

Quality management in the Italian luxury industry: an empirical investigation on cashmere

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Abstract: The luxury sector is characterised by several critical success factors, including ‘premium quality’. Although quality management (QM) has been deeply studied in recent years, few authors explicitly addressed QM with regard to luxury industry as a whole, let alone the idiosyncrasies of Italian approach to luxury. The contribution of the present study is twofold: 1) first of all, it introduces a novel and rigorous research protocol to study the QM organisation, system and practices of companies in the luxury sector; 2) secondly, the protocol is applied to cashmere, worldwide synonymous with luxury, and a symbol of Italian excellence, to understand how Italian producers of cashmere garments are implementing QM. The research demonstrates that the cashmere luxury sector is characterised by an extremely high commitment towards quality both inside and along the supply chain, yet to some extent excellence is pursued through an informal approach to quality improvement. Managers in different fields could learn from the lessons learned in this sector and apply the best practices to their companies.

Keywords: luxury; cashmere; quality management; supply chain; Italy.

Reference to this paper should be made as follows: Brun, A. and Lideo, C. (2021) ‘Quality management in the Italian luxury industry: an empirical investigation on cashmere’, *Luxury Research J.*, Vol. 2, Nos. 1/2, pp.22–47.

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1 Introduction

In recent years, worldwide interest in luxury significantly increased, following the exceptional growth experienced by the luxury industry. In 2017, the global luxury market grew by 5%, reaching an estimated €1.2 trillion, and it will keep growing at a 4–5% compound annual rate over the next three years (D’Arpizio et al., 2017). Meanwhile, this market is becoming more and more complex, thus “while still showing steady growth, brands are adjusting to a new set of scientific tools in order to keep creativity and product excellence at the center of their strategies and organizations” (D’Arpizio, 2013). Despite the considerable number of existing studies, current literature on luxury industry is mainly focused on sociological, branding and marketing aspects. Starting from the interest to investigate luxury sector more deeply, we started our research by analysing the critical success factors (CSFs) of the industry: *premium quality, heritage of craftsmanship, exclusivity, brand reputation, ...* (Brun and Castelli, 2013; Sjoström et al., 2016; Kapferer and Michaut, 2016). Albeit being quoted by virtually every author, premium quality has not been deeply analysed in the extant literature. In fact, although quality and ‘quality management’ have been extensively studied in recent years, few authors expressly dealt with these topics with regard to the luxury industry.

Wishing to contribute to bridging the above-mentioned gap, the purpose of this study is twofold. From the one hand, it introduces a novel and rigorous research protocol, useful to study and describe the QM organisation, system and practices of firms in the luxury sector; the rigor of the protocol lies in the fact that all factors and items are based on extant literature. The second, empirical part of this research will describe quality management organisation, system and practices of Italian luxury apparel firms focused on the cashmere sector; the newly developed protocol will be employed to analyse how firms are:

- 1 organising their QM department
- 2 structuring their QM system
- 3 managing quality along the supply chain.

The remainder of the paper is organised as follows: Section 2 presents a literature review on the topics under study – namely, luxury and quality management, discussing existing gaps. Section 3 outlines the research questions. In Section 4, the research methodology, along with the main features of the companies involved in the completed case studies, are presented. Furthermore, in Section 5, the interview protocol, developed from the literature, is presented. Section 6 deals with the analysis of the findings and Section 7 will draw some concluding remarks and suggests future research directions.

2 Literature review

The present section briefly surveys extant literature focusing on the CSFs of luxury, on the one hand, and on quality management on the other. A brief overview of the current situation of the luxury sector, of cashmere and the textile-apparel Italian context will also be given.

2.1 *Critical success factors of luxury management in scientific literature*

The concept of luxury has actually been around for some time. Mankind has the inherent urge to feel happy. So it is no surprise that, during the Roman Empire, gentry and plebeians alike would share the desire for ‘soft living, sumptuousness’, a status they would refer to using the term *Luxus*. And today, according to Kapferer and Bastien (2009), “luxury is everywhere”. So, unlike Roman plebeians, today “nouveau riche consumers and entrepreneurs can afford to indulge in the purchase of luxury brands” (Nueno and Quelch, 1998). This omnipresence of luxury, its being massified, along with the three decades of constant growth – with the global market of personal luxury goods being expected to reach €280 B by 2020 (D’Arpizio, 2016), quadrupling its \$70 B figure of 1996 (Duff, 1997) – justify the interest around the topic lately shown by the scientific community. While, since the seminal work of Veblen (1899) at the turn of the 20th century, sociologists studied such phenomenon as ‘conspicuous consumption’ for over a century, in marketing the stream of researches was arguably commenced by seminal works by Quelch (1987), Nueno and Quelch (1998) and Kapferer (1997). Researchers in the field of operations and supply chain management somewhat lagged behind, with the first papers appearing less than 10 years ago (Brun et al., 2008; Brun and Castelli, 2008) and a mere 25 papers published on Scopus indexed journals having both ‘luxury’ and ‘supply chain’ in the keywords to-date. Lately, three papers made interesting reviews of the most prominent scientific works attempting at defining the concept of luxury (Brun and Castelli, 2013; Sjostrom et al., 2016; Kapferer and Michaut, 2016). The three papers agree on the fact that the most practical way to define the term luxury is through a list of attributes that are associated with luxury products (and services), and they introduce three rather similar, comprehensive lists highlighting the contribution of most prominent extant works. These papers make an effort to classify attributes into two groups (core and long tail), or along three (material, individual and social) or four (form vs. contents and social vs. personal) dimensions. In Table 1, we merged the three lists of attributes, in order to come up with a single, unified list; this shows that there definitely is a general consensus amongst most prominent authors on most of the attributes, yet no two authors are sharing completely the same view.

So we might conclude that, generally speaking (i.e., referring to a wide array of product categories), luxury products are characterised by a mix of the following attributes:

- premium quality of materials and craftsmanship of the production
- a marketing approach aiming at creating exclusivity and emotional appeal, through a combination of factors such as (natural or artificial) paucity (scarcely available raw materials, raw materials, limited production, limited distribution), premium price, superior shopping experience
- elements of uniqueness and/or extreme personalisation
- global reputation of the brand, conveying the idea of world-class excellence – which, in case of ‘technical’ brands such as Ferrari, is linked to best-in-class technical performances and innovation

- association with a country of origin or a region with a strong reputation for specific product categories (Italian shoes and yachts, Swiss watches, German cars, or more specifically wines from Bordeaux or Champagne)
- a recognisable style, often associated with iconic designs, ‘emblematic’ products, or even signature colours (e.g., Louboutin red-bottoms)
- brand authenticity, supported by on-going consistency with values and personality of the creator or *maison*, and creating a lifestyle.

