Helpdesk Report

Knowledge, evidence and learning for development

Structure of the global ready-made garment sector

Kelbesa Megersa
Institute of Development Studies
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Question

- What does the evidence tell us about the structure of the Ready-Made Garment (RMG) sector and how its global supply chains operate? How is it unique?

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1. Overview

The ready-made garment (RMG) industry's value chain is buyer-driven. It is labour intensive and involves large retailers who have specific product requirements. Large companies set up production plants in regions where land and labour are cheaper. Clothes are then shipped, largely to western markets but increasingly Asian markets also.

Business models can be vertically integrated or more focussed on outsourcing. A vertically integrated model is where one company owns and is responsible for all parts of the supply chain. An outsourced model is where a company outsources different parts of production to others in the supply chain. Key RMG industry players are often a mixture between these two models.

Although outsourcing can be more cost-efficient in terms of production costs there are trade-offs. The complexity of coordinating arrangements can be costly and slow. Increasingly, consumers are wanting more complex items and at an instant rate with changing fashions and trends. More integration can improve production lead times.

A number of case studies provide some insight into sourcing and management practices:

- VF Coorporation, the largest apparel company in the world by revenue in 2018, ensure balance in their sourcing strategy by not relying on one country for their production. This assists in sourcing competitively and sourcing closer to end markets for quicker lead times. They support partners with knowledge and technology. They are looking at circular business models, which reuse materials and keep products in circulation longer to minimise waste. They use software to monitoring inventories, providing customer services and integrating sourcing with negotiation and procurement.
- PVH, which includes number of brands like Calvin Klein, Tommy Hilfiger also, have a diverse and extensive network or sourcing partners. They state that they are increasing focus on long-term relationships with suppliers to collaborate on research and development.
- Inditex (Zara, Massimo Dutti and others) are an example of a fully-vertically integrated company. They develop their own designs, own the manufacturing plants used for production, and retail in their own outlets. They continuously update their stock and the integration helps with rapid market response.
- Li & Fung and Fosun International are supply chain managers coordinating between producers and retailers. Li & Fung are looking forwards and focussing on providing solutions for the digital economy. Both warrant further investigation with regards to operating models.

A country case study looks at Lesotho describes two value chains. One involving Taiwanese owned factories producing for the US market, and one involving South African owned production plants exporting back to South Africa. Taiwanese production plants focussed more on basic production and have relationships with locals are less integrated. South African owned production hired more local supervisors and managers and provide more training.

Changing regional and international trade agreements are a significant factor for companies making decisions on where to locate production plants. For example, the African Growth and Opportunity Act provides sub-Saharan African exports duty- and tariff- free access to the US RMG market and has attracted Asian investors into Africa.

Power relations in the value-chain are often skewed where production plants are reliant on demand from big companies who are connected to the markets. The larger retails companies or supply chain managers are less reliant on the small producers of which they have a choice in the global landscape.

The McKinsey State of Fashion Report 2019, emphasises the need for global players to become more agile and able to respond quickly to consumer demands for changing fashions. Greater integration of supply chains lends itself to shorter lead times. The report also notes emerging demand for ethical products and company practices as younger consumers are increasingly conscious of environmental and social issues.

2. Business models and sourcing

Introduction

Jacobs et al (2016) describes the apparel industry as having a buyer-driven value chain. It is labour intensive and involves large retailers who define product requirements for a specific market. Global sourcing is important for buyer driven value chains to reduce costs and respond quickly to changing markets. Production location is based on procurement requirements such as cost of manufacturing, quality, capacity, and possible risk involved.

Terminology

Vertical integration a process in business where a company buys another company that supplies it with goods or that buys goods from it in order to control all the processes of production.[1] So one company is responsible for production, marketing sales etc. The company owns the factories and the distribution centres.

Alternatively, the **outsourcing business model** is where a company outsources various functions to an outside business or person. An expert coordinates the different functions, for example the retailer and the manufacturing plant may not be in contact but are coordinated by the ourtsourcing expert (Magnani et al., 2018; Strange and Magnani, 2017).

