

**SELLING LUXURY PRODUCTS ONLINE:
THE EFFECT OF A QUALITY LABEL ON RISK PERCEPTION,
PURCHASE INTENTION AND ATTITUDE TOWARD THE BRAND**

Shubin Yu*

HSBC Business School, Peking University,
University Town, Nanshan District, Shenzhen, China, 518055
Shubin.Yu@phbs.pku.edu.cn

Liselot Hudders

Department of Communication Sciences, Ghent University,
Korte Meer 7-9, Ghent, 9000, Belgium
Liselot.Hudders@UGent.be

Verolien Cauberghe

Department of Communication Sciences, Ghent University,
Korte Meer 7-9, Ghent, 9000, Belgium
Veroline.Cauberghe@UGent.be

ABSTRACT

Many luxury brands and online retailers are struggling with how to sell luxury products online. Purchasing such premium priced brands online implies a high level of risk for consumers since their evaluation of the products cannot be based on direct, tangible experiences with the product. This study suggests that retailers can diminish the perceived risk by adding a quality label to a luxury product. However, the effectiveness of such quality label depends on the cultural orientation of the consumer. As such, we expect a quality label only to be effective for high uncertainty avoidance consumers. An analysis of secondary data from A.T. Kearney reveals a negative relation between a country's level of uncertainty avoidance (UA) and how favorable its consumer base is for transacting online, which might be an indication that even general online consumer behaviors (not luxury products per se) are perceived as highly risky in high uncertainty avoidance cultures. In addition, an experimental study using a 2 (Quality label vs. no label) by 2 (luxury vs. non-luxury purchase) between-subjects design reveals that for a luxury brand, a quality label reduces the risk perception and in turn leads to higher purchase intention and attitude toward the brand for high UA individuals.

Keywords: Luxury products; E-commerce; Quality label; Uncertainty avoidance

1. Introduction

E-commerce is never an easy choice for luxury marketers. Several years ago, when marketers were arguing about e-commerce for luxury brands, selling luxury products online is like tasting the apple in the Garden of Eden, alluring but perilous [Tungate, 2009; Kapferer & Bastien, 2012; Geerts, 2013]. Most luxury marketers believed that going online was not necessary for luxury brands because luxury consumers are generally older and less adventurous than regular shoppers, not willing to buy luxury products online [Tungate, 2009]. Furthermore, as an open, cheap, free and fast medium, the Internet seemed not to be compatible with luxury brands that are considered to be exclusive, elegant, expensive and timeless [Kapferer & Bastien, 2012]. However, an e-business strategy can also help to propel the brand to a status of global brand awareness. In addition, the rise of young affluents and the success of online luxury retailers like NET-A-PORTER start to attract luxury marketers to sell their products online [Tungate, 2009]. Meanwhile, the downturn of offline retail performance also pushes luxury companies to consider e-commerce [McKinsey & Company, 2015]. The Boston Consulting Group [2016] even released a report entitled "Digital or Die: The Choice for Luxury Brands". Luxury brands need to grow, and the potentialities of growth hide on the e-commerce. E-commerce is expected to make up 18% of luxury goods sales by 2025 [McKinsey & Company, 2015]. Altgamma-McKinney Digital Experience Observatory [2015] predicts that luxury players start to move from simply exploring

* Corresponding Author

the e-commerce (e.g., with a reduced product range) to launching full e-shop concepts (e.g., significant investments in IT, customer support, and supply chain). Finally, they will reach a maturity period, with online sales more than 20% of brand total revenues. According to the study by Díaz, Martín-Consuegra, and Estelami [2016], 32.26 % of luxury brands offer possibilities of online shopping in 2016. In fact, luxury brands like Fendi, Armani, Gucci and Prada opened their online store one by one. Even Céline, the brand that used to be highly conservative to digital practices, surrendered to this trend. To date, Céline has announced its plans to launch e-commerce [The Fashion Law, 2017]. To capitalize on the increasing potentials of e-commerce, LVMH, the largest luxury goods conglomerate, is also going to launch its own e-commerce site soon [Agnew & Ellison, 2017].

As the online environment and luxury industry evolve, more and more scholars are optimistic about e-commerce and believe that electronic commerce can help luxury brands to grow [Hennigs, Wiedmann, & Klarmann, 2012; Okonkwo, 2010; Guercini & Runfola, 2015]. Nowadays, the research question shifts from whether luxury brands should embrace e-commerce to how luxury brands act in e-commerce. A few studies start to explore how luxury brands maintain a sense of luxury by improving the shopping experience [Beuckels & Hudders, 2016] and transferring the traditional sensory shopping experience into online shopping [Okonkwo, 2010; Kapferer & Bastien, 2012] and make use of new information technologies (e.g., personalization and targeting) to identify and track luxury consumers online and cater their needs accordingly [Okonkwo, 2010; Yu, Hudders, & Cauberghe, 2017a; Yu, Hudders, & Cauberghe, 2017b]. Findings from previous studies on retail luxury strategies are also transferred to the online context. For example, traditional luxury retail tends to adopt an aesthetically oriented strategy [Joy et al., 2014] and to build up the charismatic persona of the creative director [Dion & Arnould, 2011]. Based on these findings, researchers propose possible solutions for luxury brands to enhance the aesthetics and luxuriousness of their website/online stores.

Kluge et al., [2013] conduct a content analysis of 81 existing luxury brand homepages. The findings reveal that luxury brand homepage design differs significantly from conventional homepage design. Compared to conventional homepage design, luxury homepage design prefers using darker background colors, a larger or full-screen space to present the content, a horizontal navigation bar. Additionally, luxury homepage design removes most elements in conventional design (e.g., home button, contact, help, FAQ, about us, search function, welcome page, etc.). Furthermore, Kluge et al., [2013] indicate that by applying such typical luxury design, luxury brands can enhance the perceptions of conspicuousness and uniqueness. The typical luxury design is generally effective as luxury brands are more sophisticated in nature [Lopez & Ruiz, 2011].

Shen, Vel, and Khalifa [2016] examine the effect of website design on customer-based brand equity (CBE) of luxury brands. By conducting a survey study with 201 participants, Shen, Vel, and Khalifa [2016] suggest that the aesthetic element of website design: aesthetic formality (i.e., “the order, legibility, and simplicity of a website”, p. 1118) and aesthetic appeal (i.e., “the overall impressiveness, hedonic quality of a website”, p. 1118) can elicit a sense of luxury, which in turn has a positive effect on CBE.

Apart from the design of the website, the study by Beuckels and Hudders [2016] investigates how image interactivity influences luxury perceptions in a virtual shopping environment. The findings show that image interactivity can lead to higher perceptions of exclusivity, quality, hedonism and extended self owing to higher perceived telepresence. This study offers some interesting guidelines for luxury brands to retain or even enhance their luxury perception in e-commerce.