The list could be complemented with aspects inherent to a specific conception of luxury:

- link with a ‘patrimony’ and ‘heritage’, lifestyle and ‘Art de Vivre’, ‘creativity’ (typical of the French vision, embraced by Comité Colbert);
- creativity, Italian culture and style, beauty (in the sense of aesthetically beautiful object) (according to the Italian vision, brought forth by Altagamma);
- tradition and innovation, design and style, and ‘impeccable service’ (according to the British vision, promoted by the Walpole Committee);
- ‘passion for perfection’, creativity, craftsmanship and technical know-how, are at the core of the culture of excellence in Germany (represented by Meisterkreis).

Furthermore, some authors add other (less frequently mentioned) features, such as ‘designer reputation’ and ‘public figure’ (Arora, 2011), link with ‘art’ (Kapferer and Michaut, 2016), as well as ‘method of production’ and ‘low commercial links’ (Beverland, 2005). While some of these features could be relevant for specific industries (such as ‘method of production’ for wines), we did not include them in Table 1 as they seem neither to be widely accepted by the most quoted works, nor generally applicable to the world of luxury as a whole.

The above list of attributes could be regarded according to two perspectives:

- the Marketing school of thought regards them as “attributes [that] consumers associate with luxury” (Sjostrom et al., 2016; Kapferer and Michaut, 2016),
- while the operations and supply chain management school of thought considers them critical success factors, which a company shall cultivate to “pursue a luxury positioning for their brands and products” (Brun and Castelli, 2013).

Basically, the former perspective is useful to understand antecedents of luxury purchase intentions (why consumers would want to buy a certain brand or product), while the latter is focusing more on the implication of managerial choices (what shall the company do to be successful on the market). Two sides of the same coin, yet, clearly, the marketing perspective would depend upon the specific market under consideration, while the operations footprint of a luxury brand owner company should be univocal across markets. The above analysis of luxury attributes justifies our curiosity towards the following, overarching research question: how are luxury companies organising their quality management systems to guarantee premium quality of their products?

Table 1 List of attributes associated with luxury products

<i>Macro-attribute</i>	<i>Brun and Castelli</i>	<i>Sjostrom et al.</i>	<i>Kapferer and Michaut</i>
Premium quality and (heritage of) craftsmanship	Premium quality Heritage of craftsmanship	Premium quality and craftsmanship	High quality Heritage
Exclusivity and emotional appeal, created through scarcity, premium price, shopping experience	2, 5, 9, 12, 13, 11, 12, 13. 5, 6, 9, 10, 11, 13. Emotional appeal	1, 2, 4, 5, 8, 15, 17, 18, 19, 21, 24, 25. 2, 17, 26. 2, 21, 24, 25, 26, 27.	28, 29, 30. * 5, 29, 31. 30. 2, 28, 29, 32.
Uniqueness, personalisation	Uniqueness	Unique	Pleasure, dream Expensive
Global reputation of the brand name and the product performances	Brand reputation	Brand architecture and name	Personalised services
Country of origin or region with a strong reputation	Technical performance	Reputation	Innovation
Recognisable style, timeless or iconic design or products	Country of origin	Country of origin	Beauty, fashion
Authenticity, personality and values of the creator or maison, creation of a lifestyle	Recognisable style and design	Recognisable style and product	Timeless
Art	Creation of a lifestyle	Authenticity	Art

Notes: 1 – Quelch (1987); 2 – Nueno and Quelch (1998); 3 – Dubois and Duquesne (1993); 4 – Kapferer (1997); 5 – Vigneron and Johnson (1999); 6 – Phau and Prendergast (2000); 7 – Lamming et al. (2000); 8 – Dubois et al. (2001); 9 – Kapferer (2001); 10 – O’Cass and Frost (2002); 11 – Catry (2003); 12 – Antoni et al. (2004); 13 – Hanna (2004); 14 – Moore et al. (2004); 15 – Beverland (2004); 16 – Reddy and Terblanche (2005); 17 – Beverland (2005); 18 – Drechsler (2005); 19 – Prince (2005); 20 – Danziger (2006); 21 – Straeh and Everett (2006); 22 – Okonkwo (2007); 23 – Baker (2007); 24 – Keller (2009); 25 – Heine (2010); 26 – Arora (2011); 27 – Cervellon and Coudriet (2013); 28 – D’Arpizio (2016); 29 – Dubois et al. (2005); 30 – De Barnier et al. (2012); 31 – Kapferer (1998); 32 – Yeoman (2011).

*The authors did not mention whether these attributes were taken from one specific paper, but refer to the literature review and in particular Dubois et al. (2005), Kapferer (1998), Vigneron and Johnson (1999), Dubois et al. (2005) and De Barnier et al. (2012).

2.2 Quality management in scientific literature

Over time, many different definitions of *quality* have been given: since the seminal paper of Garvin (1984), experts and practitioners agree on the fact that there are many different interpretations of the term. Notwithstanding this, Dr. Joseph M. Juran's definition of quality as 'fitness for use' is widely recognised today as one of the more relevant (Bisgaard, 2007): it is the customer, and not the manufacturer, who defines quality. Central to an organisation, and immediately linked to quality, is *quality management* (QM), "an integrated approach to achieving and sustaining high quality output, focusing on the maintenance and continuous improvement of processes and defects prevention at all levels and in all functions of the organization, in order to meet or exceed customer expectations" (Flynn et al., 1994). To support the achievement of a competitive advantage, QM should encompass three basic processes:

- 1 *quality planning*: designing products, services and processes that will be able to meet established goals under operating conditions
- 2 *quality control*: operating and when necessary correcting the process so that it performs with optimal effectiveness
- 3 *quality improvement*: devising ways to take the process to unprecedented levels of performance (Juran, 1986).

Flynn et al. (1994) proposed a massively-quoted framework assessing QM practices at plant level, encompassing seven elements: *top manager support*, *quality information*, *process management*, *product design*, *workforce management*, *supplier involvement*, *customer involvement*. A contribution by Lengnick-Hall (1996) claimed that, regardless of the specific tools and methods a firm adopts, in order to reach competitive advantage a firm must become customer oriented.

