

Chapter 2

Product Development Process of an International Luxury Fashion Brand: Implications to Hong Kong Fashion Trading and Manufacturing Companies

Yi-Ning Fung and Tsan-Ming Choi

Abstract In fashion supply chains, product development is a crucial and sophisticated process. This is especially true for the luxury fashion brands as they aim to achieve the best quality, in both choices of materials and management of the production process. In this paper, we report a case study on the product development process of a luxury fashion brand (Brand A). Based on the real case's scenario, we explore the whole product development process, from material sourcing, sample development, to materials inspection, and management. We compare Brand A's product development process with the commonly seen product development process in fashion trading companies in Hong Kong. Implications on how Hong Kong fashion trading and manufacturing companies can enhance their operations are also discussed.

Keywords Product development · Fashion industry · Supply chain management

2.1 Introduction

In the fashion industry, the product development process is a highly complex and sophisticated one. On one hand, driven by the fast fashion business trend (Choi 2013), business efficiency is always an important dimension of product development. On the other hand, product and design qualities are both regarded as critical

Y. -N. Fung (✉) · T. -M. Choi
Institute of Textiles and Clothing, The Hong Kong Polytechnic University,
Hung Hom, Kowloon, Hong Kong
e-mail: yiningfung@hotmail.com

T. -M. Choi
e-mail: jason.choi@polyu.edu.hk

elements in fashion product development. As such, a proper product development process for fashion requires a balance between cost saving and quality.

Traditionally, the fashion industry in Asia, like Mainland China and Hong Kong (MCHK), is famous for cost efficiency. However, with the development of Hong Kong and Mainland China, operations costs (including the labor cost, land cost, energy cost, etc.) are getting higher and higher. Product development costs of fashion companies in MCHK are high and hence the cost advantage no longer exists. As a result, fashion manufacturers and traders in Hong Kong should consider new measures to develop their operations and sustain their competitive advantage.

In this paper, by reporting a real case study on the product development process in an international luxury fashion brand (Brand A¹), we try to shed some light on how Hong Kong fashion manufacturers and traders may develop their operations with reference to the high- quality product model implemented in Brand A. In addition, this paper provides empirical details regarding the product development process of a well-established luxury brand. In particular, it serves as an important reference to researchers who are interested in conducting further research on product development.

This paper is organized as follows. Section 2.1 introduces the topic. Section 2.2 reviews the literature. Section 2.3 presents the product development process in Brand A. Section 2.4 introduces the common features of the product development process in Hong Kong. Section 2.5 presents a comparison between the product development processes in Hong Kong and in Brand A. Section 2.6 discusses the implications. Section 2.7 concludes this paper with a discussion on future research.

2.2 Literature Review

Product development process is an important topic in fashion business. In the following, we concisely review some related studies.

For fashion product development, several studies are devoted to making improvement in the respective process. For example, Lau et al. (2006) develop a novel fuzzy expert system for fabric specimen forecasting. Their proposed system can facilitate the fashion product development process with the incorporation of sensory judgments during fabric selection. The authors report that the forecasting accuracy of the expert system is over 80%. Thus, the proposed expert system can effectively help fashion manufacturers and traders to identify the most appropriate fabric for product development. Goworek (2010) studies the contemporary practice in fashion product development in UK fashion retailers. The author reveals via case studies that communication skills are crucial in the product development process. In particular, the author argues that effective collaboration among various participants is important during fashion product development. This is especially true if the

¹Brand A is an artificial name for a real brand.

fashion product development process has to include the latest information on fashion trends and fashion market conditions. Caniato et al. (2014) study the integration of new product development process and international fashion retailing. The authors argue that international fashion retailing can help collect data regarding foreign countries' requirements on new product development. Via conducting real case studies with 13 Italian fashion companies, the authors successfully construct the framework and identify the respective variables.

As the fashion product development process also involves the use of energies and creates pollutants, recent studies have addressed these issues from the sustainability perspective. For example, Moon et al. (2013) report a case study on the product design scenarios which can effectively save energy consumption. Dissanayake and Sinha (2015) reexamine the product development process in fashion remanufacturing and propose measures which can enhance the level of sustainability.