However, most studies focus on how luxury e-commerce uses low task-relevant cues (i.e., “relatively inconsequential site information such as web site design, entertainment, and other ambient factors”, Kim, Choi, & Lee, 2015, p. 386). For example, Kluge et al., [2013] and Shen, Vel, and Khalifa [2016] focus on the effect of the web design on perceived luxuriousness, while Beuckels and Hudders [2016] study the effect of image interactivity. Few studies investigate the effect of high task-relevant cues (e.g., product information or safety cues, Kim, Choi, & Lee, 2015) in luxury e-commerce. An exception is the study by Kim, Choi, and Lee, [2015] that suggests that both low task-relevant and high task-relevant cues affect the consumers’ revisit intentions toward the web site. In reality, to maintain the luxuriousness of the online shopping environment, many luxury online retail websites are pursuing minimalism and concise styles. Although these styles are consistent with the design of the physical stores and transfer the luxuriousness to an online environment, such minimalist style (i.e., lacking enough information) may sacrifice the service quality of the webpage (e.g., product quality information), which can diminish the perceived value and behavioral intention according to the study of Türk et al., [2012]. Especially for websites selling multiple luxury brands, insecurity about the product quality is a big issue. Consumers may worry that these online multi-brand stores sell inferior quality products or even worse, counterfeits. Therefore, more in-depth studies are needed to investigate the effect and underlying mechanism of high task-relevant cues for luxury brands and also contextual factors influencing the effect of high task-relevant cues.

For consumers, purchasing luxury products online implies a high level of risk [Liu, Burns, & Hou, 2013] due to a large amount of money involved [Wu, Chen, & Chaney, 2013] in combination with the uncertainty about the quality

of the product [Liu et al., 2013]. Because in a brick-and-mortar store, luxury consumers can fit the product, feel the fabric, talk to the sales representative, and evaluate the quality. In an online context, consumers rely on pictures, product information, consumer reviews and other persuasive cues. For example, consumer generated product reviews can produce a positive effect on attitude toward the product [Gai, 2014]. However, to maintain the exclusivity, luxuriousness and simplicity of the online store, online luxury retailers seldom have an online review system. Consequently, there is no sufficient information for the consumer to assess the product. Therefore, online luxury retailers need to find ways to reduce the risk perception of buying the luxury products on their particular web shop.

Previous research in a non-luxury environment suggests that certain safety cues in an online store can be displayed to reduce the risk perception involved with online purchases. In this respect, Van Noort, Kerkhof, and Fennis [2008] show that these safety cues (i.e., privacy policy, general terms and conditions, delivery status, customer reviews, safety warranty, etc.) can actually lower the risk perception and engender positive attitudes and behavioral intention. However, Van Noort et al. [2008] manipulate safety cues by showing all types of symbols, including the security of the transaction, the product quality, and the privacy protection. Therefore, it is not possible to know which type of safety cues works and which one does not work. Moreover, the study by Van Noort et al. does not investigate the moderating effect of the type of product. Therefore, we do not know whether safety cues have the same effect for luxury vs. non-luxury products. Due to the huge difference between luxury and non-luxury products, selling luxury products online requires a different set of strategies [Bjørn-Andersen & Hansen, 2011]. Therefore, it is interesting to investigate the effectiveness of safety cues for luxury products.

For luxury products, a quality label can be an excellent risk-relieving strategy. For example, Zalando, an online fashion retailer, shows a "100% Authentic" or "Premium" label next to its luxury items. This kind of quality label can be very effective because the quality is one of the key motives of luxury consumption [Husic & Cicic, 2009]. For mono-brand stores, it may not be necessary to use this type of claims because the quality of the product can be guaranteed in this type of stores. However, for multi-brand stores such as Yoox.com, it will be beneficial to display such quality cues. In fact, when luxury brands distribute their products via retailers, they lose control of the management of the product. Duty-free shops and online luxury retailers can sell the product in their own way based on their marketing strategy. For example, JD.com, a Chinese online retailer, may put a quality guarantee label next to a luxury cosmetic product. Therefore, it is necessary for us to investigate the effectiveness of this type of claims. However, the effectiveness of quality labels regarding reducing risk perceptions and increasing buying intentions for luxury brands is not yet examined. In addition, we expect that the effectiveness of a quality label depends on the cultural orientation of the consumer. The cultural orientation of the consumer becomes more and more important in affecting the performance of the e-commerce. Unlike offline shopping, which serves mostly for local consumers, an online store may target to global consumers from different cultures. Quality labels may only work for individuals with high uncertainty avoidance (UA) tendency because high UA individuals are prone to search for safety cues when shopping online to reduce their uncertainty. However, research about the moderating role of UA in the effectiveness of safety cues, to our knowledge, is non-existent.

To answer these questions, we conduct an experimental study to test the effectiveness of a quality label and to examine whether the effectiveness depends on the category of the product (luxury vs. non-luxury) and consumers' level of uncertainty avoidance.

2. Theoretical Framework and Hypotheses

2.1. Signaling Theory and Quality Labels

In biology, peacocks signal reproductive fitness with its large colorful tail. In economics, signaling is the idea that one party credibly conveys some information about itself to another party. In management, signaling theory explains the effective use of signals in the interaction of individuals and organizations [Spence, 1973]. This theory has also been cited to explain individuals' behaviors in job markets [e.g., Spence, 1973]. For example, when finding a job, candidates send a signal about their competitiveness to the employer by showing their education credentials. Later, researchers have applied this theory to financial reporting [e.g., Zhang & Wiersema, 2009], entrepreneurship [e.g., Certo, 2003], luxury consumption [e.g., Hudders, De Backer, Fisher, & Vyncke, 2014] and e-commerce [e.g., Kimery & McCord, 2006; Mavlanova, Benbunan-Fich, & Koufaris, 2012; Drake, Hall, Cegielski, & Byrd, 2015; Hu, Rabinovich, & Hou, 2015].

In the context of e-commerce, online retailers (sellers) control the information source strictly, while online shoppers (buyers) are confronted with an information deficit. Unlike traditional shopping in which consumers can judge the quality of a product directly by touching, observing, and even smelling, consumers shopping online can only evaluate the product based on incomplete and imperfect information provided by the seller. In this asymmetric information environment, where sellers hold more information and buyers are at a disadvantage, online shoppers tend

to look for and rely more on signals to assess the product [Kirmani & Rao, 2000; Atkinson & Rosenthal, 2014; Mavlanova et al., 2012].

Consumers infer the quality of the product based on the displayed signals such as quality labels, certification marks, or seals of approval [Moussa & Touzani, 2008]. Phelps [1949, p.499] defines certification marks as “marks used upon or in connection with the products and services of one or more persons to certify regional or other origin, material, mode of manufacture, quality, accuracy, or other characteristics of such goods or services”. Similar to certification marks, quality labels (e.g., 100% premium quality guarantee, best quality guarantee) can be defined as labels that manufacturers and retailers display to ascertain the quality attributes of the product [McEachern & Warnaby, 2004]. Quality labels provide the consumer with product quality information in response to consumers' demand for high-quality products. As such, a quality label can reduce the information asymmetry between suppliers and buyers [Fotopoulos & Krystallis, 2003]. Previously, there was information asymmetry when consumers purchase experience goods (i.e., "products whose quality can be ascertained only after buying and experiencing the product," Moussa & Touzani, 2008), such as food. Nowadays, consumers face the information asymmetry when purchasing products online because the quality of the product cannot be ascertained until they receive the product. Akerlof [1995] suggests that the information asymmetry elicits uncertainty and risk perceptions. Therefore, shopping online is perceived riskier than shopping via a traditional channel [Van den Poel & Leunis, 1999; Grabner-Kraeuter, 2002]. As such, quality labels can be a useful tool for online retailers to reduce the risk perception [Urban, Sultan, & Qualls, 2000].