2.2.1 Organisation of quality management

How to organise the wide set of quality-management-related activities and processes in a company is still an open topic. What is certainly common in most firms is the presence of line operators or dedicated units, in charge of operational quality control, be it *systematic* (100% inspection) or *sampling* (Cooklin, 2006). Although alongside inspectors there are always supervision and coordination figures (*quality manager*, even if sometimes on a part-time vis-à-vis their roles within the company), an identified *quality management department* is not always present. Some authors advocate the adoption of a *department dedicated to QM* as a prerequisite to achieve quality performance (Forker et al., 1997), while others favour a decentralised organisational structure (Vickery et al., 1999; Nicolas and Valceschini, 1995), and even a *widespread quality function* as, when every employee is responsible for quality, the need for a quality department disappears (Ishikawa, 1985); the latter perspective commands a corporate *quality culture* (Schein, 1985; Corbett and Rastrick, 2000; Maull et al., 2001; Irani et al., 2004). Organisational structure is a determinant of QM effectiveness (Zhang et al., 2012), hence authors investigated the *hierarchical status* (Cooklin, 2006) as well as the *span of control* (number of subordinates) of the quality manager and QM department (Vickery et al., 1999). Finally, in recent literature, some authors linked QM to the 'booming' topic of *corporate social*

responsibility – CSR (e.g., McAdam and Leonard, 2003; Foster and Ogden, 2008; Caniato et al., 2012; Towers et al., 2013).

2.2.2 *Quality management at supply chain level*

Many authors investigated the topic of quality at SC level. Lin showed that QM practices (namely: *top management leadership, training, product/service design, supplier QM, process management, quality data reporting, employee relations, customer relations, benchmarking learning*) are significantly correlated with the ‘supplier participation’ strategy and this influences business results and customer satisfaction levels (Lin et al., 2005). Kaynak and Hartley (2008) investigated how SC management-related quality practices (namely: *supplier QM and customer focus*) influence performances in US firms. Yeung (2008) examined the organisational impact of Strategic Supply Management (SSM) and the company environment that facilitate such an endeavour, categorising companies into QM-intensive firms and non-QM-intensive ones (depending on the presence of *formal working groups for implementing QM, formalised continuous QM training, communicating their total quality management (TQM) approach to the public*). Sroufe and Curkovic (2008) studied the efficacy of ISO 9000 implementation within an SC management context, arguing that ISO 9000 registrations demonstrate that a quality system exists, however they do not guarantee its effectiveness.

2.2.3 *Quality management in luxury companies*

As clearly demonstrated by findings of scientific research, the implementation of a QMS is affected by several *contingent elements* related to characteristics of both the single company and the specific industry (e.g., De Araujo, 1997; Sohal and Terziovski, 2000; Benson et al., 1991). Thus, despite the vast extant literature on the subject, there is still an urge for further research in some areas, such as specific industries (most of the previous researches have been conducted in electronics, machinery, transport industries) and geographical areas (most of the previous studies are based on USA and Asia). A Scopus search on papers containing the keywords ‘luxury’ and ‘quality management’ returns only four results. Brun and Moretto (2014) explore the organisation – both internal and at Supply Chain level – of QM in French luxury companies, while Carmignani (2016) proposes a framework integrating lean production and TQM and discusses its application to an Italian fashion company. Wilcock and Boys (2014) study the link between QM and counterfeiting clearly, there is a huge gap in the literature on quality management in the luxury industry, which deserves to be addressed.

2.3 *The specific focus: quality management in cashmere*

Given this background and considering empirical studies addressing the influence of country on quality management effectiveness (e.g., Rungtusanatham et al., 1998), we decided to focus our research on Italy. In doing so, *cashmere* was found to be one of the symbols of Italian excellence. In fact, among the most important and famous manufacturers of yarns, fabrics and cashmere garments in the world, there certainly are Italian players such as: Brunello Cucinelli, Loro Piana, Ermenegildo Zegna (see, e.g., ‘Best luxury cashmere brands’ at <http://www.fashion.infomat.com>). Besides, an aura of luxury and prestige is still perceived around cashmere

(<http://www.cashmereworldfair.com>). This noble fibre comes from the fine undercoat (dehaired) fibres produced by a *cashmere goat* (<http://www.cashmere.org>) and, according to Faust, the main factors which serve to qualify cashmere as a luxury good are: a particular softness and lightness of the fibres, scarcity of raw material, difficulties with sources (e.g., China, Mongolia, India) and the preparation and processing of fibres (Faust, 2013). The cashmere supply chain (SC) is complex, generally involves a high number of partners and is geographically long (Towers et al., 2013). Furthermore, increased Chinese domestic demand for raw cashmere (due to the fiscal advantages promoted by the Chinese Government in favour of internal production as opposed to raw cashmere export), adverse climate and husbandry-related issues have made the price of raw cashmere skyrocket in recent years. All these elements make cashmere price extremely high in comparison with other fibres (Watkins and Buxton, 1992). Cashmere is considered by many the undisputed king of fibres. The cashmere market is considered a *niche* segment (McGregor, 2000) as animal fibres represent roughly 0.1% of the textile market and goat fibres contribute 0.06%. On the other hand, the textile-apparel sector is a leading one in Italy, with an expected 2016 turnover of €53 B, over 50% of which are export (<http://www.sistemamodaitalia.com>) and encompassing very few ‘fashion’ giants, some medium-sized players and a myriad of small and micro firms (almost 47,000 companies in total), facing the challenges of an inevitably globalised environment. When analysing the apparel industry from the SC point of view, *industrial districts* are quintessentially Italian. They are constituted by a large number of small entities (craft workshops or small industrial firms) that operate in a geographically limited area in which a heritage of shared values and know-how are widespread. By clustering together, those small firms are able to achieve economies of scale while maintaining flexibility and high production capabilities, giving rise, at the same time, to a useful competition (Djelic and Ainamo, 1999; Guercini, 2004; Corbellini and Saviolo, 2009; <http://www.sistemamodaitalia.com>).