The term **apparel**, meaning ‘clothing’ seems to be more often used than ready made garments. ‘Apparel’ is used throughout this report if that is what it was termed as in the source of the information. Official guidance on whether these terms are interchangeable was not available. Presumably, apparel includes custom-made clothes but the large corporations discussed in this report are not involved in this sort of tailoring.

Sourcing

Sourcing is a key part of the business model and a critical success factor for the global clothing industry. For decades, European and US retailers and consumers profited from the steady flow of production activities from low-cost nations in East Asia, in what many sector analysts refer to as a “caravan journey”. Major retailers choose RMG manufacturers on the basis of five criteria: price, quality, capacity, speed, and risk. A survey among apparel buyers in 2011

[1] https://dictionary.cambridge.org/dictionary/english/vertical-integration

found that Bangladesh was beginning to become favoured over sourcing from China because of capacity and costs (McKinsey, 2013).

As of late, the series of high-profile accidents in the Bangladesh's garment industry (e.g. multiple factory fire accidents in 2005, 2006 and 2010 as well as the 2013 Dhaka garment factory collapse) [2] concentrated the world's attention on sourcing in big RMG retailers. Particularly, on the function of the industry in engendering economic growth for poor nations in a sustainable and socially responsible way (McKinsey, 2017 and 2013).[3]

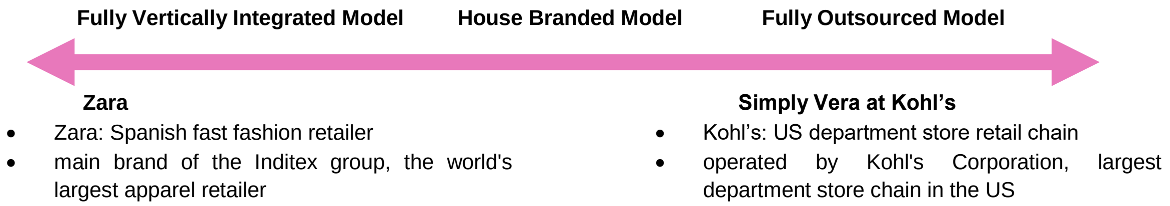
Business models

The RMG sector is **characterised by two business models vertical integration and outsourcing** (Magnani et al., 2018; Perry et al., 2015; Rahman and Sayeda, 2016; Strange and Magnani, 2017).

Zara is an example of a vertically integrated clothing company. Design, production, shipment, display, promotion, sale, and customer service are all managed within Zara.[4] In reality, businesses will tend towards an in-between model where some services are integrated within one company and some are out-sourced.

Figure 1 is a simple model showing these approaches as a continuum.

Figure 1: An Outsourcing Model for Fast Fashion



Source: Adapted by author from exhibits of RMG business models by Mihm (2010; p56 and 60), *Fast Fashion In A Flat World: Global Sourcing Strategies*, https://clutejournals.com/index.php/IBER/article/view/585/571, Licensed under CC-BY 3.0 US

Choice of business model in the RMG sector is typically determined by labour costs, technology, price of goods sold, market responsiveness, and involvement in the supply chain (Oxborrow, 2015; Mihm, 2010).

Information was not found that identified businesses explicitly naming models that they were using within the scope of this report, although brief public statements about their systems are reported. A rapid search in the academic literature found that business modelling and decision making are often discussed using somewhat inaccessible terms (Sturgeon, 2000). Decisions on

[2] At least 1,136 people were killed, and hundreds injured in April 2013 – following the collapse of an eight-storey building (on the outskirts of Dhaka) in Bangladesh. The complex was housing five garment factories providing global brands. The collapse of the Rana Plaza was the worst industrial accident in Bangladesh and the world's most deadly industrial accident since the 1984 Bhopal disaster in India (Reuters, 2017).
[3] In 2011, McKinsey & Company conducted a survey among leading apparel buyers in Europe and the US regarding their sourcing strategies and plans. Respondents indicated that in the face of increasing costs in China, companies were starting to explore alternatives. They also stated that they saw Bangladesh as the next likely sourcing destination. They cited prices and capacity as Bangladesh's key advantages versus gaps in infrastructure and compliance. (McKinsey, 2013)
[4] https://toughnickel.com/industries/Business-Operations-of-Clothing-Retailer-Zara

how to manage elements of a supply chain in the clothing sector are extremely complex and largely warrant a more in-depth investigation than is allowed in this helpdesk format.