Quality labels have received growing interest within the marketing literature [Moussa & Touzani, 2008]. However, most studies focus on the food industry [e.g., Fotopoulos & Krystallis, 2003; Aprile, Caputo, & Nayga Jr, 2012]. Many studies have confirmed the effectiveness of quality labels. For example, consumers are willing to pay a higher price for a product with a quality label [Aprile et al., 2012]. Davis' research [1987] reveals that a simple quality label (i.e., “100% cotton”) can significantly enhance the perceived quality of the product. Cheskin Research [2000] also supports that seals of approval (i.e., a symbol that shows a good opinion of something) can reduce consumers' perceived financial risk. A quality label can actually be beneficial for promoting the food. In the online context, some studies have found that certain cues (mainly transaction security) can lower the risk perceptions when shopping online [e.g., Kimery & McCord, 2006; Wang, Beatty, & Foxx, 2004]. Van Noort, Kerkhof and Fennis [2008] also confirm that generally safety cues can reduce the risk perception in an online shopping environment. However, research on how a quality label can affect consumers' risk perceptions, online purchase intentions, attitude toward the brand for luxury (vs. non-luxury) products does not exist.

2.2. Uncertainty Avoidance and E-commerce

Uncertainty avoidance (UA) can be described as “the extent to which the members of a culture feel threatened by uncertain or unknown situations” [Hofstede, 1991, p. 113]. It is important to take uncertainty avoidance into account when investigating the effectiveness of quality labels because of a connection between risks and uncertainty [Bauer, 1960]. A quality label may work differently for different individuals. For example, low UA individuals may not be as dependent as high UA individuals on safety cues to reduce their risks. Actually, prior research has suggested an indirect relation between uncertainty avoidance and online shopping behaviors through perceived risk [Choi & Geistfeld, 2004] in the high UA culture (i.e., South Korea), but not in low UA culture (i.e., U.S.). However, most researchers investigating the influence of UA compare only two countries (e.g., U.S and Korea, Ko, Jung, Kim, & Shim, 2004; Choi & Geistfeld, 2004). One exception is the research by Lim, Leung, Sia and Lee [2004] which involves a comparison of 39 countries. High UA people do not like uncertainty in shopping online. Lim et. al, [2004] have assumed that the high uncertainty avoidance countries should have a lower rate of the Internet shopping adoption. However, their research does not reveal a significant relation between uncertainty avoidance and the Internet shopping adoption rate. This may be because, at that time, the Internet shopping adoption rate was influenced by the telecommunication infrastructure and technological innovations of a country [Agarwal & Wu, 2015]. In 2004, when the study was conducted, e-commerce was not yet widely accepted by developing countries (e.g., China, India) and only 16% of the world population used the Internet [International Telecommunication Union, 2015] due to the limitation of the telecommunication infrastructure and the adoption rate of computers [Chinn & Fairlie, 2006]. Nowadays, 40% of the population is using the Internet and the gap between developing and developed countries is decreasing [International Telecommunication Union, 2015]. Therefore, the telecommunication infrastructure and technological developments have less influence on transacting online. In this case, it will be beneficial to replicate the study and examine the relation between UA and a country's consumer base for transacting online. Therefore, we propose the following hypothesis:

Hypothesis 1: The higher the level of uncertainty avoidance, the less favorable a country's consumer base is for transacting online (across product categories).

2.3. Risk Perceptions and Buying Luxury Products Online

The negative relationship between UA and a country's consumer base for transacting online can be explained by the difference of risk perceptions. High UA individuals may perceive shopping online riskier than low UA individuals. For luxury products, these effects will be even more prominent. To better understand the moderating role of uncertainty avoidance and product type, we should first examine the mediating role of risk perception. In marketing research, the concept of perceived risk was introduced by Bauer [1960]: "Consumer behavior involves risk in the sense that any action of a consumer that will produce consequences which he cannot anticipate with anything approximating certainty, and some of which are likely to be unpleasant" [p.24]. In the online context, risk perception is defined as a potential loss to purchase online [Featherman & Pavlou, 2003]. Unlike in-store shopping, online shopping entails more risks [Lee & Moon, 2015], such as source risk, transaction security risk, customer service risk, and privacy risk [Lee & Moon, 2015]. For luxury brands, the perceived risk of shopping online (compared to in-store shopping) may even be more prominent. First, the bad reputation of the Internet in trading counterfeit goods enhances the risk level of purchasing luxury online [Wu et al., 2013; Hennigs, Wiedmann, & Klarmann, 2012]. Although quality cues are not equal to authentic guarantees. However, a quality label may somehow imply the authenticity of the product, which may be a helpful risk-reliever. Second, when consumers buy a luxury product online, they may hesitate to make the purchase decision because they cannot evaluate the quality of the product. As widely known, expensiveness is a key factor describing luxury brands by many researchers [e.g., Vigneron & Johnson, 1999; Kapferer, 1998; Dubois, Laurent, & Czellar, 2001; Hudders, Pandelaere, & Vyncke, 2013]. A high price of a luxury product poses a higher financial risk to consumers for purchasing luxury products online [Wu et al., 2013; Liu et al., 2013].

By paying such large amount of money for a luxury product, consumers may worry about the quality of the product [Tungate, 2009]. As we know, the quality is a critical factor to describe luxury brands [Vigneron & Johnson, 1999; Kapferer, 1998; Dubois et al., 2001; Vigneron & Johnson, 2004; Hudders et al., 2013]. Luxury brands are expected to offer superior quality products than non-luxury brands [Vigneron & Johnson, 2004] because a high price is an indication of better quality [Rao & Monroe, 1989; Parguel, Delécolle, & Valette-Florence, 2016]. Nowadays, consumers become more concerned about the quality of luxury products as luxury brands relocate their production in low labor cost countries [Kapferer & Bastien, 2012], produce their products on a large scale [Cristini, et al., 2017], introduces a new brand with lower quality products, or distribute lower quality products via outlet stores [Li, Ryan, & Sun, 2017] or online retailers. When purchasing luxury products through a luxury brand's own online store, consumers may worry less about the quality of the product. However, when purchasing luxury products in multi-brand retailers, consumers may really have doubts about the quality of the product as the origin, authenticity, and the quality of the product are not assured. As quality is a key factor influencing luxury consumption [Husic & Cicic, 2009], consumers need to know the quality of a luxury product before they purchase it. For traditional off-line shopping, consumers can evaluate the quality by touching and checking the product. When purchasing luxury products online, consumers search for information in the online store to assess the quality of the luxury product [Liu et al., 2013]. In this case, cues signaling the quality of the product can be used for consumers to infer the quality of the product [Drake et al., 2015]. If consumers can successfully reach a conclusion that the quality is guaranteed, they will have less risk perceptions. In this case, quality labels containing information of the quality dimension may help to eliminate the information asymmetry and reduce the risk perception.