3 Research questions

Even though the literature review shows that QM has been extensively studied in recent years, few authors have expressly dealt with this theme either in the luxury industry or in the Italian area. Another limitation of the literature is the object of the analysis: in most cases previous studies in the luxury field deal with the distribution side of the SC and usually they do not consider the manufacturing-supply side, even if a ‘whole SC’ perspective is recognised to be very relevant (Caniato et al., 2009; Towers et al., 2013). Wishing to bridge the above-mentioned research gap, the overall research aims at developing a research protocol to study QM in the upstream part of the SC, and describing QM organisation, system and practices of Italian luxury cashmere firms, focusing on the impact of contingent factors on those variables. In defining our research questions, suggestions for ‘further researches’ found in the literature have been taken into account; in particular “assuming that competition in the luxury industry is dominated by factors such as quality, brand and exclusivity, it is important to study management practices put in place to secure these factors and to pursue market leadership” (Luzzini and Ronchi, 2010) and “how is quality managed in the context of the supply chain?” (Foster, 2008). Hence, the specific research questions addressed by the present paper are:

- RQ1 Which is the actual approach to QM organisational structure adopted by Italian luxury firms producing cashmere apparel? How do contingent factors impact on the QM organisational structure?
- RQ2 Which is the actual approach to QM system and process quality management adopted by Italian luxury firms focused on cashmere? How do contingent factors impact on the QM system and process quality management practices?
- RQ3 Which is the actual approach to QM along the SC (both upstream and downstream) adopted by Italian luxury firms focused on cashmere? What is the impact of contingent factors?

4 Research methodology

Given the above research questions, the nature of this empirical and qualitative study is *exploratory*. Considering the nature of this study, the research is based on *multiple case studies* (Yin, 2009). Case study methodology can be used to provide description, test theory or generate theory (Eisenhardt, 1989). The research involved a sample of nine luxury textile-apparel manufacturers focused on cashmere and based in Italy. Methodological papers on case-based research agree that this number can be considered sufficient to give an accurate account in an empirical research (Yin, 2009; Eisenhardt, 1989).

In order to select the sample companies and aiming at obtaining a list of the best known and interesting ones, many information sources have been carefully inspected such as distinguished newspapers (e.g., *Il Sole 24 Ore*, the *Financial Times*, <http://www.cashmere.org>), public rankings on the best luxury brands (e.g., *Infomat Fashion* – ‘best luxury cashmere brands’ at <http://www.fashion.infomat.com>) and websites and blogs dedicated to cashmere, due to the importance of word-of-mouth for a brand to become globally recognised (e.g., <http://www.aboutcashmere.com>, <http://www.umbriacashmeredistrictaward.it>; <http://www.italiancashmere.com>).

Case-based research ‘relies on theoretical sampling’ (Eisenhardt, 1989). From the one hand, we aimed at building a representative sample of the actual composition of the Italian enterprises system. Thus, we needed a sample mainly made of small and medium firms, but also containing some globally recognised companies. This choice allowed to analyse different contingent factors and to interpret convergent and contrasting results among cases according to the principles of both literal replications (where some cases are expected to provide similar results) and theoretical replication (where some cases are expected to provide contrasting results for predictable reasons) (Caniato et al., 2011; Yin, 2009). Furthermore, we opted for a ‘convenience sample’ (Voss et al., 2002), i.e., shortlisting the potential sample to companies in which top management was easily reachable through the university contacts. The resulting sample is depicted in Table 2.

Table 2 The sample companies

<i>Company</i>	<i>Employees</i>	<i>Turnover [mln €]</i>
1	7,000+	1,200+
2	2,500	630
3	1,100	281
4	300	64
5	67	17
6	50	9
7	38	8
8	10	4–5
9	10–15	2

All the companies are *brand owners* (they produce for the B2C apparel market); besides, most of them manufacture semi-finished and finished goods for other leading brands as well. Indeed, a supplier-customer relationship exists between some of the companies in the sample. We considered the following products categories: fine fibres yarn, fabrics, knitwear and apparel (accessory lines as eyewear, perfumes, accessories, leather goods have not been considered in the further analysis).

Due to the well-founded importance of studying management practices along the SC and wishing to have a broader and deeper view on the subject under examination as well as on empirical support for the research, two important Italian companies operating at different levels of the upstream side of the cashmere SC were also interviewed.

Information was collected by means of face-to-face semi-structured interviews and integrated with document analysis; secondary data considered were only highly reliable and official sources such as scientific papers, company websites and publicly available reports (e.g., financial statements). In order to collect direct data, the interview protocol described in the next section has been used. Although identical questions were addressed to all companies, interviewees had the possibility to freely describe their company practices by answering open questions (Caniato et al., 2012). With only one exception, owners, managing directors and plant managers were interviewed; moreover, interviews were mainly done face-to-face at the company headquarters or main plant location. When possible, multiple interviews and company site visits (*direct observation*) were conducted to achieve a broader perspective and perform data triangulation (Eisenhardt, 1989; Yin, 2009). In some cases, a further *questionnaire* was submitted to respondents for integration or confirmation of the collected data.

Finally, interviews were recorded and summary structured reports for each firm were prepared. Answers were aggregated according to the interview protocol, and qualitative comments were also analysed to consider the overall company situation for a more complete data discussion. Data analysis was conducted adopting cross-case analysis techniques.

5 Interview protocol

In previous sections, a gap in current literature has been evidenced and research questions of the present study have been presented. In order to investigate said questions, starting from both an in-depth review of the literature on QM and an overview of luxury, cashmere and Italian textile-fashion markets – as summarised in the first two sections – key variables were identified and classified in the *interview protocol* shown below.

As Eisenhardt put it, “theory building from case studies does not rely on previous literature or prior empirical evidence” (Eisenhardt, 1989). We thus started from the largest possible array of dimensions (taken from quality management and luxury supply chain management literature) but purposefully avoided generating any a priori hypotheses – hence proceeded analysing all of them in an as unbiased as possible way.

First of all, general information about the company, its branding and SC choices was asked in order to have, firstly, a general overview of the sample analysed and, secondly, to investigate about the possible *contingent factors* to be considered in the analysis. Focus should be on such contingent factors as: *environmental factors* and *technological factors* (external), *strategic factors* and *company demographics* factors such as its size (internal) (Spina, 2008; Delmestri, 1996; Daft, 2001).

