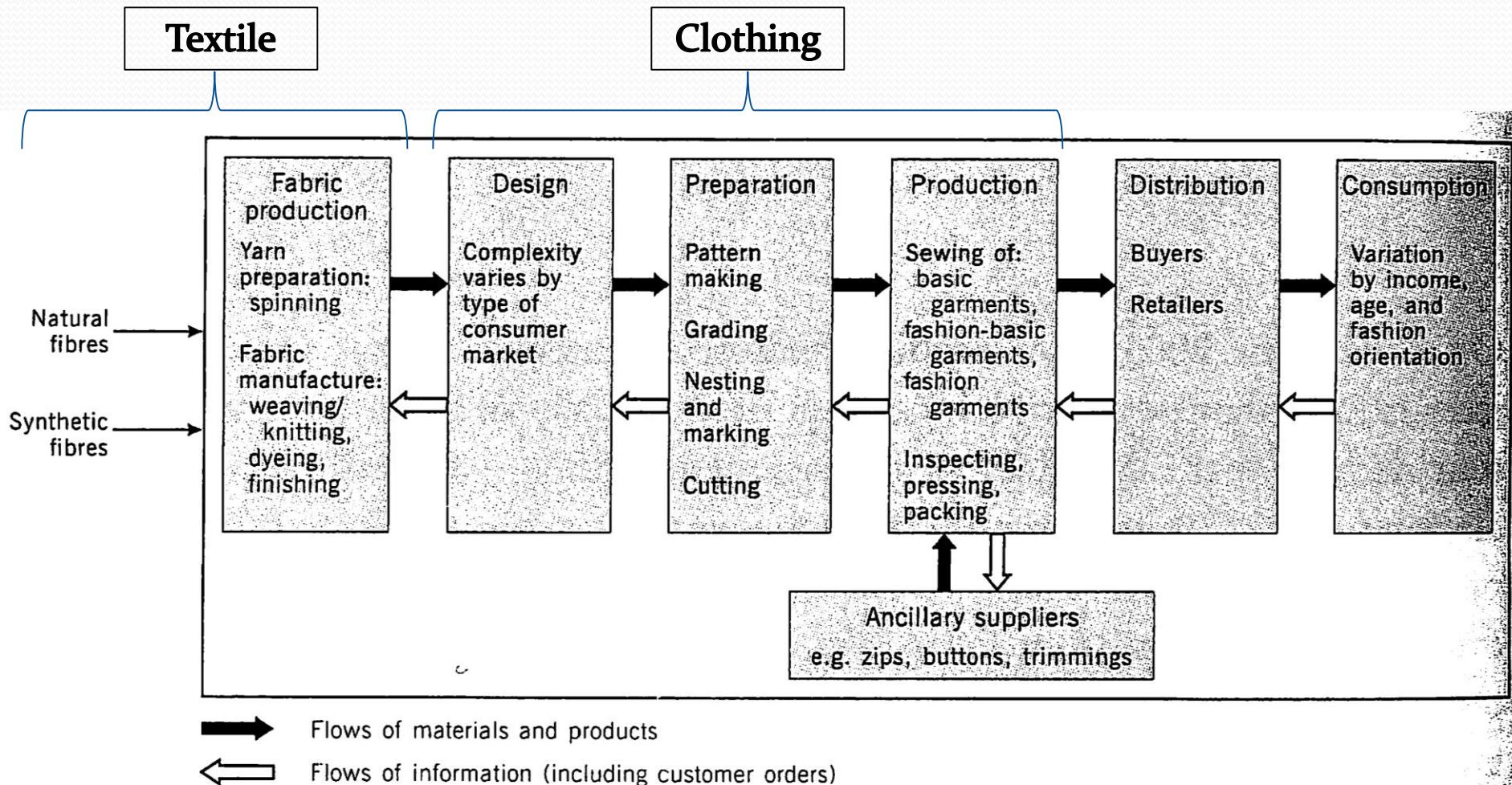


Figure 9.1 The clothing production circuit

(Dicken 2007, 250)