However, not all consumers equally assess risks. In-store luxury consumers show a higher level of risk aversion than online luxury consumers [Liu et al., 2013], which implies that buying luxury online may be perceived riskier than in-store shopping. Risks are also related to the perception of uncertainty [Bauer, 1960]. The uncertainty about the product increases the perceived cost of purchasing a product online [Liang & Huang, 1998]. Therefore, as a cultural facet, we expect that individuals' uncertainty avoidance may play a moderating role. People in high UA countries are not tolerant of ambiguity, which makes them feel risky of new ideas and practices [Dawar, Parker, & Price, 1996]. Shopping online poses more uncertainties because consumers cannot evaluate the product directly. High UA individuals may perceive these uncertainties riskier. Especially for purchasing luxury products online, a large amount of money involved may pose a severe risk to high UA individuals. Moreover, as the key purchase motive, the quality of the luxury product cannot be assessed and guaranteed. Signals are crucial when information uncertainty of the product appears [Drake et al., 2015]. When facing such an uncertain situation, high UA individuals need to rely on extra signals that help to relieve their uncertainty and risk perception [Jung & Kellaris, 2004; Fenko et al., 2017]. In this case, a quality label may be extremely helpful to reduce high UA individuals' perceived risk for purchasing luxury online. However, for lower UA individuals, when purchasing luxury or non-luxury products, they tend to rely less on safety cues since they can endure the uncertainty relating to the online purchase. Therefore, a quality label may not be effective for lower UA individuals.

Hypothesis 2: For higher UA individuals (compared to lower UA individuals), a quality label can help to reduce the risk perception when purchasing luxury (vs. non-luxury) products online.

2.4. Quality Labels, Risk Perception, Purchase Intention and Attitude toward the Brand

Moussa and Touzani [2008] reveal a positive association between perceived credibility of the quality label and product purchase intention (i.e., buying likelihoods for the product within defined time periods, Morrison, 1979). More specifically, higher perceived credibility of the quality label leads to higher perceived product quality, which in turn leads to higher purchase intention. The reason may be that higher perceived product quality reduces the risk perception of the purchase. Since the 1960s, risk perception has been applied to explain consumers' behavior in the decision-making process [Chang & Chen, 2008]. Risk perception was found to affect consumers' purchase intention strongly [Choi & Geistfeld, 2004; Chang & Chen, 2008; Vijayasarathy & Jones, 2000; Park, Lennon, & Stoel, 2005]. Javenpaa, Tractinsky, and Saarinen [1999] suggest that perceived risk towards an online store will reduce consumers' willingness to purchase online. Van den Poel and Leunis [1999] further confirm that risk perception of an online retailer was associated negatively with consumers' willingness to purchase online. In this case, by reducing the risk perception, a quality label may lead to more positive persuasive effects. As such, we propose the third hypothesis and the conceptual model (see also Figure 1):

Hypothesis 3: For higher UA individuals (compared to lower UA individuals), a quality label can lead to higher purchase intention and more positive attitude toward the brand due to the reduced risk perception when purchasing luxury products (vs. non-luxury) online.

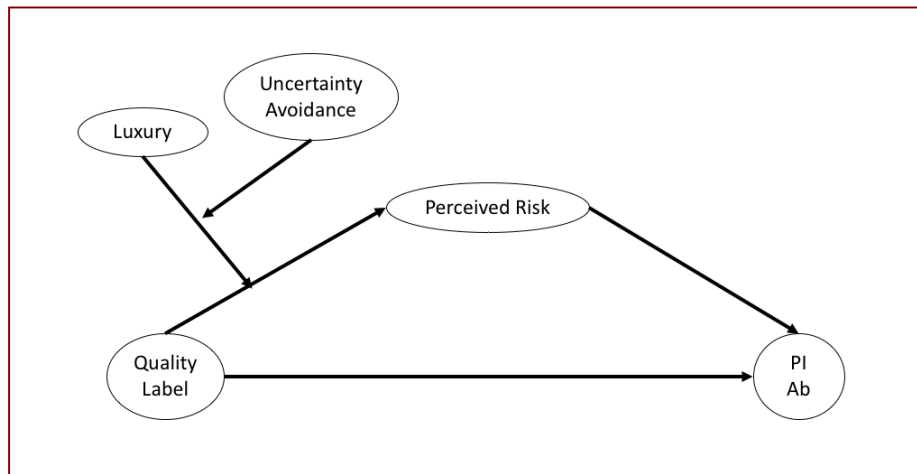


Figure 1: The Conceptual Model

3. Pre-study

3.1. Method

To test the first hypothesis, we performed a linear regression analysis to predict consumers' online behaviors (across product categories) based on the UA level of a country. To measure consumers' online behaviors, we used secondary data from previous research. The Online Consumer Behaviors Index (OCBI) was calculated in the 2015 Global Retail E-Commerce Index by A.T. Kearney, a global management consulting company. OCBI is the indicator of online consumer behavior, namely the Internet penetration, purchasing trends and technology adoption. A higher score means that a country's consumer base is more favorable for transacting online. A.T.Kearney ranked the top 30 countries based on the score. We took the UA score of each country from Hofstede's studies in 2010.

3.2. Results

The results indicated that there was a significant negative relation (see Figure 2) between UA and online consumer behaviors ($F(1,28) = 4.682, p = .039$), with an R Square of .143. OCBI decreased 0.25 unit for each unit of UA. Therefore, a country's level of UA can predict how favorable a country's consumer base is for transacting online. The first hypothesis was supported. The pre-study suggests that there was a negative relationship between UA and a country's consumer base for online shopping. This implied that high UA consumers are more reluctant to shop online. This may be due to higher perceived risk of shopping online for high UA individuals. To investigate the mediating role of perceived risk, we conducted the main study. Furthermore, we also wanted to check whether UA, measured at an individual level, will be a moderator in the effect of quality labels.

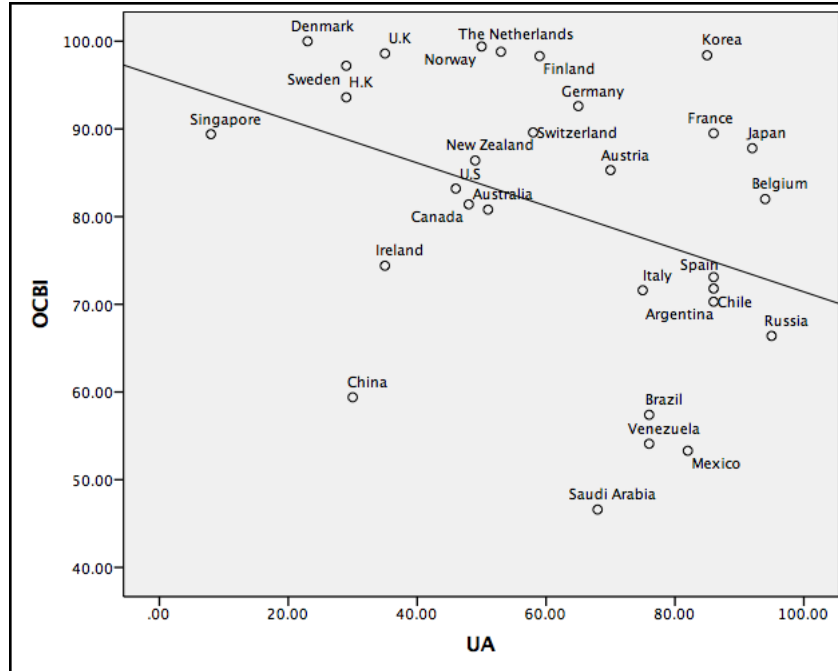


Figure 2: The Relation Between UA and Online Consumer Behaviors Index of 30 Countries

4. Main Study

4.1. Method

Design

A 2 (no label vs. the quality label) x 2 (non-luxury vs. luxury products) between-subject factorial design was employed to examine the second and third hypotheses. Quality label and luxury conditions were manipulated by adapting the stimulus materials. For uncertainty avoidance, we first measured the uncertainty avoidance level of each individual. Then, the program (SPSS macro PROCESS) automatically picked five points (10th, 25th, 50th, 75th, and 90th percentiles) based on their score of uncertainty avoidance. We did not manipulate uncertainty avoidance by selecting low vs. high uncertainty avoidance countries because of a series of potential methodological problems: 1) translational equivalence [Sechrest, Fay, & Zaidi, 1972], 2) measurement equivalence [Milfont & Fischer, 2010], 3) response styles [Reynolds & Smith, 2010]. In this case, this study measured individuals' UA level to avoid these problems. Questionnaires were developed by using an online survey software, Qualtrics, in which surveys were randomly distributed to the respondents.