The interview protocol addressed three main groups of variables related to quality:

- 1 *Quality management organisational structure*: features of the organisational structures for QM adopted by analysed companies (beyond the mere presence of inspections and checks for defects as argued in the literature review section). This part of the interview protocol comes from an adaptation (based on the study of the most recent literature) of the protocol proposed by Brun and Moretto (2014).
- 2 *Quality management system and process quality management practices*: organisational culture, procedures, processes and resources needed to implement QM. As mentioned before, the QMS is used to direct and control how quality policies are implemented and quality objectives are achieved: this part of the interview protocol specifically covers the QM practices in internal processes adopted by the brand owner company.
- 3 *Quality management along upstream and downstream sides of the SC*: first focus is on upstream supply quality management (supplier’s quality control and relation with suppliers in order to reach the quality specifications demanded by the brand owner). Then, variables in the second table are related to *customer focus*, being one of the most frequently highlighted themes in various studies.

The resulting protocol is summarised in Table 3. Readers wishing to have access to the full tables indicating the coding of all answers in the interview protocol – which are not reported here for sake of brevity – shall send an email to the corresponding author.

One final note on the ultimate goal of our research protocol: through the protocol we formalised the issues under study, thus enabling a type of reasoning based on pre-determined rules, i.e., a reasoning of computational type, in which the role of cognition is mainly instrumental. The latter is a necessary condition to be able to claim that our theory emerged from the data inductively, *à la Eisenhardt*. Thus, it is not interesting to explain how the single parts of the protocol came to use; rather, the protocol *as a whole* came to use in making sure that an objective reasoning process was followed.

Table 3 The research protocol

<i>Section</i>	<i>Variable</i>	<i>Description</i>	<i>References</i>
General information, branding and SC model	Size	Number of employees and turnover	
	Product categories	List of the specific product categories offered by the company	
	Brand positioning	Positioning and personality of any brand owned by the company (luxury level, quality, design, craftsmanship, Made in Italy label, ...)	1, 2.
	SC model	Make or buy choices, ownership and locations at the different levels of the company supply chain (focus on Source, Make, and Deliver processes and their sub-processes)	2, 3, 4, 5, 6.
QM organisational structure	Level of centralisation	Continuum between the existence of a dedicated function (stand-alone and centralised) and QM spread in the different departments	7.
	Position in the company organisational chart	Dependence of the quality manager inside the company organisation	7.
	Organisational chart of QM department	Internal QM department grouping criteria	8.
QM System and QM practices	Quality culture	Specific aspects of organisational culture	9, 10, 11.
	Quality awareness	Whether QM is the firm's primary focus in operations strategy	12, 13.
	Scope of quality management	Whether goal the company is aiming at by managing quality	12.
	Role of workforce	Workers' awareness of the importance of quality	12, 14.
	Leadership	Acceptance of quality responsibility by top management and his/her participation in quality improvement efforts	12, 14, 15, 16 17.
	Training	Specifically about quality: there is (is not) a formal and continuous quality management training in the company	12, 13, 15, 16, 17.
	Role of quality team	The firm has (or not) a formal working group/committee about quality	12, 13, 14.
	Continuous improvement	Whether the firm reinforces continuous study and improvement of all its products, services and processes by identifying actions through information management	13, 15, 16.
	Official implementation of TQM	The firm claims (or not) to his clients and public that it is a total quality organisation	12, 13, 19.

Notes: 1 – D'Arpizio (2007); 2 – Brun and Castelli (2008); 3 – Chaudhry and Hodge (2012); 4 – Ngai et al. (2014); 5 – Towers et al. (2013); 6 – Brun et al. (2008); 7 – Vickery et al. (1999); 8 – Zhang et al. (2012); 9 – Schein (1985); 10 – Corbett and Rastrick (2000); 11 – Maull et al. (2001); 12 – Yeung et al. (2003); 13 – Yeung (2008); 14 – Kaynak and Hartley (2008); 15 – Conca et al. (2004); 16 – Flynn et al. (1994); 17 – Lin et al. (2005); 18 – Lengnick-Hall (1996); 19 – Irani et al. (2004); 20 – Caniato et al. (2012); 21 – Foster and Ogden (2008); 22 – Sroufe and Curkovic (2008); 23 – Forker et al. (1997); 24 – Cooklin (2006); 25 – Luzzini and Ronchi (2010).

Table 3 The research protocol (continued)

<i>Section</i>	<i>Variable</i>	<i>Description</i>	<i>References</i>
QM System and QM practices	Corporate Social Responsibility	Level of commitment in ethics and sustainability in business	5, 20, 21, ISO standards.
	Certification	Adoption or not in the company of any certification/standard	12, 22, ISO standards.
	Documentation	The presence, or not, of quality documentation	12, 16, ISO standards.
	Quality key performance indicators (KPI)	Use of KPI: how the organisation controls and improves its processes by setting quality measures	15, 16
	Reports	Quality data and reporting records	14, 16, 17, 23.
	Level of control of finished goods	Operative control in terms of % on the total products	14, 24.
Upstream Supply Chain QM practices	Suppliers selection	The criteria used by the brand owners to let a supplier be in their suppliers register	15, 16, 17, 22.
	Relationship management	The decision to resort to the competitive market through short-term relationship, rather than the establishment of long-term consolidated ones	6, 14, 16.
	Suppliers training on quality	Whether training suppliers on brand owners quality standards and requested practices is required	15, 17.
	Suppliers evaluation	Whether a formal system for the evaluation of supplier performance exists	14, 15, 25.
	Information Sharing	The depth of the information sharing flow between brand owner and suppliers	6, 14, 17.
	Control of inbound materials	Operative control in terms of % on total inbound materials	14.
Downstream SC QM practices and customer focus	Level of focus on customer	Focus on increasing connection with customers, identifying their requirements, assessing their satisfaction and supporting activities to improve customer satisfaction	14, 16, 17, 18, 19
	Measurement of customer expectations	How the company manages customer expectations (before the goods purchase)	15.
	Measurement of customer satisfaction	How the company manages customer satisfaction (after the goods purchase)	15.

Notes: 1 – D’Arpizio (2007); 2 – Brun and Castelli (2008); 3 – Chaudhry and Hodge (2012); 4 – Ngai et al. (2014); 5 – Towers et al. (2013); 6 – Brun et al. (2008); 7 – Vickery et al. (1999); 8 – Zhang et al. (2012); 9 – Schein (1985); 10 – Corbett and Rastrick (2000); 11 – Maull et al. (2001); 12 – Yeung et al. (2003); 13 – Yeung (2008); 14 – Kaynak and Hartley (2008); 15 – Conca et al. (2004); 16 – Flynn et al. (1994); 17 – Lin et al. (2005); 18 – Lengnick-Hall (1996); 19 – Irani et al. (2004); 20 – Caniato et al. (2012); 21 – Foster and Ogden (2008); 22 – Sroufe and Curkovic (2008); 23 – Forker et al. (1997); 24 – Cooklin (2006); 25 – Luzzini and Ronchi (2010).