Similar to Goworek (2010) and Caniato et al. (2014), this paper aims to examine the product development process in fashion, based on real case scenarios. However, this paper is different from all the reviewed papers in its major objective and the perspective. To be specific, this paper is similar to Campaniaris et al. (2015)² in which it relates to the topic of fashion industry's development. In particular, this paper proposes the probable direction of further development of the product development process in fashion companies in HK.

2.3 Case Study: The Product Development Process of Brand A

Brand A is a famous top luxury fashion brand with its origin in Europe. It is ranked by many popular portals as one of the top 100 brands in the world. In the following, we report the product development process of Brand A. Notice that the details of the case are learned from the senior management members of Brand A, including its executive vice president, managing director of women division, and director of women's ready to wear.

Similar to most fashion product development process in well-established brands, the process of design and product development in Brand A is very complex and sophisticated. It consists of a number of stages, which are substantially influenced by various factors. To be specific, the first stage relates to innovation with which new design ideas and fashion concepts are generated which involve the consideration of the market as well as materials sourcing (with inputs from marketing research). The new design ideas are then developed by the production team to

²Campaniaris et al. (2015) examine the industrial development of the fashion sector in Canada. The authors examine the ways for the Canadian fashion companies to evolve and keep its competitiveness by providing value adding services.

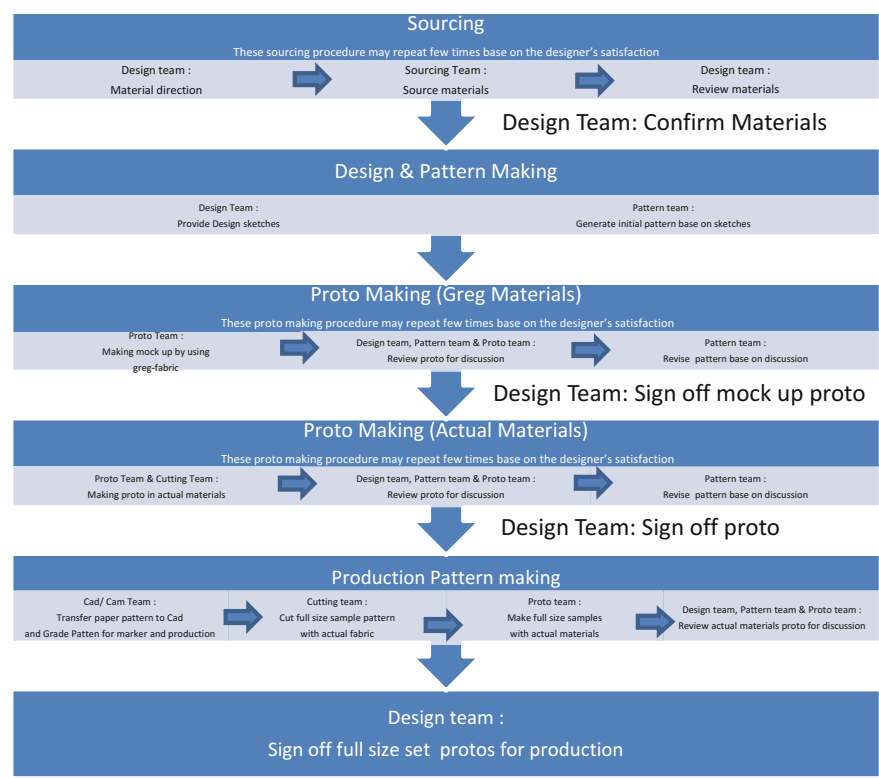


Fig. 2.1 The product development process of Brand A. *Source* Based on the discussion with the senior staff members of Brand A

create the respective prototype patterns and proceed to make the samples. In the following, we report the details of different stages in Brand A. Figure 2.1 shows the product development process of Brand A.

2.3.1 Materials Sourcing

At the very beginning of each season, in Brand A, the (fashion) design team will communicate with the materials sourcing team upon the fabric they look for. Then, the sourcing team will source materials from manufacturers and suppliers to provide swatches for the design team to choose from. The design team will then decide which particular fabric they are going to use in the season. Afterwards, proto yardage order will be placed and the team will prepare materials for the later stages. As a remark, in this stage, the team must make sure the materials and manufacturing processes are able to satisfy the design requirements (Carr and Pmeroy 1992).