One paper was identified which helped provide some insight into this area, looking at the cost-agility trade-offs of outsourcing (Sartal et al., 2017). The authors note that as outsourcing in other countries increases production costs are reduced but time-to-market costs rise. Shipping and coordinating between large numbers of intermediaries becomes more complex. Quality control becomes more difficult when dealing with suppliers using different standards and procedures. The paper goes on to propose economic models looking at degrees of specialisation in optimising outsourcing. The optimal point depends on the global RMG firm's strategy. High rotation of goods means time-to-market is more important than for a company that focuses more on quality than fashion responsiveness. The decision to outsource has become more than just about reducing costs but also about frequent changes in customer preferences and requirements for customisation. The authors conclude that the decision on what degree to outsource is a balance between production and time-to-market costs. Nearshoring production is becoming more appealing as wages rise in Asia, local production reduces the ecological footprint and allows products to reach markets quicker (McKinsey & Company, 2018).

A selection of case studies are provided in the next section to help give an insight into the RMG industry and supply chain considerations.

3. Case studies

Data

Apparel companies ranked by size of *revenue* are reported by statista.com. The McKinsey report (McKinsey & Company, 2018) rank companies by *economic profit*, leading to a different order. Economic profit is total revenue minus implicit and explicit costs. Another difference is that the McKinsey ranking is of *fashion* companies rather than *apparel* companies (fashion includes shoes and accessories). Market share data come from different sources.

VF Coorporation

The largest apparel company in the world by revenue in 2018 according to statista.com was VF Corporation (VFC) with a revenue of 13.8 billion USD.[5] It has an overall market share of 6.62%.[6] This varies between segment, it has 6.72% of the market share in jeanswear, 57.7% of the market share in outdoor apparel, 1.19% market share in sportswear. It's revenue for the 12 month period ending June 30, 2019 was 13.98 billion USD.[7] It's subsidiaries include Vans, The North Face, The Timberland Company, Wrangler, and Eastpak. The VFC website claims that responsible sourcing is an imperative.[8] Their sourcing strategy favours balance and not being dependent on one country. This helps to manage cost competitively and source closer to end markets. They source 35 per cent from the Americas, 25 per cent from Vietnam, 11 per cent from Cambodia, 5 per cent from Bangladesh, 3 per cent from Indonesia, 2 per cent from Jordan and 10 per cent from other countries.[9] They describe their responsible partnership model as the

[5] https://www.statista.com/statistics/831185/revenues-of-the-largest-global-apparel-companies/
[6] https://csimarket.com/stocks/competitionSEG2.php?code=VFC
[7] https://www.macrotrends.net/stocks/charts/VFC/vf/revenue
[8] https://www.vfc.com/our-company/supply-chain#first-in-class
[9] https://www.vfc.com/our-company/supply-chain#global-balance

'Third Way'.[10] A progression from the First Way (internal manufacturing) and from the Second Way (transactional sourcing). They support partners with the knowledge and technology to produce efficiently and hold suppliers to the same high standards as their owned facilities.

VFC are looking at circular business models.[11] They describe linear production as unsustainable, inefficient and wasteful. A circular business model looks at reusing materials and keeping products in circulation for longer to minimise waste.

VFC is known to have a segmented market business model for customer groups with different needs – outdoor, jeans, image wear etc.[12] It sells wholesale to mass merchants, national chains, department stores, specialty stores and directly to consumers (online). Revenues are generated through product sales and through the selling of licenses for brands to third parties.

A report from 2008 describes the software that VFC have used, i2 Supply Chain Planner.[13] The software assists with inventory optimisation and monitoring, integrates sourcing with negotiation and procurement, and improves customer services. It is able to create a plan based on true demand, alternate routings and raw materials' position.