Production characteristics

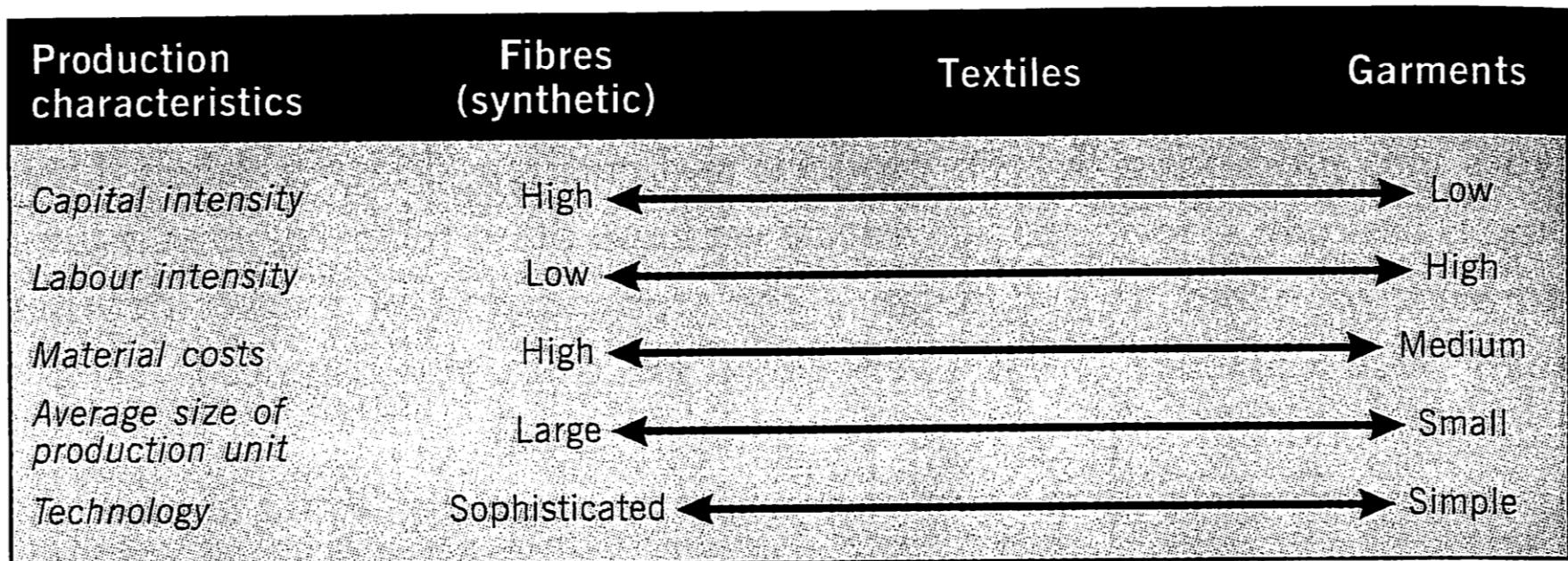


Figure 9.6 Variations in production characteristics between major components of the textiles–clothing production circuit

Technological Changes

- General Trends
 - Increasing speed
 - Mechanization and automation
- Limits . . .
 - Soft and limp two-dimensional materials
 - to fit a three-dimensional human body
- Recent technological developments
 - In non-sewing operations:
 - Pre-assembly: grading, laying out, cutting
 - Post-assembly: warehouse management and distribution
 - Sewing and assembly: not much

Clothing Production

- More fragmented than textiles
- Less sophisticated technologically
- Prominent outsourcing – especially sewing
- Increasingly dominated by distributors
 - Buyer-driven industries

Corporations

Current Trends . . .