With the support of the material team, pattern makers and proto developers will have a clear picture of what fabrics they will use. They will have a fine adjustment on the pattern and constructions according to the fabric characteristics. This step can help to make sure that the materials are in their best use and the prototypes can fully meet the design concept and requirements.

Brand A pays very high attention to the material sourcing and quality control. In particular, Brand A uses three main types of materials, namely leathers, fabrics, and silks, and they have a very tight standard of control on their usage. For other trimmings such as buckles, buttons, and tapes, they are sourced and controlled by other different departments.

As leather goods are the signature items for Brand A, the leather sourcing requirements are very demanding and the standard is very high. Not limited in the large varieties of leather: goatskin, lambskin, alligator skin, ostrich skin, Stingray skin, etc., Brand A materials sourcing team will need to source the best quality ones all round the world, for example, Bleu de France, Mississippensis, Sikkim, Mysore, Swift, Epsom, Barenia, and Togo.

Nevertheless, based on the designer's seasonal directions, they need to communicate with nominated leather suppliers and tailor-make the desire leather finishing and effects. For instance, the muted matt finishing, holographic foil, dimpled and textured surface. This sourcing structure also applies to other materials sourcing.

2.3.2 *Sample Making*

Brand A has its own in-house sample making workshop which is divided into three parts, namely the pattern making area, proto making area, and the CAD/CAM cutting area. The role of each member in each area is very specific and focused. This helps make the product more sophisticated and up to the brand's world-class standards.

2.3.2.1 Pattern Making

In fashion product development, it is known that pattern makers help to take in the fashion designer's idea and creates patterns needed for producing the actual garment (Vogt 2007). According to the woven workshop manager in Brand A, the main processes in pattern making are draping, pattern making, and fitting. After receiving the sketches from designers, pattern makers will use greg-fabric to drape on the dummy and make a mock-up of the garment for the first outlook reference. Different pattern makers are specialized in particular products. For example, a pattern maker is specialized in jackets, another one for novelty tops, etc. Moreover,

each pattern maker's assistant helps him/her to chase and cut the pattern during the draping and pattern drawing process. Pattern makers need to work closely with fashion designers or the entire design department upon the style details and construction; as a result, they sometimes contribute apparel design ideas especially when one those related to technical details. This can help to facilitate the design and production process, as the final pattern will be used to manufacture the garment.

The pattern makers must be extremely experienced and precise because a small mistake can ruin the design and jeopardize the whole product development process. Furthermore, it will cost the manufacturer significant amount of money in waste materials and production time.

2.3.2.2 Cutting

The Brand A' pattern makers will initially create the first pattern for a particular garment idea which is used to create an initial sample of the garment. Later in the process, the pattern maker will develop a more technically accurate pattern which is closer to the production pattern. They will make a garment using the actually selected fabric. To cut the adopted fabric, special arrangement is made. There are members who are specialized in cutting fabrics (i.e., their sole job is on cutting fabrics). They will cut hand by hand and piece by piece. For the fabrics which need special care, the worker will place pieces of silk paper on top and bottom and stitch it on the fabric being cut. This can help to stabilize and minimize the reaction of the fabric and to protect it from damage and distortion.

2.3.2.3 Proto Making

In Brand A, the requirements of hiring a Sewing Machine Operator are different from the normal office staff. They pay attention to their sample making history and experience, instead of qualifications. All of them are highly skilled and have an excellent experience to work with the products and materials. In the development process, they need to work closely with designers and pattern makers, so they can interpret the pattern correctly and fulfill the design. Thus the "mock up" and prototypes are created in good craftsmanship. Sample room sewing workers in Brand A are highly respected and are working in a good environment. So, once they are hired, they stabilize and work for a long time. Thus, they are well adapted to the culture and products of Brand A.