Stimulus materials

We designed a fictitious web store called Fashion Online (see Figure 3 to 6). The website had a similar layout as online fashion retailers such as NET-A-PORTER. We used a fictitious web shop so that previous experience with the web shop and knowledge about the security of the web shop could not affect the results. As a result, consumers' trust toward the online store can be controlled because prior research revealed a strong association between trust and purchase intention [e.g., Thatcher, Carter, Li, & Rong, 2013]. A picture containing a handbag was shown on the left side of the webpage. Detailed information (i.e., price, product name, size, brand name, description) was displayed on the right-hand side of the online store.

The label condition was manipulated by adding a premium quality label versus not adding such a label to the website, next to the picture of the product in the web shop (see Figure 3-6). Signal credibility is consumers' perceived honesty of the signal and the online retailer. Signal credibility plays an important role in affecting the effectiveness of the signal [Hu, Rabinovich, & Hou, 2015]. Therefore, we launched a pre-test to make sure that the label is credible and effective. We pretested three fictitious premium quality labels by 43 respondents (female: 21, male: 22; mean age: 32.7, SD = 10.01) in the U.S. by using the Mechanical Turk (MTurk) sample, an online labor system provided by Amazon. Similar to Qualtrics panels, MTurk is an opt-in panel service. Although MTurk is not a probability sampling method, it is "more representative of the U.S. population than in-person convenience samples" [Berinsky, Huber, & Lenz, 2012, p. 351]. MTurk has been increasingly used in research in social science and is believed to be consistently reliable compared to traditional samples [Goodman, Cryder, & Cheema, 2013]. We selected the one with the highest score (5.77 out of 7.0 SD = 1.24) on perceived quality. The perceived quality was measured by rating the statement

“Fashion Online showed guarantees of the quality of the product”. The selected label had a red background and contained the following words “100% premium quality guaranteed”.

