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APPENDIX -1

Basic Range Questionnaire

Survey on Apparel Supply Chains

This survey is made and conducted by Mahesh Rangana Sathkoralage in partial fulfillment of the MBA in Supply Chain Management degree offered by the Department of Transport & Logistics Management, Faculty of Engineering, University of Moratuwa, Sri Lanka.

This survey is sent to you as an acknowledgement of your contribution and experience to the fashion and apparel industry. Understanding your opinions on the current state of fashion supply chain and how it should be transformed is vital for the future growth of the industry. Therefore, please take a few minutes from your valuable time and answer the following question. The entire questionnaire can be answered in 5 to 10 minutes.

Kindly note that by participating, you're giving your consent to analyse your answers for publication of the Masters dissertation and future journal and conference publications.

*Required

| | |
|--|-------------------|
| | Gender |
| | Male |
| | Female |
| | Prefer not to say |
| | Other |

| | |
|--|-------------------|
| | Your age in years |
| | 18-25 |
| | 26-35 |
| | 36-45 |
| | 46-55 |
| | 56-65 |
| | 66 and over |

| | |
|--|---|
| | Work experience throughout your career in apparel sector (in years) * |
| | Less than 1 year |
| | 1-2 |
| | 2-5 |
| | 5-10 |

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| | More than 10 |
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| | Which best describes your employer in the supply chain? * |
| | Manufacturer |
| | Intermediary |
| | Consulting/service provider |
| | Retailer/brand |

| | |
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| | Departmental/functional affiliation * |
| | Operations / Supply Chain / Logistics |
| | Design / Product Development / Sourcing / Merchandising |
| | Marketing / Sales / Branding |
| | Peripheral functions (Finance / Human Resources / IT / Administration / etc.) |

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| | Where does your role fill in the organization's hierarchy? * |
| | Top/upper management |
| | Upper/middle management |
| | Middle management |
| | Entry level |
| | Hourly/casual employment |

Please answer the following questions to describe the exposure you've received so far in your career.

Countries where you've lived more than 5 years in

Country you're currently based in

Countries where you've worked in

Brands you've worked with

Company X

Company X operates a leading clothing brand in a developed country. The brand sells through their own stores as well as wholesale and online channels. Similar to most cases this brand also uses off-shore manufacturing in several developing countries.

Company X has several volumes based ranges (basic or core products) which run throughout the year and seasonal ranges which change quarterly (3 months). Most of the basic ranges are in the mature stage of Product Life Cycle but can also be newly developed as a basic/volume driven range too. Demand/margins of these ranges are comparatively predictable and consistent (less deviations from estimated) as well.

The basis of these ranges is scale and efficiency. They achieve the margins through manufacturing efficiency and economies of scale though the growth is marginal. Therefore, from a business point of view, increasing efficiency across the supply chain is key.

The next questions focus on areas where the brand can design the supply chain to be EFFECTIVE and EFFICIENT in managing the volume based ranges explained above.

Please rate the applicability of the following statements on a scale of 7 with 7 being Completely Agree, Completely Disagree for the focal product., considering the above context.

1 Product Development

Material standardization in the product development phase is important *

This is to use standard materials as much as possible to achieve operational flexibility. For example, few similar fabrics/ same yarn for several fabrics, etc.

Completely disagree

Completely agree

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Style/shape standardization in the product design phase is important *

This is mostly about the shapes and pattern. It is using few key pattern blocks across the ranges where possible. E.g. - 3 key shapes for briefs/ 4 key shapes for bras / 3 key cup shapes, etc.

Completely disagree

Completely agree

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| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
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Postponement in product development is important *

This is another strategy used by some brands. Partial development happens with two or more vendors (may be with the cheapest and the fastest option / or in two regions where taxation is different) but select the final vendor very late when more information on market demand is available.

Completely disagree

Completely agree

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| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
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2 Manufacturing Operations

Manufacturing postponement is important *

This is another way of postponement. Customer share the forecasts in advance and then vendor can work with the suppliers and go ahead to arrange fabrics/trims for basic colours. Then the final manufacturing only happens after exact volumes are confirmed.

Completely disagree

Completely agree

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Vendor managed inventory is important *

Vendor has full access to the market demand data and vendor will manage production and the inventory for the buyer based on the information.

Completely disagree

Completely agree

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Vendor managed warehousing is important *

In vendor managed warehousing, vendor manages the warehousing and inventory on behalf of the brand.

Completely disagree

Completely agree

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Backward Integration is important *

This is a strategy where the brand moves to the previous (upstream) tier to own and control the backward operations.