6 Findings

The present section will discuss findings from case studies and is organised as follows:

- the section opens with an overview on sample data and an argumentation on the identification of contingent factors
- findings are then presented to answer to the research questions
- finally, a critical analysis of the results will conclude the section.

6.1 Data analysis and contingent factors identification

As mentioned before, some contingency factors have been considered, with the aim of investigating whether they could help in discriminating among different brand owners' strategies. After the literature review and considering that external factors are generally the same for all the companies in the sample (as they are all operating in the same industry and they are all based in Italy), we naturally resolved to focus just on internal contingent factors (strategic and demographics: *company size*, *luxury level*, *upstream SC configuration* and *downstream SC configuration*). Consequently, companies have been clustered as follows:

- *Size: large companies* (cases 1, 2, 3, 4) and *SMEs* (cases 5, 6, 7, 8, 9).
- *Positioning of the brand: luxury level*. We adopted the well-known classification of *absolute* (cases 1, 2, 3), *aspirational* (cases 4, 5, 7, 8, 9) and *accessible* (case 6) luxury (D'Arpizio, 2007), focusing – in case of brand owners running a portfolio of brands – on the main line label only. All companies in the sample have medium-high to high levels of craftsmanship (as mentioned by respondents, in particular for knitting and garment making, “there are no appropriate machineries capable of replacing human labor”), and a *Made in Italy label* (totality in all the other cases); hence, factors such as quality or country of origin could not be regarded as differentiating, as they patently were a common trait across the sample.
- *SC configurations: upstream*. We singled out cases of *vertical integration* (cases 1, 2, 6) and *collaborative market* (cases 3, 7, 8), i.e., company outsourcing upstream processes to suppliers located in the same Italian district; intermediate between vertical integration and collaborative market (cases 4, 5, 9). Product design and development and quality control of semi-finished products (also in case of outsourcing) are kept in house by the entire analysed sample.
- *SC configurations: downstream*. There were cases of downstream integration (cases 1, 2, 3, 4, 5, 6) and no downstream integration (cases 7, 8, 9). On average, surveyed companies export over 70% of their production. Growth is pursued through mono-brand retail (both through directly-operated and franchising stores), which helps being closer to end customers, and selective distribution giving visibility to the brand (e.g., high streets in strategic cities) consistent with the luxury positioning. Finally, all but two of the interviewees sell through an e-commerce channel.

6.2 First research question – organisational structure

Quality proved to be strategic for all the companies in the sample. The approach followed by all companies is similar, with only small difference justified by the company size. In particular, unexpectedly, no link was found between the *upstream SC configuration* and the QM organisational structure: companies organise for quality in a certain way, no matter whether the production is carried out in house or outsourced, nor whether it takes place in a secluded cashmere district vis-à-vis geographically scattered throughout Italy. In particular what emerged from the case studies is as follows:

- In all companies in the sample, quality managers have a high *hierarchical status* (they report to top management or CEO), highlighting the critical role played by quality in the luxury industry.
- All companies have a department accountable for QM: large firms tend to have a full-time QM department, while SMEs have part-time QM departments, as resources in smaller companies may be unsaturated if 100% of their time is dedicated to QM. This is also due to the fact that the workforce, being highly skilled, could sometimes contribute to quality management both in terms of quality control and quality assurance (Kenneth, 2005; Hoyle, 2009; <http://www.iso.org>).
- In terms of *level of centralisation*, the habit of involving some resources, not strictly ‘belonging’ to the quality department, to QM activities, can be considered midway between a centralised organisational structure (Forker et al., 1997) and a widespread quality function (Vickery et al., 1999; Nicolas and Valceschini, 1995).
- In terms of *grouping criteria*, only large firms have formalised criteria to organise the QM department: in particular, there are QM employees dedicated to specific transformation phases (raw materials, working processes, end products), while in smaller companies the limited amount of work does not justify formalised division of assignments.

6.3 Second research question – quality management system

All the Italian cashmere luxury companies in the sample have a high *quality awareness*, as they regard quality as a competitive business weapon, and are committed to quality, in terms of ‘search for the best raw materials’ along with ‘highly skilled labour’, but also ‘attention to details and passion’. Yet quality is pursued without implementing quality frameworks or certification schemes. Key findings are as follows:

- *Management* is always highly committed to quality issues (being actively involved in the organisation’s quality efforts, communicating their commitment to quality and accepting quality responsibility), while the commitment of the *workforce* depends on the *level of luxury*: commitment is very high in absolute luxury companies and partial in aspirational luxury firms; finally, in the single case of accessible luxury, workers are aware of their role in quality but are not committed; clearly committing workers to quality is not an easy task, as changing a company’s culture requires a very long time and strong incentives, e.g., in company 1 – particularly for the textile division - a relevant percentage of the compensation, for both workers and managers, is tied to the production quality level.

- There are no formal quality initiatives or frameworks: none of the companies are involved in official *TQM implementations* or *continuous improvement* programmes; yet, some of the sample companies actually share many of the ‘ideal TQM paradigm’ characteristics (Yeung et al., 2003). Similarly, firms are knowledgeable about quality standards such as *ISO 9000*, but are totally resistant to certifications, for such reasons as: the risk of increasing bureaucratic processes, the need of extra resources to manage it, the fact that ‘savoir faire’ is a better reference than a quality certificate.
- *Quality documentation systems* are influenced by *company size*: most of the sample resorts to *KPI to measure quality*; moreover, in all large firms, *reports on quality data* are available, while this is not always the case in SMEs; dashboards were introduced due to either a personal resolution of the CEO to make advancements in terms of tracing, collecting and summarising data on quality (regardless of firm size), or the need for performance and processes data visibility felt by CEO of big companies that, otherwise, cannot have a global control of the whole company.
- Regarding *training on quality*, companies carry out training on the job and general trainings (particularly for new processing or products), rather than specialised training on quality.
- All companies perform a *systematic control of finished goods*.
- Finally, a general interest toward corporate social responsibility was found among all companies.