2.3.2.4 CAD/CAM Sizing and Marker Making

In Brand A, the Pattern Graders and Marker Makers are "in-house" and work closely with the Pattern Makers. The Grading and Marker making processes are

Table 2.1 Features of Brand A’s product development process

Areas	Features	Pros	Cons
Materials sourcing	In-house support, specialized functions, top quality	Good communication, high-quality materials	High cost
Sample making	In-house functions. Specialized functions in pattern making, cutting, and proto making, etc.	The best craftsmanship is achieved	Expensive
Materials and product inspection	100% inspection of fabric	Highest quality	Percentage of usage is low (potential wastage is high), and product cost is high

computerized by using the Lectra system (which is a cutting-edge technology for enhancing cutting room operations³). When the “perfect” production pattern with all the pattern pieces are completed (pattern for each part of the garment which will be used to manufacture the garment in mass production), Pattern Graders take the pattern and reduce and enlarge it into different sizes. This provides the Marker Makers with graded patterns they can use for producing the items in a range of sizes (Granger 2007).

2.3.3 Materials and Product Inspection

According to the Raw Material Manager of Brand A, each and every yard of fabric will be 100% inspected. Once a defect is found, they will place a mark as a reminder. For fabrics with more defects, they will use them in small garment parts, vice versa. In the case of print silk, they will check if all the panels can be matched. Any color dot on the print is not accepted, for example, if it is used in the front panel of the garment, it will not be used. “Our products are not expensive, they are costly!” (said by Brand A’s Executive Vice President). As a reference figure, among 14,000 pieces of silk print fabric only 7500 pieces are approved. In addition, to avoid the defect on the fabric being on large panels, the usable width or percentage is far less than many other factories. These show the level of quality requirements and high materials cost in Brand A. Table 2.1 summarizes the features of Brand A’s product development process, and Fig. 2.1 shows the whole product development process of Brand A.

³See: <https://www.lectra.com/en/>.

2.4 The Product Development Process in HK Trading and Manufacturing Companies

In Hong Kong, most of the trading companies deal with many different brands and manufacturers. They usually act as the middlemen between brands and manufacturers. For example, the Hong Kong design and product development team work closely with Mainland China manufacturers to develop prototypes, while the merchandising team negotiate on costing. After receiving all the samples and costing information, the overseas sales team will then organize buying meetings and show the prototypes to customers for selection and place orders.⁴

2.4.1 *Materials Sourcing*

Hong Kong trading companies are famous in having an established sourcing network and being price cautious, the sourcing teams usually have a pool of suppliers which can supply different materials. Sourcing teams work closely with designers and merchandisers, based on the customers' target price range, they will source available materials which are similar to designer's request and at the same time being favorable to costing and productions. Sometimes, to cope with the low price point, designers are not shown with materials they desire, instead, they need to compromise in the design and styles.

Moreover, some trading companies will rely on the manufacturers to source materials for them and pass to designers. Manufacturers can source materials from suppliers with good relations, e.g., those who have arranged bulk production before. This helps to facilitate the production efficiency and receive a good bargain. However, the suppliers may be located far away and the choice of suppliers is also limited.

2.4.2 *Sample Making*

Unlike Brand A, Hong Kong trading companies usually do not have in-house workshops/sample rooms. They rely on manufacturers to make prototypes. Designers/product developers will allocate styles to different factories based on their strengths and locations.

⁴The scenario reported in Sect. 2.4 is based on the first author's substantial working experience in the related companies.

2.4.2.1 Pattern Making and Cutting

Pattern technicians from manufacturers are not specified in particular products. They are required to make patterns on all products which include pants, tops, jackets, etc. As they are located in the factories, they do not have much chance to work directly with the designers. They need to interpret the style based on the design sketches and specification and communicate with product developers via e-mails and phone calls. In addition, they will have less contribution in design details and construction.

This kind of remote communication involves loads of back and forward e-mails which create undesirable misinterpretation. As a result, the derived samples may not match the designer's request and there is a need to remake few protos before it can show to customers. This will elongate the development process and increase the development cost.

In MCHK, pattern technicians usually work alone. They need to cut the fabric and pattern by themselves. Mostly they will not be specialized in only one product or one job. It is because if doing so, companies need to hire more pattern technicians, which will bring up the operations cost. Besides, apart from proto patterns, they also need to work on production patterns. Owing to this reason, the pattern makers may be overloaded and may not take careful considerations upon the materials characteristics. They may sometimes damage or distort the fabrics during cutting and thus affect the final "output". When the pattern graders have finished the sizing, they will proceed to prepare the full-size shipment samples. Designers will have adjustments about the size specification after reviewing all the shipment samples and remake all the garments. This will also slow down the whole process and may delay the delivery schedule and on-shelf date.