PVH

PVH (formerly Phillips-Van Heusen) was the second largest grossing retailer in 2018, with revenue of 9.7 billion USD according to statista.com.[14] PVH own a number of brands including Tommy Hilfiger and Calvin Klein.[15] The company website describes the supply chain as having a diverse and extensive network of sourcing partners.[16] They also have a network of wholesale and retail distribution centres. They are increasing collaboration with what they describe as 'next generation vendors', where long-term relationships are built up enabling collaboration on research and development.

Zara and Inditex

Zara are the UK subsidiary of the Spanish fashion group Inditex. Inditex is the largest global fashion retailer in terms of number of retail outlets[17] and the largest globally by economic profit according to the McKinsey Report (4,010 million USD economic profit in 2017). Zara have a 1.5 per cent market share in the UK womenswear retailers. Inditex is the largest corporation within the sector using largely vertically integrated business model. They develop designs in-house and manufacture their own products (Mihm, 2010). Each brand or concept (eg. Zara) has it's own distribution hub in Spain. Systems automation and centralised organisation allow them to continuously update their collections. They produce in small batches and aim for rapid market response. They have agile production systems set up for fast-fashion.[18] They manage their own retail and record selling trends in real-time to feedback (Nicoletti, 2018; Sardar and Lee, 2015). Zara stock, clear shelves and then restock clothing about twice a week - instead of the traditional

[10] https://www.vfc.com/our-company/supply-chain#sourcing-strategy
[11] https://sustainability.vfc.com/our-approach-strategy/circular-business-models
[12] https://www.cleverism.com/company/vf-corporation/
[13] http://laurenbossers.writersresidence.com/system/attachments/files/3718/original/VF_inventory_case_study.pdf
[14] https://www.statista.com/statistics/831185/revenues-of-the-largest-global-apparel-companies/
[15] https://en.wikipedia.org/wiki/PVH_(company)
[16] https://www.pvh.com/company/global-supply-chain
[17] https://digital.hbs.edu/platform-rctom/submission/inditex-king-of-fast-fashion/
[18] ibid.

six seasons per year. To suit this pace, collections are small and sell out quickly (Anthony and Taplin, 2017; Mihm, 2010).

Li & Fung

Li & Fung are a supply chain manager based in Hong Kong. They work for primarily EU and US brands. They are working on a digital supply chain with innovative services and solutions for the digital economy.[19] They offer customers a number of different business models.[20] They work with different types of customers: from luxury brands to hypermarkets, selling on- and offline.

Fosun International

Fosun International and a Chinese conglomerate and investment company. They set up a fashion brand management company to help labels to develop the markets into China.[21] They provide fashion brands with management services including retail operations and marketing.

4. Country case study: Lesotho

The apparel industry accounts for around one third of Lesotho's gross domestic product (Morris et al, 2016). It has been an important employment boost for the nation, particularly for women. The industry grew rapidly from the year 2000 with foreign direct investment (FDI) from Taiwanese investors linked into supplying the US market. Lesotho was attractive as imports to US markets were duty free under the African Growth and Opportunity Act (AGOA) formulated in 2000. This was coupled with the restrictions on exports from Asian producing countries to the US with the Multi-Fibre Arrangement (which ended in 2004).

In 2008 South Africa emerged as a new end market. The South Africa have duty free market access as members of the South African Customs Union (SACU). Lesotho was also attractive as the labour market was more flexible (conditions in South Africa rigid) and operating costs lower.

Taiwanese investment firms have created local skills but employees are generally trained in basic production, often one task or operation of one machine. South African firms on the other hand, train workers in more complex tasks and employ more locals in supervisory and management positions.

Difficulties for apparel producers are inadequate infrastructure (hard and soft); and local skill development.