6.4 Third research question – quality management along the SC

6.4.1 Upstream SC

Also in terms of quality management implementation along the SC, we found a very consistent picture across the sample, with an overall high involvement of suppliers and subcontractors in quality issues.

- Firstly, in *selecting suppliers*, quality criteria are globally preferred to cost-oriented ones; during the selection stage, suppliers go through specific audits, conducted mainly to ensure that they are capable to meet the needs of the brand owner company in terms of quality practices, law compliance, adherence to declared specifications by all the companies in the sample; once a supplier is qualified, *quality performance* is rated mainly through informal evaluations.
- All brand owner companies stated to have mainly established long-term supportive *relationships with suppliers* and subcontractors, characterised by high mutual trust.
- A high level of *information sharing* between supplier and subcontractors is generally adopted (medium level with new ones). Frequently, long term relationships with suppliers are turning into virtual or actual partnerships, with many of the respondents claiming that with most of their suppliers there is an informal and even friendly relationship.
- Considering *supplier training on quality* the general approach is that when best performers are selected they do not need additional training, otherwise yes. None of the enterprises in the sample requires suppliers to be ISO 9000 certified.

- Finally, *control of inbound materials* is function of the company size: all SMEs, with one exception, accept most inbound materials in *free pass* because of the strong trust relationship with suppliers; large enterprises prefer performing sampling or systematic controls. Of course, there are cases of inbound materials requiring a specific approach: for instance, companies stated that quality controls are not usually carried out on yarn for several reasons such as a greater difficulty along with a lesser efficacy of the control itself, thus tests on yarn are generally done only at the beginning of a new supply relationship; on the contrary, firms that buy raw cashmere, despite the previous tests done by suppliers, usually carry out further acceptance sampling controls (generally up to the 30% of each inbound batch) in laboratories.

Concluding, as mentioned in Section 4, due to the recognised importance of a SC perspective in the study of QM practices, two important Italian companies operating at different levels on the upstream side of the cashmere SC were interviewed as well. Results show an approach to QM pursuing top-notch products, as well as high service level and flexibility. QM, in general, appeared to be more formalised and structured compared to the one of brand owner companies. This difference can be explained both considering that the supplier may want to prove its QM *best practices* to the clients by whom it is selected and evaluated and by the fact that some upstream production phases are highly automated.

6.4.2 Downstream SC

Considering the downstream side of the cashmere textile-apparel SC, the level of end-customers involvement on quality issues was generally high, with some minor differences related to the luxury positioning.

- Firstly, the *luxury positioning* seems to influence the *level of focus on customer*: all absolute luxury companies have a strategy highly focused on customers (enhancing customer service through customer relationship management systems, RFID tags, and made-to-measure options), while all other companies have a medium focus on customers.
- Regarding *measurements of customer expectations*, all companies rely on reports and 'advices' from buyers and agents as well as on market surveys and researches. On the other hand, in terms of *customer satisfaction measurement*, after-sales surveys are not very common (company 2 explained that "common satisfaction surveys are not suitable to top luxury customers"); some feedbacks on customer satisfaction are (informally) accounted for in buyers and agents reports. Finally, all companies agreed that the best way to assess customer expectations and satisfaction is through direct observation of customers' behaviour and dialogue with them; having a direct channel (e.g., mono-brand boutiques) largely facilitates this approach, yet a general tendency to 'listen to the voice of the customers' emerged, regardless of the specific downstream SC configuration.

6.5 Critical analysis and comparison with similar and conflicting literature

On the basis of the previous extensive discussion and results analysis, it is now important to proceed ‘enfolded literature’ (Eisenhardt, 1989), i.e., summarising key findings and comparing them with extant literature.

Let us start with key findings related to QM organisational structure:

- Italian cashmere firms tend to have a formalised (centralised) QM department, with dedicated resources in case of large companies and part time appointments for smaller ones, and with the quality manager occupying a high status in the organisational hierarchy
- said QM departments are mainly focused on quality planning and quality control activities; quality improvement is more a widespread mindset rather than a formalised approach as, e.g., kaizen tools are not employed in a formal and structured way.

Forker et al. (1997) summarises the preaching of quality gurus, such as Juran, Deming and Crosby, recalling that companies should focus on quality planning, control and improvement; furthermore, burden of quality should be shouldered across several (let alone all) company departments. To this regard, we can consider our findings partly aligned with the extant literature, in that, theoretically, respondents showed understanding of these philosophies and provided cogent explanations of their choices, yet from the practical implementation there still seems some work to do, placing more emphasis on the formalisation of roles rather than the competence of people. Some (large) companies are demonstrating their willingness to bring their quality organisation to the next level, having some widespread control and assurance activities. Yet this level of ‘maturity’ is not surprising considering the results of other empirical studies – e.g., in Yeung taxonomy, the ‘top performing’ cluster is that of strategic quality system, in which “only a few organisations have spread their quality responsibility to different departments” (Yeung et al., 2003). Furthermore, the high status of QM in the organisational hierarchy confirms that premium quality is recognised critical success factor (Brun and Castelli, 2013; Sjoström et al., 2016).

Moving on to the quality management system:

- All companies are fully aware that quality (mainly seen as intrinsic product characteristics) is a critical success factor:
 - a at the managerial level, there is full commitment towards quality
 - b employees are always aware of the relevance of quality, yet they are fully committed only in case of absolute luxury companies.
- There is a general resistance to formalisation, standardisation and certification: companies prefer to link the quality culture to craftsmanship and tacit knowledge.
- All companies are measuring some quality-related KPIs, yet only the largest companies have Information Systems allowing complete reports and documentation of quality issues.

Regarding the employees commitment, the role of management in spreading quality culture is well established (Irani et al., 2004) so once again we regard the partial alignment with expected results as a gap, which should be filled over time. The general resistance to formalisation, standardisation and certification is in line with findings for French luxury companies, which know but don't formally adopt TQM (Brun and Moretto, 2014). Collecting quality data is definitely recommended by several authors as, in previous studies, although focused on different industries, it proved to be positively impacting on performances (Flynn et al., 1994; Forker et al., 1997; Kaynak and Hartley, 2008).