- The manufacture of clothing more fragmented
 - and far less dominated by large firms than textiles
 - organised by 'lead firms' in developed countries
- Categories:
 - Operators of small workshops
 - Producer of basic goods for large markets utilising economies of scale
 - Large-scale integrated firms producing for a number of leading retailers (e.g. Esquel)
 - 'Factoryless' firms that organize entire systems of garments production
 - Often retailers
- Large firms
 - Afford to invest in the new technologies
 - Build a worldwide brand image

Increasing retailer dominance

- Highly concentrated purchasing power of the large retail chains
 - → leverage over clothing manufacturers
- Mass Merchants – with or without production
 - US: Wal-Mart, Sears, J.C. Penney, Dayton Hudson
 - Japan: Daiei, Mitsukoshi, Daimaru, Ito Yokado
 - Germany: Karstadt, Kaufhof, Schicckendanz
 - Netherlands: C&A
 - France: Carrefour
 - Britain: Marks & Spencer, Primark, Tesco
- Specialist clothing retailers
 - US: The Gap, Banana Republic, The Limited, Liz Claiborne
 - UK: NEXT, New Look,
 - Jigsaw, DKNY, Zara, H&M, Uniqlo

Production Trends

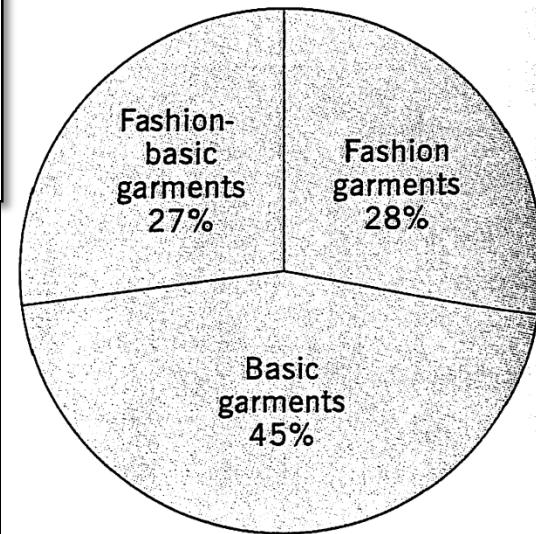
- More differentiated market, more frequent fashion changes
 - Shortening production runs
 - 2-4 seasons per year → 6-8
 - Zara: 12 seasons a year
 - Starting with small batches and rapid reorders for styles that sell well
- Boundary between production and retailing is becoming increasingly blurred
- Power shifts further towards the buyers
 - Retail chains are heavily involved in subcontracting and outsourcing arrangements
 - *buyer-driven circuit*

Figure 9.5 Composition of demand for different clothing categories in the United States

Source: based on Abernathy et al., 1999: Figure 1.1

Consumption

- Basic: human needs → sales based on price
- Fashion: desires to express → sales based on style
 - highly symbolic, suggestive of self-perceptions and external self-projections.
 - Influenced by income, age, social status, gender, ethnicity . . .
- Most rapid increase in demands → Fashion Basic
- Overall demand for clothing increases less rapidly than the growth of incomes
 - Strategy to overcome market saturation
 - Stimulate demand through fashion change
 - Designer labelling → differentiate



The state and global shift

Developing Countries

- Low entry-barrier
 - Accessible to any country
 - regarded as the springboard for industrialisation in developing countries

Economic Upgrading

1. Assembly/Cut, Make, and Trim (CMT)

garment sewing plants are provided with imported inputs for assembly, most commonly in export processing zones (EPZs).

2. Original Equipment Manufacturing (OEM):

The supplying firm makes a product according to a design specified by the buyer; the product is sold under the buyer's brand name

The firm must have upstream logistics capabilities: procuring (sourcing and financing) the necessary raw materials, piece goods, and trim needed for production.

3. Original Design Manufacturing (ODM)/Full Package with Design:

focuses on adding design capabilities to the production of garments.

4. Original Brand Manufacturing (OBM):

branding and the sale of own-brand products.