Completely disagree

Completely agree

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Logistics Operations

Logistics Postponement is important *

This relates to having several warehouses located in different regions and decide which warehouse to use at the last moment depending on where the market demand is.

Completely disagree

Completely agree

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Warehousing options (cross docking/port splitting) is important *

These are logistic service features to reduce warehousing and internal transportation costs.

Completely disagree

Completely agree

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Logistics partnerships (3PL/4PL) is important *

3PL - Third party logistics providers: Completely separate organisations that provide logistics to manufacturers at a cost. 4PL - Fourth party logistics providers: Similar to 3PLs, but does not possess assets and operations as a high-level manager of logistics solutions.

Completely disagree

Completely agree

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3 Sourcing/supplier Selection

Near shore manufacturing/sourcing is important *

This refers to manufacturing or sourcing closer to the customers' demand nodes.

Completely disagree

Completely agree

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Working with FEW key strategic suppliers/vendors is important *

Completely disagree

Completely agree

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Connecting with ALL downstream partners (brand does all the product development and design for all the materials) in the supply chain is important *

Completely disagree

Completely agree

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Vendor is given the responsibility to manage the entire upstream supply chain is important *

Completely disagree

Completely agree

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Vendor is given the responsibility to manage selected parts of the supply chain only (non-strategic materials, e.g. generic trims) is important *

Completely disagree

Completely agree

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APPENDIX -2

Seasonal Range Questionnaire

Survey on Apparel Supply Chains

This survey is made and conducted by Mahesh Rangana Sathkoralage in partial fulfillment of the MBA in Supply Chain Management degree offered by the Department of Transport & Logistics Management, Faculty of Engineering, University of Moratuwa, Sri Lanka.

This survey is sent to you as an acknowledgement of your contribution and experience to the fashion and apparel industry. Understanding your opinions on the current state of fashion supply chain and how it should be transformed is vital for the future growth of the industry. Therefore, please take a few minutes from your valuable time and answer the following question. The entire questionnaire can be answered in 5 to 10 minutes.

Kindly note that by participating, you're giving your consent to analyse your answers for publication of the Masters dissertation and future journal and conference publications.

*Required

| | |
|--|-------------------|
| | Gender |
| | Male |
| | Female |
| | Prefer not to say |
| | Other |

| | |
|--|-------------------|
| | Your age in years |
| | 18-25 |
| | 26-35 |
| | 36-45 |
| | 46-55 |
| | 56-65 |
| | 66 and over |

| | |
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| | Work experience throughout your career in apparel sector (in years) * |
| | Less than 1 year |
| | 1-2 |

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| | 2-5 |
| | 5-10 |
| | More than 10 |

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| | Which best describes your employer in the supply chain? * |
| | Manufacturer |
| | Intermediary |
| | Consulting/service provider |
| | Retailer/brand |

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| | Departmental/functional affiliation * |
| | Operations / Supply Chain / Logistics |
| | Design / Product Development / Sourcing / Merchandising |
| | Marketing / Sales / Branding |
| | Peripheral functions (Finance / Human Resources / IT / Administration / etc.) |

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| | Where does your role fill in the organization's hierarchy? * |
| | Top/upper management |
| | Upper/middle management |
| | Middle management |
| | Entry level |
| | Hourly/casual employment |

Please answer the following questions to describe the exposure you've received so far in your career.

Countries where you've lived more than 5 years in

Country you're currently based in

Countries where you've worked in

Brands you've worked with

Company X

Company X operates a leading clothing brand in a developed country. The brand sells through their own stores as well as wholesale and online channels. Similar to most cases this brand also uses off-shore manufacturing in several developing countries.

Company X has volume based ranges (basic or core products) which run throughout the year and seasonal ranges which change quarterly (3 months). These seasonal ranges are developed by a dedicated design/product development team. Brand attains the differentiation in these ranges through innovativeness. This can be in colour, prints, shape, pattern, materials, product performance etc. Seasonal developments generally yield better margins. However, demand and margin variations from estimates are always high.

The key success factors for these ranges are reacting fast to fashion trend, colour themes, product innovativeness, product availability. Price is still key however above factors may help to exploit the demand at the peak and achieve better margins (with no discounts/mark downs etc.). Therefore, from a business point of view, increasing AGILITY (FAST RESPONSE) across the supply chain is key.

The next questions focus on areas where the brand can design the supply chain to be EFFECTIVE and EFFICIENT in managing the volume based ranges explained above.