Having a look at quality along the SC:

- Suppliers and sub-contractors are selected according to quality criteria and are then engaged in long-term and high-trust relationships. Long term relationships and partnerships are consistent with the main principles of TQM (De Araujo, 1997). Moreover, according to several authors (e.g., Fabbe-Costes and Jahre, 2008), the general strong links and high degree of integration across organisational boundaries lead to better performance. On the other hand, those relationships are mainly informally managed.
- Large companies carry out systematic (100%) inspection on incoming goods, while small companies don't carry out incoming inspections; the approach of French luxury companies seems more developed, with Chanel and Hermes no longer inspecting incoming goods (free pass being the most developed stage of an ideal supply chain QM maturity model), yet results were showing exactly the same trends (Brun and Moretto, 2014).
- QM at suppliers seems to be more formal and structured than at brand owner companies (based on just two cases, yet this seems worth exploring further);
- On the downstream side, all companies implement 'voice of the customer' techniques, yet none has formal customer satisfaction surveys or after-sales reports in place. Even if the awareness of the importance of customer involvement is increasing, Italian luxury companies should be careful not to risk 'falling in love' with the product, reducing the focus on end customers' actual expectations. Quality improvement has to be based on feedbacks from the market (Juran, 1986).

The above discussion allows us to discuss an important question: to what extent does luxury quality management differ from (traditional) QM? Our final verdict: in the luxury industry we saw good endeavours yet QM is still managed in too an informal way. In the luxury business, quality is certainly well understood and regarded as a strategic weapon; yet this is in stark contrast with the resistance (of all luxury companies) to formalise the adoption of QM frameworks and initiatives, which are well-established in such industries as automotive (the industry in which many QM methodologies were developed or applied for the first time) and, in general, large-scale manufacturing. What is the real reason of this misalignment? From the one hand, companies showed fear of abandoning the old artisanal mindset, where the operators were the main source of know-how, while the same operators have been robbed of their 'pride in craftsmanship' by large-scale manufacturing (Deming, 1982); yet in their explanations we also saw some glimpses of the arrogance typical of self-contemplating sectors such as luxury apparels, which seem still indifferent to advancements conceived in mass-market industries. This consideration

leads to an open question: whether and how such an informal way to operate might negatively impact on effectiveness of business operations and, if that is the case, on quality issues.

7 Conclusions and further developments

The present paper provides a contribution to the research both in the luxury industry and in the quality management fields by analysing QM organisation, system and practices of Italian luxury textile and apparel firms focused on cashmere and understanding the significant impact of contingent factors on those variables. The topic is innovative *per se* since despite the recognised primary importance of ‘premium quality’ among luxury industry CSFs, research on QM with regard to the luxury sector is very limited so far. The empirical part of the research focuses on Italy (since few studies on QM are based on this geographical area). Firstly, a review of the extant literature on the key topics was carried out. Secondly, the most relevant quality organisation and management variables as well as meaningful contingent factors were identified and later classified in designing the interview protocol. A case study research was then conducted. Results show that Italian cashmere firms tend to have a formalised QM department, focused on quality planning and quality control, while quality improvement is present but not formalised. From a SC perspective, suppliers are involved in QM through long-term and high trust relationships, mostly informally managed. Customer focus is not adequate. This research project can provide useful insights both for researchers and practitioners. For researchers, this study formalises a comprehensive research protocol to understand how companies organise their QM activities, which is still a wide unknown and unexplored area in several industries. Thus, by filling the gap in literature, the authors expect that further research will be carried out, helping determining the main trends in QM organisational structures, system, process practices and along the SC practices. For practitioners, this work can help managers in identifying which QM practices and organisational model are most frequently adopted by in luxury companies today and, if any, what are the main pitfalls. An added value is the SC perspective of the study. We are very confident that the results of the present study could be extended to other luxury contexts, for the following reasons:

- First of all, throughout the study, we did not find any single idiosyncrasy of the cashmere (production) sector, which should justify (or even raise the suspicion of) differentiated practices with respect to other luxury woven or knit natural fibres garments – which altogether form a relevant part of the Italian apparel industry. After all, the fact that cashmere goats fibres are coming from Tibet, while angora goat fibres are coming from Ankara, Alpaca from Peru, and other fibres such as the ‘niche of the niches’ Vicuna from the remotest regions, seems not to be affecting the industrial footprint, let alone the approach to QM, of the Italian companies transforming those fabrics into their coveted products.
- With the overarching objective to develop a ‘grounded’ theory, we aimed at seeking a sense of generality, avoiding the risk to develop an idiosyncratic theory. This would have been hard for a very wide research question such as “how are cashmere producer organised?”; for this reason, we split the overarching research objective

into three couples of narrower research questions, leading to emerging relationships between constructs such as the following:

- 1 large firms have formalised criteria to organise the quality department, while SMEs do not have such criteria
- 2 all companies in the sample are aware of the ISO standards, yet all of them decided not to register to ISO 9000; reasons for choosing not to register to ISO 9000 include: the risk of increasing bureaucratic processes, the need of extra resources to manage it, the fact that ‘savoir faire’ is worth much more than a quality certificate in guaranteeing to the stakeholders a certain way of working.

which convey, by their very nature, a sense of generality, as the same relationships could be found in luxury segments of such industries as silk apparels, jewellery, shoe-making, leather accessories, eyewear, even automobiles and yachts.

- In fact, the two most impacting contingent factors – namely, company size and level of luxury positioning – are not cashmere-(nor apparel-)specific. We therefore exhort researchers in this field to work to extend our findings to other luxury goods.

Of course, our goal here is just to show that findings of the present study are easily generalisable. Generalisation itself (by extending the novel theory to other contexts) would be the next step, which goes beyond the scope of the present paper.

On the other hand, the present research is somewhat limited by the small sample size. Thus, the purpose of the present study was ‘restricted’ to an exploratory one. Moreover, since our research was focused on cashmere industry and in Italy, analogue studies in other countries or markets might results in different findings. We would therefore encourage the adoption of the research protocol, to initiate a novel research avenue, which would necessary require further studies to strengthen the results of the present paper and turn them into a sound and encompassing theory. From the one hand, even though Italy is recognised worldwide for its cashmere luxury industry excellence, there are other countries playing an important role in this sector – most notably, Scotland. Thus, this study can be replicated in other key countries. Furthermore, other different specific commodity markets (e.g., leather accessories) could be the focus of further researches to replicate the present study. Finally, further investigation is needed to understand the causal relationship between QM practices and company performances. For instance, in past studies on different industries, the adoption of the TQM approach was found to be positively impacting on firm performances. Therefore more research is needed to find out which of the TQM practices are actually meaningful in the luxury industry.

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