(Gereffi and Memedovic, 2003; Fernandez et al. 2011, 2)

MFA

- Both developed countries and developing countries adopted protectionist stance on international trade during the GATT period
- Multi-Fibre Arrangement (MFA) – 1973
- Regulated world trade in textiles and clothing
 - To create orderly development of trade in textiles and clothing that benefit both developed and developing countries
 - Developing countries: access to developed country markets to increase 6% per year
 - Developed countries: safeguards to protect the disruption of their domestic markets
- Individual quotas
 - Setting price limits on the quantity of textiles and clothing that could be exported from one country to another.
- 1995 WTO – to be phased out over a ten-year period (1995-2004)
 - Terminated in 2005

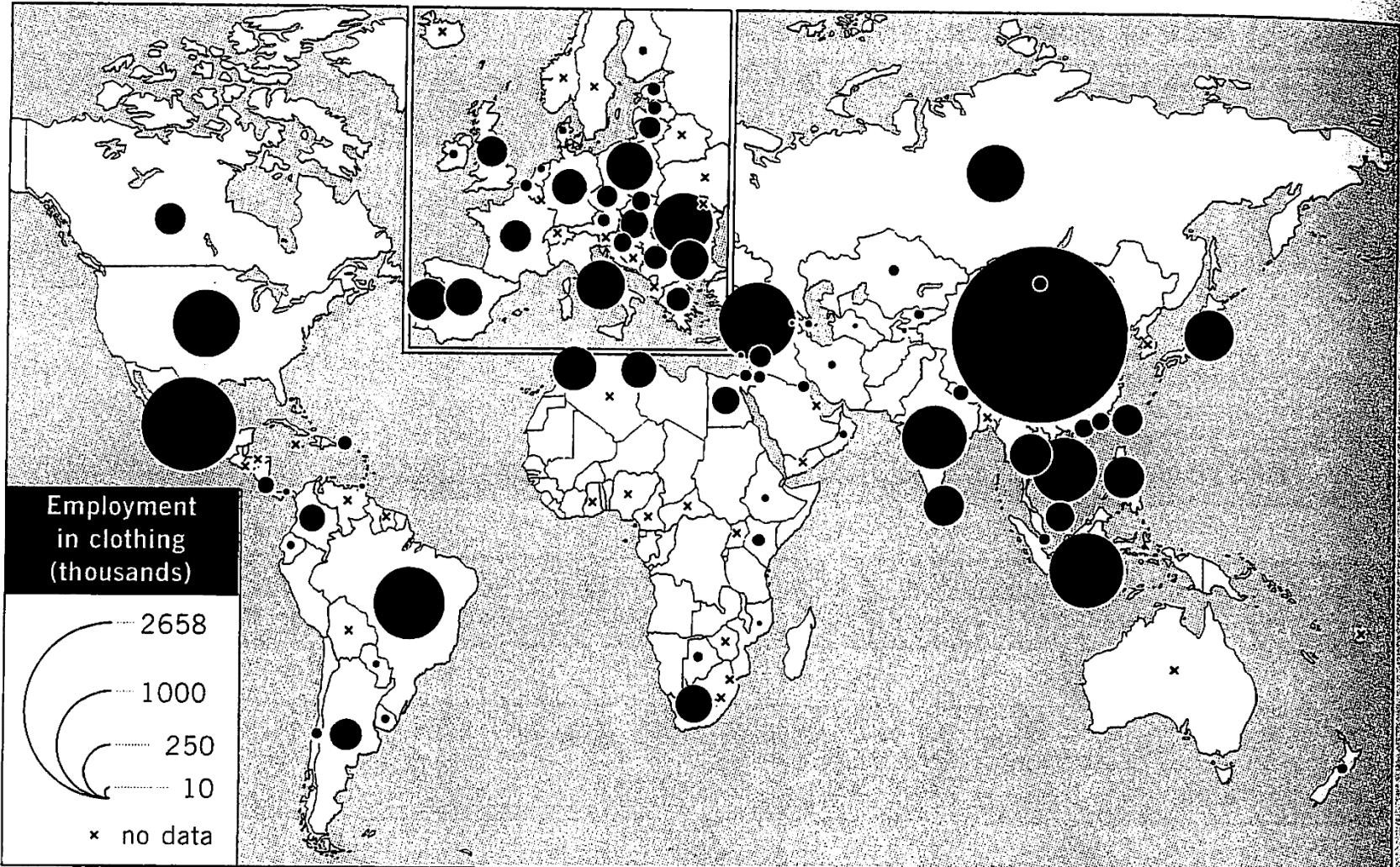
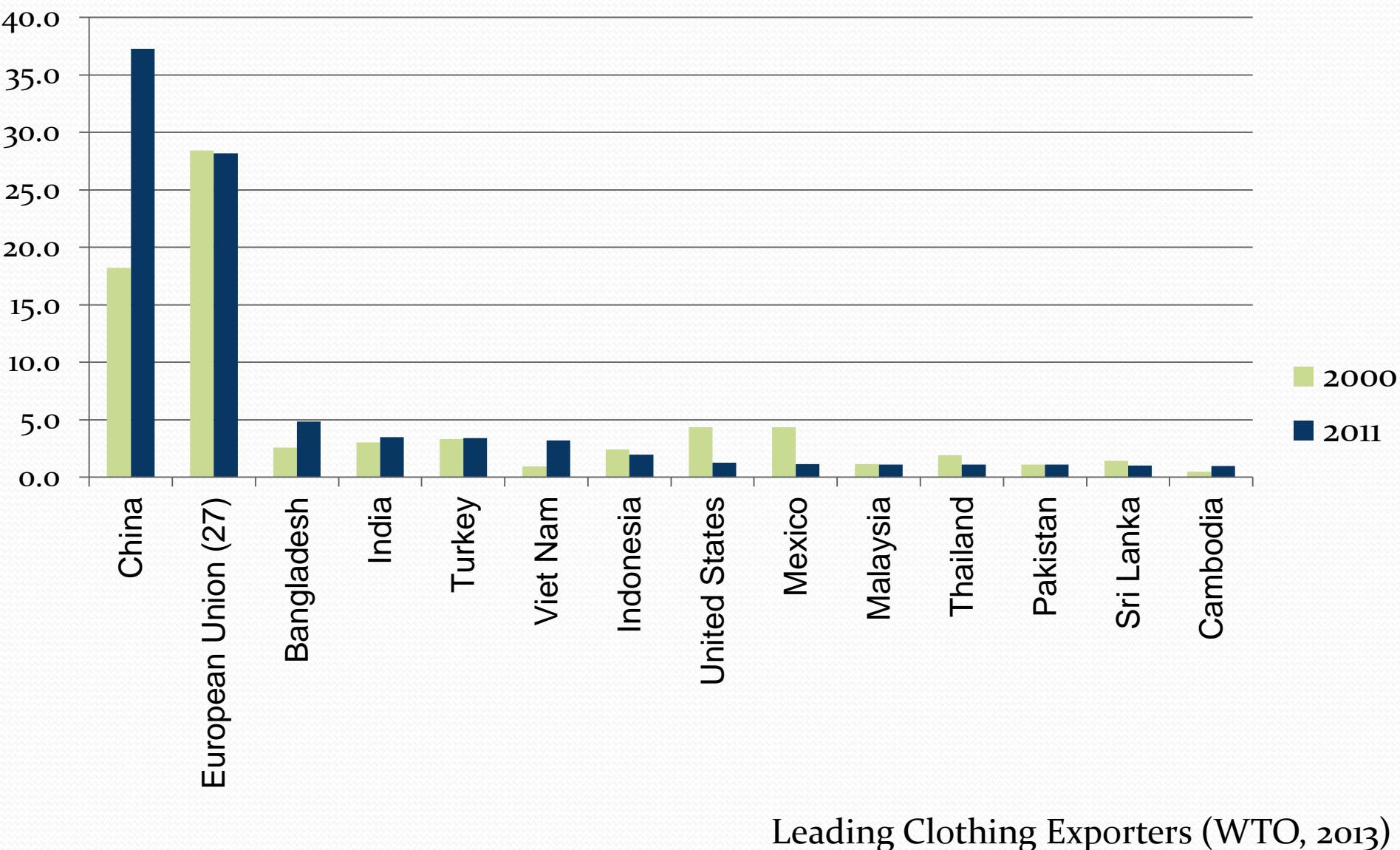