Please rate the applicability of the following statements on a scale of 7 with 7 being Completely Agree, Completely Disagree for the focal product., considering the above context.

1 Reducing lead time of the product development/design process is important

As the word suggests, it's about designing the range as late as possible. This will help to yield better results. However, need to have a very strong product development back end.

Completely disagree

Completely agree

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2 Product Development

Material standardization in the product development phase is important *

This is to use standard materials as much as possible to achieve operational flexibility. For example, few similar fabrics/ same yarn for several fabrics, etc.

Completely disagree

Completely agree

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Style/shape standardization in the product design phase is important *

This is mostly about the shapes and pattern. It is using few key pattern blocks across the ranges where possible. E.g. - 3 key shapes for briefs/ 4 key shapes for bras / 3 key cup shapes, etc.

Completely disagree

Completely agree

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Postponement in product development is important *

This is another strategy used by some brands. Partial development happens with two or more vendors (may be with the cheapest and the fastest option / or in two regions where taxation is different) but select the final vendor very late when more information on market demand is available.

Completely disagree

Completely agree

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3 Manufacturing Operations

Manufacturing postponement is important *

This is another way of postponement. Customer share the forecasts in advance and then vendor can work with the suppliers and go ahead to arrange fabrics/trims for basic colours. Then the final manufacturing only happens after exact volumes are confirmed.

Completely disagree

Completely agree

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Vendor managed inventory is important *

Vendor has full access to the market demand data and vendor will manage production and the inventory for the buyer based on the information.

Completely disagree

Completely agree

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Vendor managed warehousing is important *

In vendor managed warehousing, vendor manages the warehousing and inventory on behalf of the brand.

Completely disagree

Completely agree

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Backward Integration is important *

This is a strategy where the brand moves to the previous (upstream) tier to own and control the backward operations.

Completely disagree

Completely agree

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Logistics Operations

Logistics Postponement is important *

This relates to having several warehouses located in different regions and decide which warehouse to use at the last moment depending on where the market demand is.

Completely disagree

Completely agree

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Warehousing options (cross docking/port splitting) is important *

These are logistic service features to reduce warehousing and internal transportation costs.

Completely disagree

Completely agree

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Logistics partnerships (3PL/4PL) is important *

3PL - Third party logistics providers: Completely separate organisations that provide logistics to manufacturers at a cost. 4PL - Fourth party logistics providers: Similar to 3PLs, but does not possess assets and operations as a high-level manager of logistics solutions.

Completely disagree

Completely agree

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | | | | | | |

4 Sourcing/supplier Selection

Near shore manufacturing/sourcing is important *

This refers to manufacturing or sourcing closer to the customers' demand nodes.

Completely disagree

Completely agree

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Working with FEW key strategic suppliers/vendors is important *

Completely disagree

Completely agree

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| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
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Connecting with ALL upstream partners (brand does all the product development and design for all the materials) in the supply chain is important *

Completely disagree

Completely agree

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Vendor is given the responsibility to manage the entire upstream supply chain is important *

Completely disagree

Completely agree

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Vendor is given the responsibility to manage selected parts of the supply chain only (non-strategic materials, e.g. generic trims) is important *