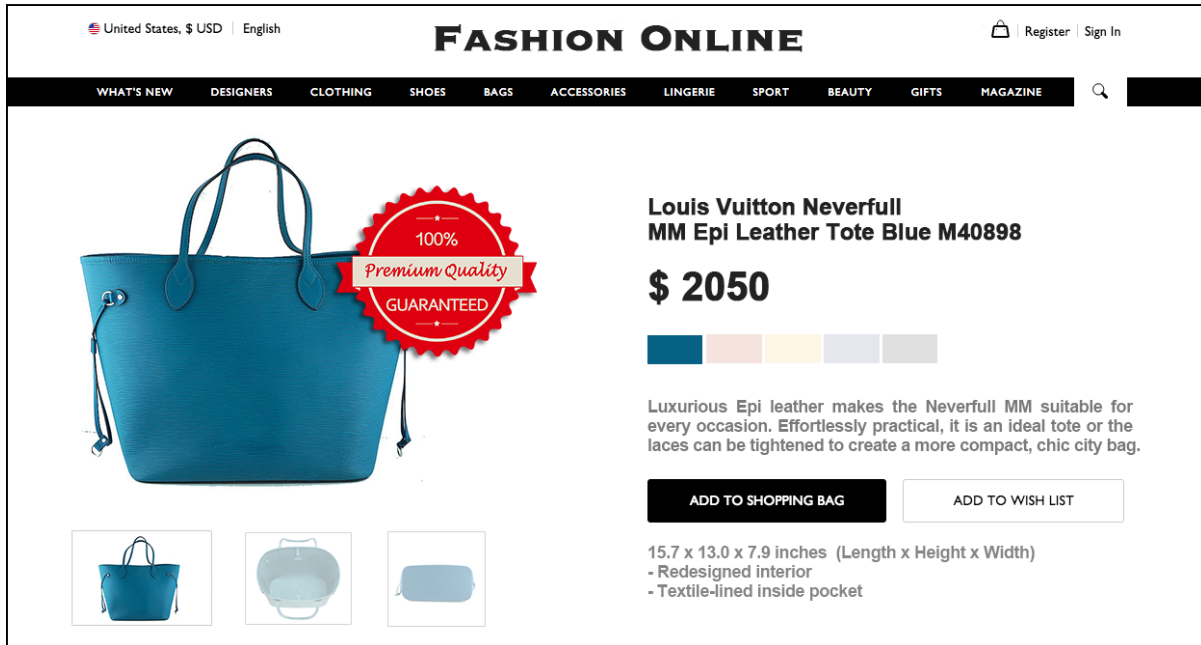


Figure 3: Luxury Condition with a Quality Label

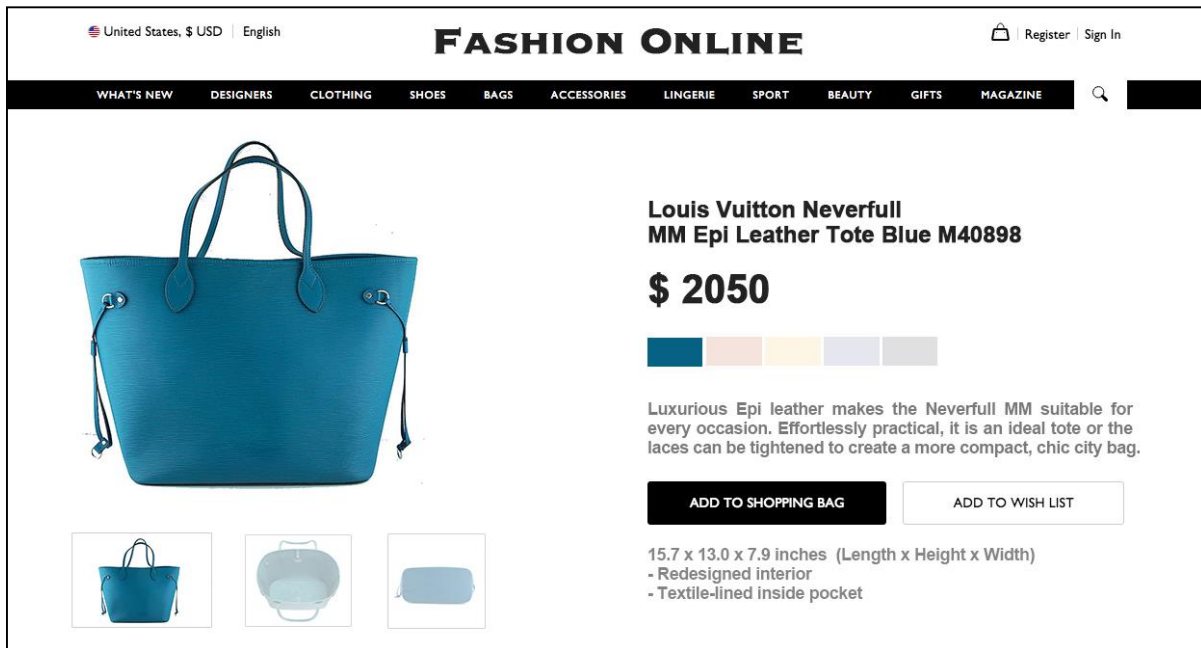


Figure 4: Luxury Condition with No Quality Label

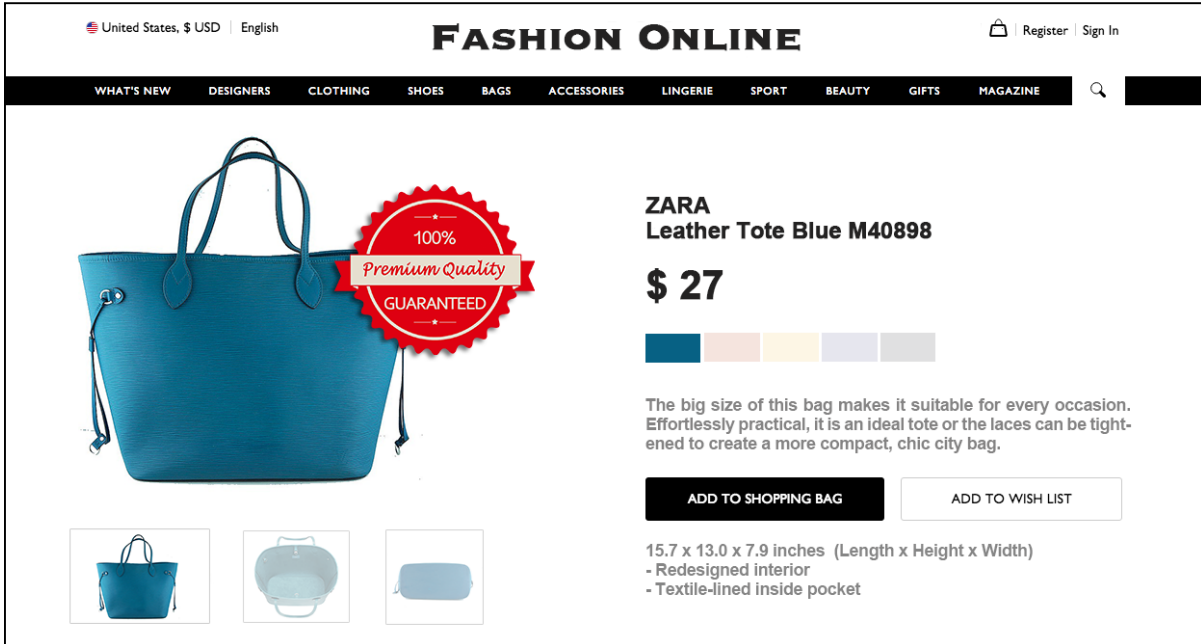


Figure 5: Non-Luxury Condition with a Quality Label

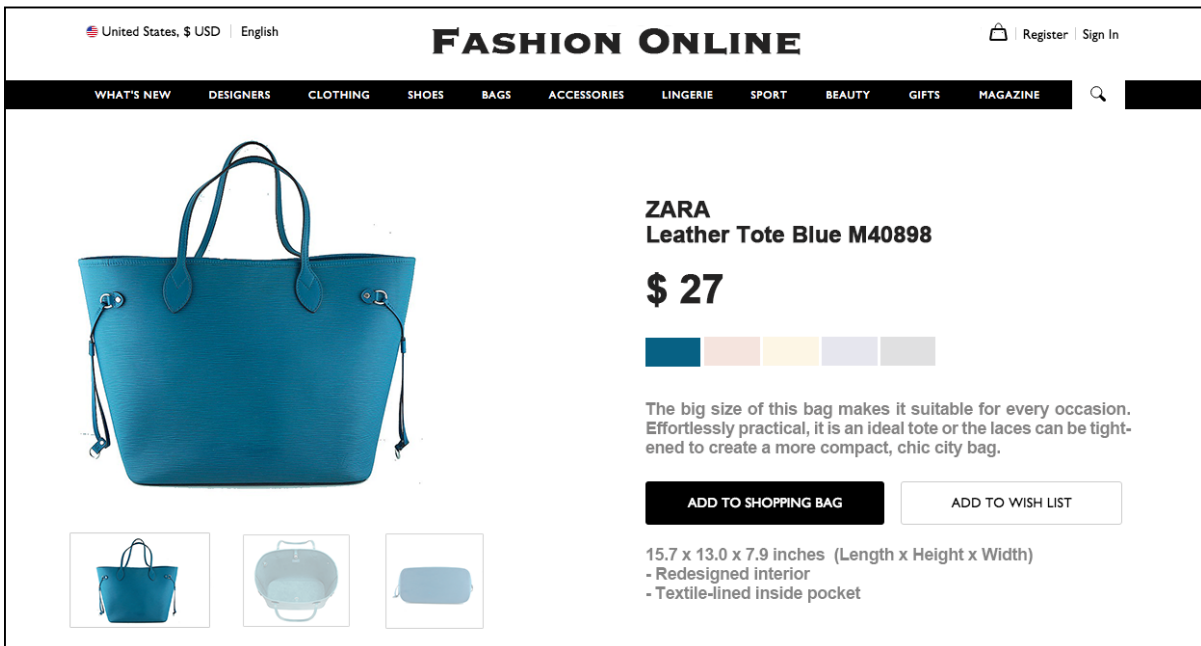


Figure 6: Non-Luxury Condition with No Quality Label

To manipulate the luxuriousness of the product, we differed the brands we used (see Figure 3-6) and the price of the product. A French luxury brand Louis Vuitton was utilized for the luxury condition. The price of the product was \$2,025. For the non-luxury condition, we used a Spanish fashion brand, Zara. The price of the product was \$27. Louis Vuitton and Zara are well-known and representative among the luxury and non-luxury fashion clothing industry. Louis Vuitton was often used in research of luxury marketing [e.g., Kim & Ko, 2012] because it is a reputable luxury brand and it is well-known by consumers. As the main brand of the Inditex group, one of the world's largest apparel retailer, Zara was also widely used in studies on fashion management and marketing [e.g., Lloyd & Luk, 2010; Willems et al., 2012]. We pretested these two brands to measure the perceived luxuriousness ($\alpha = .93$, see table 1 for specific items) by 125 respondents (female: 66, male: 59; mean age: 34.5, SD = 9.43) in the U.S by using the MTurk sample. The

results of the pre-test showed that respondents perceived the brand Louis Vuitton ($M = 4.78$, $SD = .82$) significantly more luxurious than the brand Zara ($M = 3.43$, $SD = 1.01$, $t(123) = -8.15$, $p < .001$).