2.4.2.2 Proto Making

Compared with Brand A, status of Sewing Machine Operators in MCHK manufacturers are much lower. In some small factories, they will hire Sewing Machine Operators who do not have much experience in sewing operations. Moreover, the sewing technicians mainly come from production. They used to deal with bulk production which is more routine. They make the same product over and over again and do not have much experience or understanding of the whole product development process.

Besides, workers in China usually work far away from home and they can only back home in Chinese New Year period. Usually, they will stay at home for a month and may even go to find a job in different geographical areas or industries. They do not tend to stick to the same company or industry, and their consideration focuses mainly on salary and living environments. If the working environment is not in a good condition and they can find a company with a higher pay, many workers will switch to another or even change his job nature totally, e.g., some

Table 2.2 Features of product development process with Hong Kong fashion trading and manufacturing firms

Areas	Features	Pros	Cons
Materials sourcing	Rely on factories to help with sourcing. Designers may not see the materials when they design the products	Good networks based on relationship. Highly competitive sourcing bargain (low cost)	Relationship goes first which may limit the supplier choices. Designers have to compromise in their design and styles under the constraint of materials
Sample making	No in-house functions; Nonspecialized functions in pattern making, cutting, and proto making, etc.	Low staffing cost	Lack of communication among teams. Technicians are not specialized
Materials and product inspection	Staff members may not be well trained. Statistical sampling and inspection of fabric	Low operations cost of sampling and inspection. Low product cost. Percentage of usage is high	Quality problems may arise

workers will switch from garment manufacturing to electronic manufacturing. In this case, Sewing Machine Operators usually have little commitment to the company. They are not well trained and hence they do not well adapt to the company’s product development requirements. This makes the standard of product quality varies from time to time, and it is sometimes hard to produce samples up to the designers’ satisfaction. This leads to a serious quality problem. Table 2.2 shows a summary of the common features found in most Hong Kong fashion trading and manufacturing companies.

2.5 Comparison and Discussions

From the above discussion, we can see that Brand A not only focuses on the creativity and design, but it also pays high attention and spends heavily on product development. There is no doubt that they think product development is a very important process which brings the design concept to real product and is a key to make sure the product meets the design concept and also the brand’s standard and requirements.

Compared to the scenario of Brand A, just on the contrary, not many Hong Kong manufacturing and trading companies are willing to invest heavily in product development. After the designers/product developers have finished the sketches and technical pack, merchandisers will directly pass the information to factories and let the factories do the proto work without getting much involvement of designers/

Table 2.3 Comparisons between Product Development Processes in Brand A and the Ones Managed by Hong Kong Fashion Trading and Manufacturing Firms

	Brand A	Hong Kong fashion trading and manufacturing firms
Process management and leader	Brand managed and initiated	Trader managed
Investment	Heavy	Limited
Cost	Less tight budget	Very tight budget
Procedures	Highly specialized and precise	Less specialized and precise
Design	Designers well participate in the process	Designers may not be involved and may not get what they want

developers. So, sometimes the designers may not get what they want even until the very end of development stage.

The main reason that brings to this difference upon the product development role, is the business nature. Often, the high-end luxury brands' garments focus on the high price, and fashion-forward consumer goods in high quality with a recognized brand name (i.e., brand managed and initiated). The high price consumer goods generate a high revenue. To stimulate the brand image and reinforce positioning of high fashion, luxury brands are willing to place high investment on product development, just like Brand A. However, for fashion companies in HK, the companies are traders and they usually neither own the brands nor the factories; they act as the middlemen between brands and manufacturers (i.e. trader managed). Thus, brand designers need to work with the trading companies in Hong Kong, meanwhile, the merchandisers in Hong Kong communicate with factories in China for the protos and production. Based on this kind of business nature, product development is arranged by different parties and in different nations without specification. Thus, style and quality are not to the same standard as Brand A.