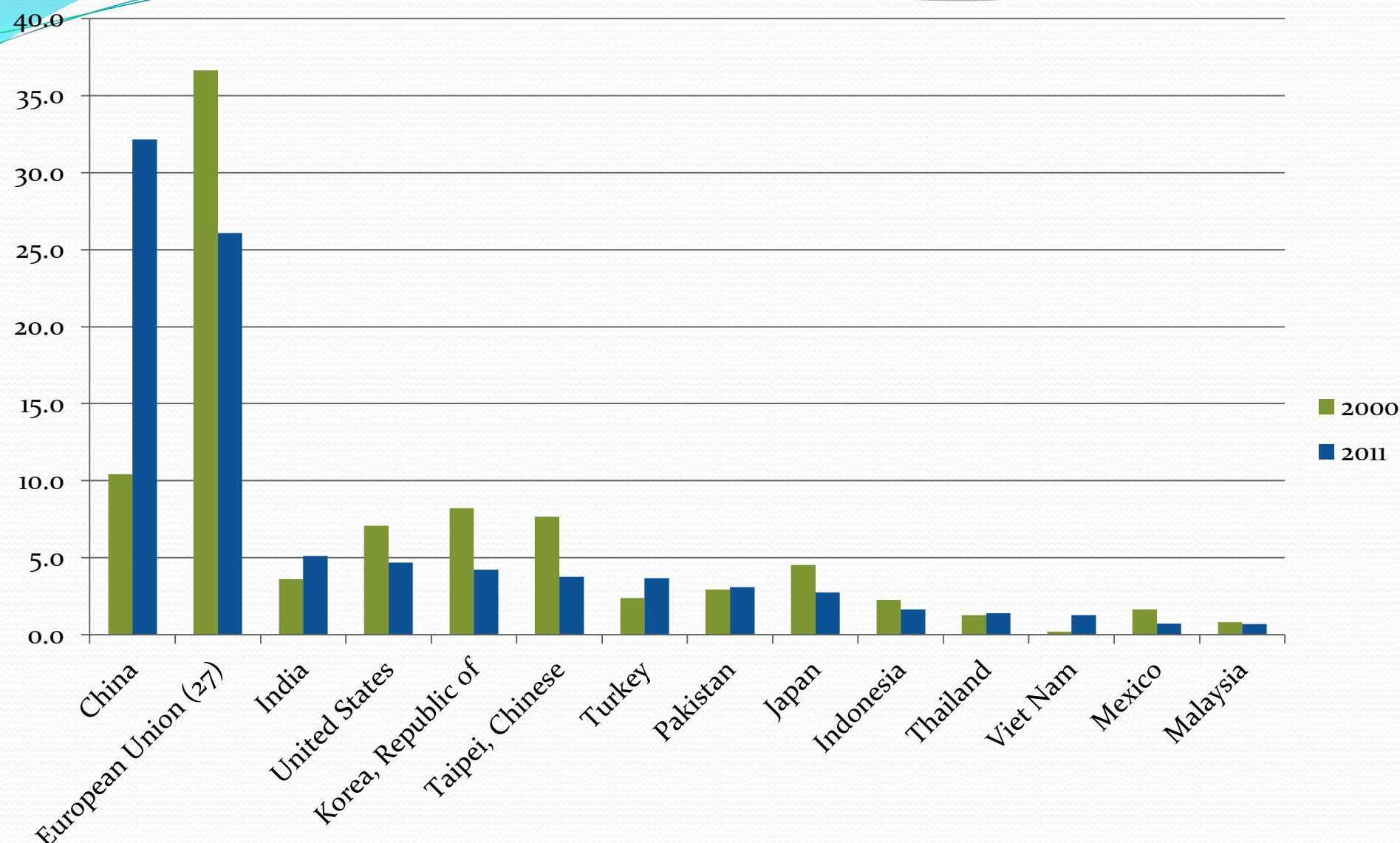
Figure 9.3 Employment in the global clothing industries