There are different power dynamics within the value chains serving the two different end markets. There are not direct relationships between producing plants in Lesotho and the buyers in the US. US requirements are largely basic products in high volumes. They nominate inputs from Asia and do not require creative input from the supplier. US specifications go to the head office in Taiwan where decisions are made on cost-effective location of production, sourcing and distribution across the value chain. The Taiwanese firms tend to source long run production of a

[19] https://www.lifung.com/supply-chain-innovation/our-business/
[20] not detailed on the website
[21] https://ww.fashionnetwork.com/news/Fosun-sets-up-Fashion-Brand-Management-Company-to-help-labels-into-China,1071123.html#.XV1Ls-hKg2w

narrow range of products for the US market. The producers are organised in large plants specialising in narrow activities.

South African buyers require more flexibility in lead in times and volumes from the producers in Lesotho. Production runs are shorter, more complex and quicker response with higher fashion content. Input sourcing is managed in South African based head offices and textiles mostly come from Asia (with some from South Africa or Mauritius). South African buyers have a closer relationship with Lesotho manufacturers and there is more fluidity with decision making. South African companies are smaller and so more reliant on their Lesotho plants than Taiwanese global operating companies who could substitute with production plants located elsewhere.

There is more scope for process innovation within Lesotho production plants where there is fluid management arrangements (as with the South African supply chain) and so sustainability is more likely. Producers for the Taiwanese firms have not been introduced to new technologies and work organisation strategies so are less likely to be sustainable in the long-term. Government of Lesotho's support for training and interventions to enhance productivity in factories has been limited and ineffective (Balchin and Calabrese, 2019).

5. Power Relations in the RMG supply chain

The most important value-added areas in the RMG sector are design, marketing, branding and retailing processes. On the other hand, the low value-added areas are within manufacturing. The RMG company often represents a large proportion of the suppliers work stream. The supplier is reliant on the overarching company, that company then holds power over the supplier. Conversely, a small supplier represents only a minor percentage of a large retail companies operations. Particularly large firms may even dictate some national or global rules and arrangements affecting trade (Lee, 2019; Tokatli, 2007).

The industry is dominated by large companies where 20 major companies account for 97% of global economic profit for the sector in 2017 (McKinsey & Company)[22].

Magnani et al (2018) discuss outsourcing relationships in global value chains and notes that lead firm-supplier relationships often involve power asymmetries. A number of textile companies are included in their analysis. They further contend that profits are made by firms able to exploit these asymmetries. They note that alternative relationships which build trust and respect are possible but not atypical in manufacturing. Buying firms tend to be able to influence or control the decisions and behaviour of the supplier.

Importance of regional supply chains

Another important characteristic of international trade in the RMG sector is the importance of regional supply chains.[23]

- Regional manufacturing networks are more integrated in Madagascar. In general, Madagascar still exports higher-value clothing than other exporting nations in sub-Saharan Africa (Morris and Staritz, 2014). This is due in part to investments in the

[22] https://www.businessinsider.com/nike-zara-tj-maxx-top-list-global-fashion-brands-2018-12?r=US&IR=T
[23] According to Sturgeon (2000), 'regional supply chain' relates to purchasing within the geographic area of countries that are linked by commercial treaties (e.g. NAFTA, EU), or an 'international supply chain' involving recourse to suppliers of more than one country, right up to the 'global supply chain' which extends worldwide.

upgrading of the RMG manufcturing capacity by diaspora and Mauritian investors (Balchin and Calabrese, 2019).

- Many of the South African companies that set up factories in Lesotho manufactured high-value clothing for both regional markets and foreign exports.[24] However, Government of Lesotho's support for training and interventions to enhance productivity in factories has been limited and ineffective (Balchin and Calabrese, 2019; Morris et al., 2016).
- The apparel industry in the US had strong historical ties with Latin American countries while countries in EU have strong regional supply chain with countries in Central Europe. The regional attribute is also observed within the sourcing of imports by major Asian textile and clothing exporters (Lu, 2019; Sartal et al., 2017; Pertiwi, 2017; Nordas, 2004).