Subjects

Data from 345 female respondents in the U.S were collected by using the MTurk panel (mean age: 35.3, $SD = 11.5$). As the product in the stimuli was feminine (i.e., a handbag), only female respondents were invited to participate in the experiment. Furthermore, we can also control for the product involvement to avoid the influence of gender. Prior studies [e.g., O’Cass, 2004, Polegato & Wall, 1980] suggest that female respondents are more involved in fashion consumption and have higher fashion leadership than male respondents. Additionally, as we targeted to potential luxury consumers, we only recruited respondents with a monthly household income of more than \$ 2,000; 62.3% of them had a monthly household income of \$ 4,000; 68.7% respondents hold a bachelor (or higher) degree.

Table 1: General Statistics

VARIABLES	CLASSIFICATION	NUMBER	PERCENTAGE
Monthly household income	\$ 2.001 - \$ 3.000	69	20.0
	\$ 3.001 - \$ 4.000	61	17.7
	\$ 4.001 - \$ 5.000	46	13.3
	\$ 5.001 - \$ 6.000	35	10.1
	\$ 6.001 - \$ 7.000	16	4.6
	\$ 7.001 - \$ 8.000	13	3.8
	\$ 8.001 - \$ 9.000	13	3.8
	> \$ 9.000	92	26.7
Educational background	Less than high school	1	.3
	High school	107	31.0
	Bachelor (College)	67	19.4
	Bachelor (University)	111	32.2
	Master’s degree	50	14.5
	Doctoral degree	9	2.6

Procedure

Participants first received a link to the questionnaire. They were asked to participate in a short survey for a study. When clicking on the link, they were redirected to the questionnaire. At first, respondents saw a short description of the fictitious online store, Fashion Online: “Fashion Online is an online lifestyle store for fashion and design, offering a seamless shopping experience across mobile, tablet and desktop.” Then, the following scenario was given: “Imagine that you are searching for a new handbag on the internet. During your search, you come across a nice fashionable handbag on the web shop Fashion Online”. Next, respondents were exposed to one of four stimuli. Respondents were told to watch the screenshot of the handbag on fashion online and respond to the questions. Next, respondents had to complete various effectiveness measures including the risk perception and purchase intention, the manipulation check variables, and UA. In the end, respondents had to indicate some socio-demographic information, gender, age, and family income. When finished participants were thanked for their participation in the study.

Measures

All variables were measured using a seven-point Likert scale, ranging from 1 fully disagree to 7 fully agree. We used the same scale of the pre-test to measure the perceived quality. The scale to measure perceived luxuriousness was a shorter version of the Brand Luxury Index [BLI, Vigneron & Johnson, 2004], consisting of 12 bipolar items (see Table 1 for all items). Risk perception was measured by six items derived from the study of Chang and Chen [2008]. Uncertainty avoidance was assessed by a four-item scale from GLOBE Research Project on Leadership Worldwide [House, Hanges, Javidan, Dorfman, & Gupta, 2004]. In the pre-analysis, we used Hofstede’s research to determine a country’s level of uncertainty avoidance. In the main study, we did not use Hofstede’s scale from Values Survey Module (VSM) to measure uncertainty avoidance because VSM cannot be used for comparing individuals [Hofstede, Minkov, & Vinken, 2013]. Therefore, the four items from GLOBE were a better choice. Purchase Intention was measured by two items ($\alpha = .84$) “how likely is it that you will buy the product within half a year from now, given that you have enough money”, and “I intend to use Fashion Online to conduct product purchases”. Attitude toward the brand ($\alpha = .97$) was assessed by Spears and Singh’s scale [2004].

Table 2: Construct Measures

VARIABLES	CRONBACH'S ALPHA	ITEMS	FROM
Perceived luxuriousness	$\alpha = .89$	Noticeable/ Conspicuous; Popular/ Elitist; Affordable/ Extremely Expensive; For well-off/ For wealthy; Fairly exclusive/ Very exclusive; Valuable/ Precious; Uncommon/ Rare; Unusual/ Unique; Manufactured/ Crafted; Upmarket/ Luxurious; Good quality/ Best quality; Original/ Sophisticated	Vigneron & Johnson, 2004
Risk perception	$\alpha = .88$	I believe that online purchases from Fashion Online are risky because the products delivered may fail to meet my expectations. I believe that online purchases from Fashion Online are risky because the products delivered may be inferior. I believe that online purchases from Fashion Online are risky because these purchases may lead to financial loss for me. I believe that online purchases from Fashion Online are risky because these purchases may cause others to think less highly of me. I believe that online purchases from Fashion Online are risky because the products delivered may fail to fit well with my personal image or self-concept. I believe that online purchases from Fashion Online are risky because these purchases may lead to a time loss for me.	Chang & Chen, 2008
Uncertainty Avoidance	$\alpha = .76$	In this society. orderliness and consistency should be stressed. even at the expense of experimentation and innovation. In this society. most people should lead highly structured lives with few unexpected events. In this society. societal requirements and instructions should be spelled out in detail so citizens know what they are expected to do. This society should have rules or laws to cover situations.	House, Hanges, Javidan, Dorfman, & Gupta, 2004
Attitude toward the brand	$\alpha = .97$	Unappealing/ Appealing; Bad/ Good; Unpleasant/ Pleasant; Unfavorable/ Favorable; Unlikeable/ Likable	Spears & Singh, 2004

4.2. Results

Manipulation checks

Two t-tests were performed to examine whether the manipulations were successful. Consistent with our expectations, compared to the control condition, respondents in the quality label condition perceived that the product had better quality guarantee (MQUA = 4.98, SD = 1.57, MNQUA = 4.56, SD = 1.62, $t(343) = -3.28, p < .001$). Additionally, respondents in the luxury condition (MLUX = 5.45, SD = 1.23) perceived the product to be more luxurious than those in the non-luxury condition (MNonLUX=3.5, SD = 1.06, $t(343) = -15.66, P < .001$). Thus, the research stimuli were successfully manipulated.

Hypotheses tests

To test the hypotheses, we used SPSS macro PROCESS instead of ANOVA. Unlike ANOVA, PROCESS can be used easily for statistical mediation and moderation analysis [Hayes, 2013; Field, 2013]. PROCESS used an ordinary-least squares (OLS) path analysis to identify the direct and indirect effects. There were 76 statistical models in PROCESS. By using model 3 from PROCESS [Hayes, 2013, bootstrap samples: 10,000], we performed a moderation analysis to examine the three-way interaction effect of the independent variables 1) quality label, 2) type of goods (luxury vs. non-luxury), 3) UA level on the risk perception as the dependent variable. In addition, the income level of the respondent was control because the income level may influence the perceived financial risk of purchasing luxury products online. The results first showed that there was a significant main effect of luxury condition on risk perception ($b = .28, SE = .14, t(336) = 1.98, p = .048$). Respondents perceived higher risk when purchasing luxury products than non-luxury products online. This effect was consistent with our expectation. There was no main effect of the quality label ($b = .07, SE = .14, t(336) = .47, p = .64$) on risk perception or purchase intention. In addition, we did not observe

a two-way interaction effect of the quality label and the luxury condition ($b = -.32$, $SE = .28$, $t(336) = -1.15$, $p = .25$), a two-way interaction effect of the luxury condition and UA ($b = .17$, $SE = .13$, $t(336) = 1.31$, $p = .19$) or a two-way interaction effect of the quality label and UA ($b = -.16$, $SE = .13$, $t(336) = -1.23$, $p = .22$).