Source: calculated from UNIDO *International Yearbook of Industrial Statistics*, 2005; ILO 2005

15 countries for 78.6%(2000) 90.1%(2011) of world exports



15 countries for 90.4%(2000) 91.3%(2011) of world exports



Leading Textile Exporters (WTO, 2013)

Environment and Labour

Textile Production and Environment

- One of the biggest water polluters in China
 - Uses more water than any other industry
 - Pollutes nearly all the water it uses
- Waste water
 - 80% from dyeing and finishing process
 - 12% from fibre processing

(Green Choice Alliance 2012)

Type of production	Source of Pollutant	Main Pollutants
Cotton mill	Withering, sizing	Cotton dust, fibre, pulp
Wool mill	Dyeing, shrinking, scouring	Lanolin, dyes, additives, fibre, wax, pectin, ammonia, sulfur, compounds, suspended solids, chromium
Silk production	Silk spinning, refining (degumming), dyeing, finishing	Sericin, dyes, additives,
Knitted fabric mill	Alkali reduction, scouring, dyeing, post-treatment	Sericin, dyes, additives
Viscose fibre mill	Spinning, post-treatment	Alkai from black liquids and other organic matters, zinc, sulfides
Polyester fibre mill	Liquids, Post-treatment (oil wastewater)	Oils
Nylon mill	Washing, post-treatment	Caprolactam, oils, suspended solids, ammonia, nitrogen
Polyvinyl alcohol mill	Liquids, spinning, post-treatment	Cresol, sufuric acid, oils, suspended solids, formaldehyde, chloride, zinc

Industry	Total Industrial Product (10,000 RMB)	Freshwater Use (10,000 Tons)	Water re-use (10,000 Tons)	Wastewater Discharge (10,000 Tons)	Wastewater discharged per 10,000 RMB of production (Tons)
Total of Guangzhou	32907938	325132.3	247781	21103.3	6.4
Textile Industry	418199.3	6469.8	343	5321.4	127.4
Pulp and paper products	1694561	2744.4	3428.2	1926.6	11.4
Food, beverages, tobacco and agro-foods processing	4657735.4	6271.9	14485.1	1018	2.2
Fabricated metal products	334910.6	619.5	36.1	423	12.6
Power and heat production and supply	1077443.3	147768.9	32605.2	1101.1	10.2
Rubber products	178519.1	295.2	682.7	263.3	14.7

2007 Industrial Wastewater Discharge Date for Guangzhou

(Data: Guangzhou Municipal Environmental Protection Bureau; found in Green Choice Alliance 2012, 12)

Textile Wastes

- In 2012 in the US
 - 14.3 million tons of textiles were generated in 2012, (5.7% of total municipal solid waste (MSW))
 - 15.7% (or 2.3 million tons) recovery rate for all textiles (does not include reuse)
 - 14.4% (clothing and foot wear), 17.8% (sheets and pillowcases) recovered for export or reprocessing

What happens to recycled clothes?

- Reuse and export: 45%
- Recycled and converted: 30%
 - wiping and polishing cloths.
 - Cotton rags
- Recycled into fibre: 20%
 - Cotton → form a component for new high-quality paper.
 - Knitted or woven woollens and similar materials → car insulation or seat stuffing.
 - Other types of fabric → fibres for upholstery, insulation, and building materials.
- Landfill: 5%



CTR is devoted to creating awareness about keeping our clothing, footwear, and textiles out of landfills.