Completely disagree

Completely agree

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APPENDIX -2

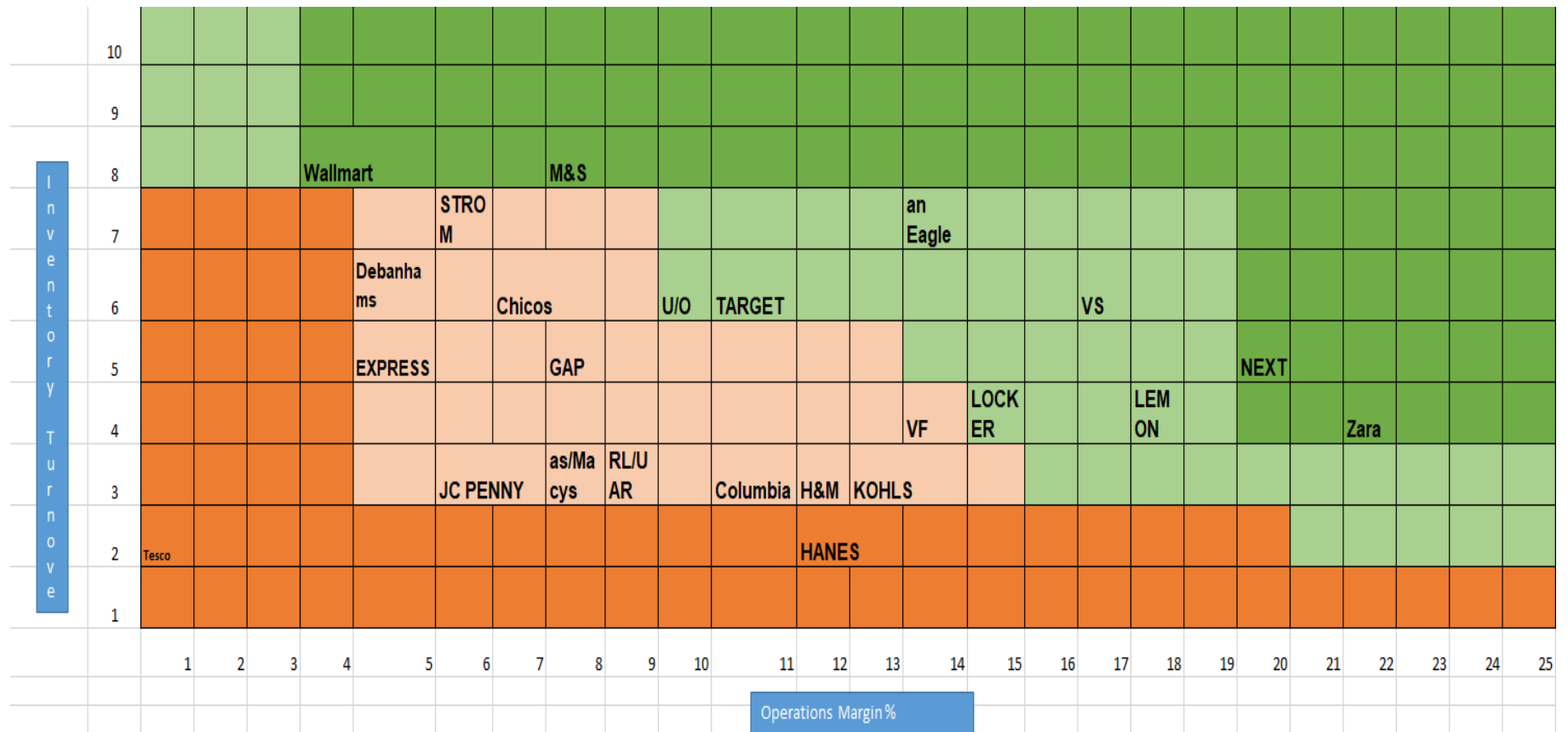
| BRAND | ADDIDAS | American Eagle | Chicos | Columbia | Debanhams | EXPRESS | FOOT LOCKER | GAP | H&M | HANES | JC PENNY | KOHL'S | LULULEMON | M&S (Clothing) | MACYS |
|---------------------------------|----------------|-----------------------|---------------|-----------------|------------------|----------------|--------------------|------------|----------------|--------------|-----------------|---------------|------------------|---------------------------|--------------|
| OPERATING PROFIT% | 8% | 14% | 7% | 11% | 5% | 5% | 15% | 8% | 12% | 12% | 6% | 13% | 18% | 8% | 8% |
| INVENTORY TURNOVER RATIO | 3 | 7 | 6 | 3 | 6 | 5 | 4 | 5 | 3 | 2 | 3 | 3 | 4 | 8 | 3 |
| MULTIFICATION | 24% | 100% | 42% | 32% | 28% | 24% | 59% | 40% | 37% | 25% | 18% | 38% | 72% | 60% | 24% |

Source: FY 2016 published financial records

| BRAND | NEXT | NIKE | NORDS TROM | PVH | RALPH LAURE N | Sears | TARGE T | Tesco | UNDER ARMO UR | Urban outfitt ers | VF | VS | WALL MART | ZARA | REGINA |
|---|-------------|-------------|-----------------------|------------|------------------------------|--------------|--------------------|--------------|------------------------------|----------------------------------|-----------|-----------|----------------------|-------------|---------------|
| OPERATING PROFIT% | 20% | 13% | 6% | 9% | 9% | -6% | 11% | 1% | 9% | 10% | 14% | 17% | 4% | 22% | 11.90% |
| INVENTORY TURNOVER RATIO | 5 | 4 | 7 | 3 | 3 | 3 | 6 | 2 | 3 | 6 | 4 | 6 | 8 | 4 | 6 |
| MULTIFICA TION | 100% | 53% | 43% | 28% | 26% | -19% | 66% | 1% | 28% | 57% | 57% | 101% | 34% | 88% | 71.40% |

Source: FY 2016 published financial records

APPENDIX -3



Source: Author