In addition, trading in Hong Kong mainly focuses on the private labels which are sold in department stores and discount stores overseas. Design teams working in these department stores and discount stores such as J.C. Penny and Macy's are responsible for creating their store's own private label/brands. Due to the relatively low-profit margin of the consumer goods in department stores and discount stores, to make profit, the order quantity is huge. In addition, control of product target price and operations cost is very critical. For the design teams, the styles and product quality are highly constrained by the low target price. Besides, to control the operations cost, the department stores and discount stores usually do not have their own product development teams and the product development process is usually shared by the Hong Kong merchandising and trading firms, and the production team in factories in places like the mainland China. To summarize, a table of comparison is added as follows (Table 2.3).

2.6 Implications

From the previous sections, we have already discussed the product development process in Brand A and also the commonly seen situation in the Hong Kong fashion traders and manufacturers. In the following, we first summarize some key challenges faced by the Hong Kong traders and manufacturers. Then, we explore how the findings from the case study on Brand A as well as the literature can help.

2.6.1 *Challenges*

From our previous analysis, it is found that in the product development process, in many cases, relationship goes first in materials sourcing which directly leads to a limitation of supplier choices. As a result, designers have to compromise in their design and styles under the tight constraints of materials. In addition, for sampling making, two major problems appear which include the lack of communication among teams, and the lack of specialization of technicians. In materials and product inspection, we see that quality problems usually arise. To overcome these challenges commonly seen in the product development process in Hong Kong trading and manufacturing firms, some new measures have to be taken.

2.6.2 *Proposed Measures*

Pinpointing the challenges faced by the Hong Kong trading companies, we propose the measures to cope with them by making reference to Brand A's case, as well as others.

2.6.2.1 *From Brand A's Case*

1. **Quality evolution:** As the requirement of quality fashion goods from consumers are getting higher from time to time, there is a quality uplifting evolution even for the non-luxury sectors. In fact, the retail buying positions in today's marketplace are changing, so that the quality of product is important. Every fashion company handles product development differently, but many fashion brands/retailers expect product developers to have good knowledge of the product development process and be able to work with designers and manufacturers to produce private-label goods for their retail brand/stores (Guthrie and Regni 2006). Nowadays, fashion merchandising companies in the mainland China have taken up the job of Hong Kong merchandising companies in arranging the production and bulk shipment. Factories' production team can somehow take

over the merchandising function of Hong Kong trading firms. To deal with this challenge and stay competitive, Hong Kong trading companies cannot only act as a middleman and focus in offering merchandising services. They need to enhance the creative and product development service provide to customers. Following the approach of Brand A, Hong Kong fashion trading companies should treasure more on quality. They can make use of Hong Kong designers' global fashion exposure and high fashion sense, and invest more in product development process. This would provide a higher quality service to customers.

2. **In-House Facilities:** Brand A is successful partially because of its fully vertically integrated process, with all in-house supports, for product development. Following its model, Hong Kong trading companies can consider set up an in-house sample room in Hong Kong. Instead of having manufacturers to make the protos, Hong Kong companies can do the same. Similar to the Brand A, Hong Kong trading companies can develop a team of talented and well-experienced pattern technicians and sewing operators for product development. With Hong Kong's well-developed market, education system and city's environment, good working condition is easily achievable and the inflow of well-trained skillful works is also present. It is possible that Hong Kong trading and manufacturing companies can support these critical and value-adding services for their clients. This, together with Hong Kong's locational advantage, can further enhance the niche of Hong Kong fashion trading and manufacturing companies.

2.6.2.2 Other Measures

1. **Value-adding services:** As Hong Kong is one of the world-class international metropolitans, Hong Kong designers/product developers' "fashion knowledge and abilities" are strong. Even though it is a fact that world-class fashion designers and brands are located mainly in Europe, Hong Kong still has its advantages. For example, Hong Kong designers/product developers have the locational advantage in which Hong Kong is closer to the manufacturer base of most brands in Asia (including but not limited to the mainland China). As a result, visiting Asian factories frequently is convenient and Hong Kong trading and manufacturing companies can easily communicate and check with Asian manufactures upon product construction and requirements. By closely minoring the product development process, fewer mistakes and remakes are needed. This can speed up the whole product development time to meet the ever-changing fashion works, and also saves the product development cost. Thus, there is no doubt that Hong Kong fashion designers/product developers have a niche.
2. **Technologies:** Hong Kong is a developed market with good technological infrastructures. For example, information technologies and networks are well established in Hong Kong. Financial services, business consultancy and legal services, logistics services are all well supported by information technologies.