6. Turnover of factory staff: trends and some evidences from interventions

Improving Retention and Productivity

- **The willingness of firms to deliver general training to workers hinge on the productivity gains from training and the probability that workers are retained** (Adhvaryu et. al. 2016). The RMG sector is wedged in a low equilibrium trap with worker displeasure driving high worker turnover, which in turn reduces the investment in workforce skills upgrading, training and productivity. Firms want to boost labour productivity but are afraid of losing their return on investment because of high staff turnover (ILO, 2016; World Bank, 2012).
- Muku (2013) researched the impact of job characteristics on worker motivation and discovered that **autocratic management in the RMG sector** of Bangladesh **negatively affects job satisfaction, commitment to achieving goals, productivity, and mental health. Difficulties in acquiring new skills limits skill growth and optimal exploitation of the potential of employees**. The bad state of HR practices diminishes the likelihood of career development that leads to work boredom and monotony, ultimately affecting workers' motivation, morale, and productivity.
- In his comparative research of compliant and non-compliant clothing factories (i.e. to labour standards) in Bangladesh, Baral (2010) discovered that the **average annual turnover of compliant factories is about twice that of non-compliant factories' average annual turnover**. He proposed that, in order to maintain its competitiveness on the worldwide apparel market, the Bangladesh RMG sector needs to address problems such as salary discrimination, uneven payment, casual recruitment, leased factory premises, low roofs, lack of pure drinking water, lack of lunch space, lack of adequate amount of distinct male and female bathrooms, closed working environment, etc.
- Skilled RMG sector workers (within a thriving labour market) know they have a lot of leverage—**when they are dissatisfied with their current conditions, they simply move on to the next company or contractor** (De Neve, 2014).
- Managers and supervisors of **supplier firms are confronted with a daily struggle to ensure that there are adequate people sitting on the lines, because of poor worker**

[24] As a result of the sanctions at the time, South African regional investors moved manufacturing to Lesotho in the 1980s. In reaction to changes in tariffs on imports into South Africa, a second wave of relocation to Lesotho followed in the 1990s (Balchin and Calabrese, 2019).

retention. Factories are inclined to hire anyone, without properly looking at skills, ability or motivation. These trends adversely affect productivity and technology adaptation (Chang et. al. 2016; Hearle, 2016)

- Nevertheless, **by providing training, the low equilibrium trap can be interrupted, and employees benefit from rising job satisfaction.** This advances **retention rates and productivity**. The cost of replacing and training a new worker are substantial - meaning that high retention rates are critical from a business standpoint (KfW DEG, 2015).

7. Industry outlook

The McKinsey State of Fashion Report interviews over 300 executives annually to look at trends. The 2019 report (McKinsey & Company, 2018) proposes that being nimble is going to be most important to remain a successful player in the industry. The report recommends prioritising digital systems and achieving the fastest possible speed to market. Rapidity is key and industry players should be looking for shorter lead times as consumers want to purchase something they have identified immediately. Companies need to be prepared to let go of out-dated processes that might have led to their success. Consumers are more interested in newness than brand loyalty.

Sustainability and transparency need to improve in line with customer demands. Younger generations emerging as consumers are more aware and passionate about social and environmental issues.

A focus on productivity and resilience is also advised to prepare for uncertainty in economic conditions. The globalised nature of value chains and the many components makes them more susceptible to external shocks. Contingency plans are needed within global value chains as trade could be contending with new barriers, tensions and uncertainty. The renegotiation of South-South trade agreements could have a big impact on RMG systems.

The industry is predicted to grow by between 3.5 and 4.5 per cent. The growth prediction is largely based on emerging markets in Asia and luxury markets. China is predicted to overtake the US as the largest global fashion market. Middle-class consumers in India are a growing market. India are growing as producers also becoming increasing shrewd in technological innovation.

“Digital”, “fast”, and “changing” are key words being used by executives describing the industry. Industry describing words were somewhat more pessimistic in the previous year: “uncertain”, “challenging”, and “optimistic”.

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Key websites

Garment Supply Chain Governance Project

https://www.wiwiss.fu-berlin.de/forschung/Garments/Links/index.html

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This report is based on six days of desk-based research. The K4D research helpdesk provides rapid syntheses of a selection of recent relevant literature and international expert thinking in response to specific questions relating to international development. For any enquiries, contact helpdesk@k4d.info.

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