<http://weardonaterecycle.org/>

Clothing Production and Labour

- Continuing labour intensity
 - 80% of workers are (young) (relatively unskilled) female
 - Immigrants or ethnic minorities in developed countries
- Problems of . . .
 - Sweatshops
 - Child labour
 - Low wages and long hours

→ Consumer resistance



You have to meet the quota before you can go home.

She hit all 15 team leaders in turn from the first one to the fifteenth...

*The physical pain didn't last long,
but the pain I feel in my heart will never disappear.*

The Nike protest:

[Press for Change](#),
[the National Labor Committee](#),
[Global Exchange](#),
Campaign for Labor Rights,
[National Organization of Women](#),
[Clean Clothes Campaign](#),
[Community Aid Abroad](#),
[The Living Wage Project](#),
Justice Do It Nike . . .

www.viet.net

Rana Plaza: one year on from the Bangladesh factory disaster

Last year, the eight-storey Rana Plaza building collapsed in Dhaka, killing 1,130 garment factory workers. The building had been declared unsafe, but the managers had quotas to meet. People blamed the factory owners, the builders, or the government. But isn't the real culprit our demand for cheap clothing?



Jason Burke

The Guardian, Saturday 19 April 2014

 [Jump to comments \(177\)](#)



People rescue garment workers trapped under rubble at the Rana Plaza building after it collapsed, in Savar, outside Dhaka on April 24 last year. Photograph: © Andrew Biraj/Reuters

(The Guardian, 19th April 2014)

The following brands have yet to publicly commit to the Rana Plaza Donors Trust Fund despite having had links to a factory in the building.

We call on them to immediately make significant contributions and allow the families and survivors the opportunity to rebuild their lives.

Adler Modemarkte	Cato Fashions	Manifattura Corona
scena Retail	Grabalok (Store 21)	Matalan
uchan	Iconix (Lee Cooper)	NKD
enetton	J C Penney	PWT (Texman)
arrefour	KANZ/ Kids Fashion Group	Yes Zee

The following brands have made initial contributions to the Rana Plaza Donors Trust Fund. But the amount collected still falls a long way short of what is needed.

Brands such as N Brown Group, VF Corporation and Gap have made contributions even though they did not source from a factory in Rana Plaza. Primark, have made a significant contribution (in total approximately US\$7 million), however all others listed here need to increase their contributions.

Bonmarché	C&A Foundation	Loblaw
BRAC USA incl. donations from The Children's Place, Walmart, Asda and the Walmart Foundation	Camaieu El Corte Ingles Gueldenpfennig Inditex KiK	LPP S.A. Mango Mascot Premier Clothing



[Labour Behind the Label](#)



A photograph showing a group of female factory workers sitting together in what appears to be a break room or cafeteria. They are wearing various colored caps (pink, white, green) and casual clothing. One woman in a white shirt is smiling while holding a phone to her ear. The background shows more workers and some equipment.

KAMAKO CHHNOEUM (OUTSTANDING WORKER)

"Hello and welcome to Kamako Chhnoeum! This call is free. Answer the following questions and ...

[Learn more »](#)

1 2 3 4

[Better Factories Cambodia](#)

Further Reading

- Fernandez-Stark, K., S. Frederick, and G. Gereffi (2011) ‘The Apparel Global Value Chain: Economic Upgrading and Workforce Development.’ Duke University CGGC Research Paper.
- Gereffi, G. and O. Memedovic (2003) ‘The Global Apparel Value Chain: What Prospects for Upgrading by Developing Countries?’. UNIDO.
- Green Choice Alliance (2012) ‘Cleaning Up the Fashion Industry’. *Green Choice Apparel Supply Chain Investigation – Draft Report*.