For fashion companies, they should also explore the opportunity to employ information technologies to enhance the product development services that they can offer to fashion brands (Papahristou and Bilalis 2016). For example, Hong Kong fashion trading and manufacturing companies can establish themselves as the facilitators for product development and beyond, i.e., be a fashion supply chain coordinator. This act can provide additional values to the clients (i.e., the fashion brands) as well as the partners (i.e., the factories located in Asia). The Canadian model is a good reference for Hong Kong (Campaniaris et al. 2015).

2.7 Conclusion

To cope with the changing fashion retail and production environments, trading, and manufacturing companies in the Hong Kong fashion industry need to seek rooms for improvement. In this paper, we have first examined the product development process in a world-class international luxury fashion brand (Brand A). Then, we have discussed the common industrial features of Hong Kong fashion trading and manufacturing firms. By comparing between them, we have identified some critical differences. Then, inspired by the findings in Brand A's product development process and the literature's findings, we have further proposed several measures which may further enhance the competitiveness of Hong Kong fashion trading and manufacturing companies. In particular, treasuring quality of products and services, and providing more value-added services are both pertinent measures.

For future research, to try to generalize the findings, some more specific cases on product development processes of both international fashion brands and Hong Kong-based fashion trading and manufacturing firms of different brand levels and tiers should be conducted. In addition, in our discussion, even though we argue that Hong Kong fashion trading and manufacturing companies have a locational advantage and could act as a supply chain coordinator, from a systems perspective, how significant this role is still unclear. It deserves deeper and further analysis in the future.

Acknowledgements This paper is an extended version of a project report written by the first author. The authors sincerely thank the editor Linda Chow for her invitation and helpful comments on this paper. They also thank the suggestions by two anonymous reviewers.

References

- Campaniaris C, Murray R, Hayes S, Jeffrey M (2015) The development of an apparel industry business model for Canada. *J Fashion Mark Manage* 19(3):328–342
- Caniato F, Caridi M, Moretto A, Sianesi A, Spina G (2014) Integrating international fashion retail into new product development. *Int J Prod Econ* 147:294–306

- Carr H, Pmeroy J (1992) Fashion design and product development. Blackwell, Oxford
- Choi TM (ed) (2013) Fast fashion systems. CRC Press
- Dissanayake G, Sinha P (2015) An examination of the product development process for fashion remanufacturing. *Resour Conserv Recycl* 104:94–102
- Goworek H (2010) An investigation into product development processes for UK fashion retailers. *J Fashion Mark Manage* 14(4):648–662
- Granger M (2007) Fashion: the industry and its careers. Fairchild Publications, New York
- Guthrie KM, Regni RJ (2006) Perry's department store: a product development simulation. Fairchild Publications, New York
- Lau TW, Hui PCL, Ng FSF, Chan KCC (2006) A new fuzzy approach to improve fashion product development. *Comput Ind* 57:82–92
- Moon KKL, Youn C, Chang JMT, Yeung AWH (2013) Product design scenarios for energy saving: a case study of fashion apparel. *Int J Prod Econ* 146:392–401
- Papahristou E, Bilalis N (2016) A new sustainable product development model in apparel based on 3D technologies for virtual proper fit. In: Setchi et al (eds) *Sustainable design and manufacturing*, pp 85–95. Springer, Berlin
- Vogt P (2007) Career opportunities in the fashion industry, 2nd edn. Ferguson, New York

Contemporary Case Studies on Fashion Production,
Marketing and Operations

Chow, P.-S.; Chiu, C.-H.; C. Y. Yip, A.; K. Y. Tang, A. (Eds.)

2018, XIV, 243 p. 33 illus., 23 illus. in color., Hardcover

ISBN: 978-981-10-7006-8