Furthermore, the data showed a significant three-way interaction (see Figure 7; $b = -.64$, $SE = .26$, $t(336) = -2.41$, $p = .016$) on the risk perception. We first applied a pick-a-point (spotlight) approach selecting five points (10th, 25th, 50th, 75th, and 90th percentiles) to roughly represent the low, slightly low, medium, slightly high, and high UA individuals. The results suggested that when purchasing luxury products online, a quality label led to lower perceived risk for high UA individuals and slightly high UA individuals. For medium and slightly low UA individuals, a quality label did not have significant effect for luxury products. Interestingly, we observed that for low UA individuals, a quality label even marginally significantly enhanced the risk perception for purchasing luxury products online ($p < .10$). For non-luxury products, a quality label did not have significant effect for individuals at any value of UA (Please consult Table 3 for specific conditional effects of quality labels on risk perception at different values of UA).

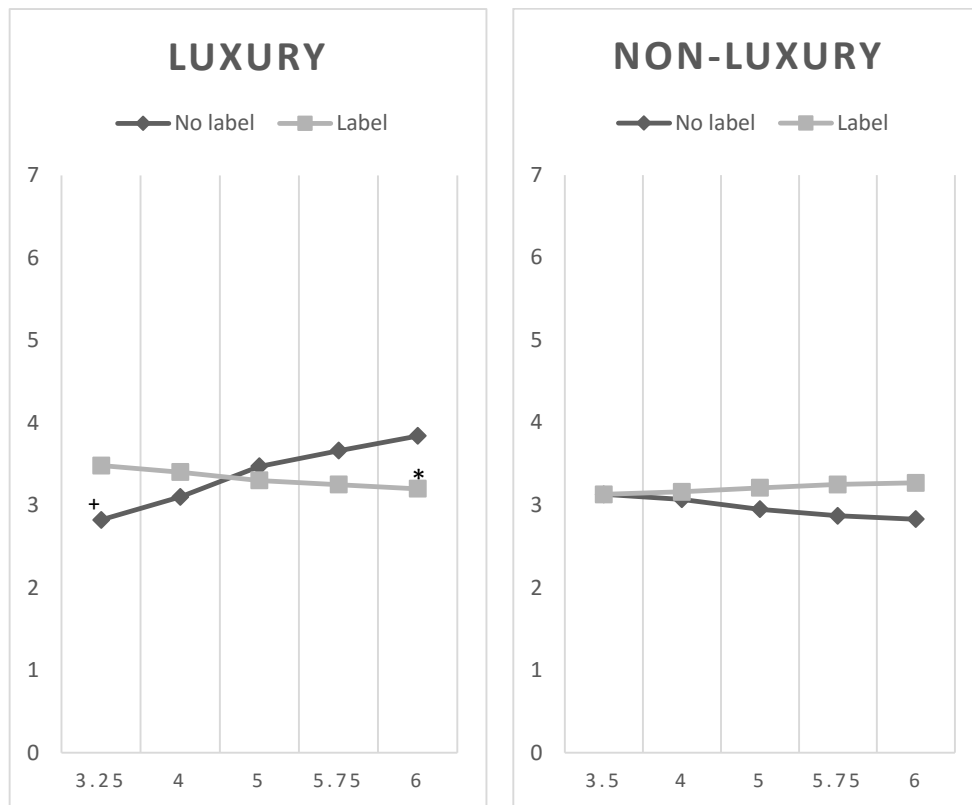


Figure 7: The Interaction Effect of the Quality Label and UA on Risk Perception (* $P < .05$, + $P < .10$)

Table 3: Conditional Effect of Quality Label on Risk Perception at Different Values of UA

UA (MC)	UA (raw)	Product	Effect (b)	SE	t	p	LLCL	ULCL
-1.58	3.25	Non-luxury	-.03	.34	-.09	.93	-.6912	.6288
-1.58	3.25	Luxury	.65	.34	1.94	.05	-.0093	1.3121
-.83	4.00	Non-luxury	.09	.24	.40	.69	-.3740	.5622
-.83	4.00	Luxury	.30	.24	1.27	.21	-.1650	.7638
.17	5.00	Non-luxury	.26	.21	1.25	.21	-.1490	.6715
.17	5.00	Luxury	-.17	.20	-0.85	.40	-.5632	.2234
.92	5.75	Non-luxury	.39	.28	1.37	.17	-.1689	.9419
.92	5.75	Luxury	-.52	.27	-1.93	.05	-1.0549	.0111
1.17	6.00	Non-luxury	.43	.32	1.35	.18	-.1955	1.0521
1.17	6.00	Luxury	-.64	.31	-2.09	.04	-1.2397	-.0388

From the graph (Figure 7), we can also directly see that when purchasing luxury products with no quality label online, high UA individuals showed higher perceived risk than low UA individuals. However, with a quality label, there was no significant difference between the high UA and low UA individuals. This meant a quality label can significantly reduce the risk perception for high UA individuals. It is recommended to report ranges of significance using a floodlight test [Spiller et al., 2013]. Therefore, we performed a floodlight analysis using the Johnson-Neyman’s approach to determine the critical point for the moderation effect. There was an interaction effect of quality labels and UA for the luxury condition ($b = -.46$, $SE = .19$, $t(336) = -2.5$, $p = .01$) but not for the non-luxury condition ($b = .17$, $SE = .19$, $t(336) = .89$, $p = .37$). Therefore, a floodlight test can only be conducted for the luxury condition. A Johnson-Neyman approach helped us to determine the significant point. From Table 3, we can see for high UA individuals (above 5.80), a quality label reduced the perceived risk. However, we also observed interesting results. For low UA individuals (below 3.13), a quality label even led to higher risk perception. Therefore, hypothesis 2 was confirmed.

Table 4: The Index of the Floodlight Test

UA (MC)	UA (raw)	Effect (b)	SE	t	p	LLCL	ULCL
-3.83	1.00	1.72	.73	2.35	.02	.2763	3.1658
-3.53	1.30	1.58	.68	2.33	.02	.2417	2.9172
-3.23	1.60	1.44	.62	2.30	.02	.2063	2.6695
-3.01	1.90	1.30	.57	2.27	.02	.1698	2.4227
-2.93	2.20	1.15	.52	2.23	.03	.1321	2.1773
-2.63	2.50	1.01	.47	2.17	.03	.0926	1.9336
-2.33	2.80	.87	.42	2.10	.04	.0507	1.6923
-2.03	3.10	.73	.37	1.99	.05	.0053	1.4545
-1.73	3.13	.71	.36	1.97	.05	.0000	1.4282
-1.43	3.40	.59	.32	1.83	.07	-.0450	1.2216
-1.13	3.70	.45	.28	1.60	.11	-.1028	.9962
-.83	4.00	.31	.24	1.26	.21	-.1719	.7822
-.53	4.30	.16	.21	.77	.45	-.2584	.5856
-.23	4.60	.02	.20	.11	.91	-.3696	.4136
.07	4.90	-.12	.20	-.60	.55	-.5113	.2721
.37	5.20	-.26	.21	-1.22	.22	-.6835	.1611
.49	5.50	-.40	.24	-1.66	.10	-.8803	.0747
.67	5.80	-.54	.28	-1.95	.05	-1.0944	.0056
.97	5.83	-.56	.28	-1.97	.05	-1.1144	.0000
1.27	6.10	-.69	.32	-2.14	.03	-1.3199	-.0521
1.57	6.40	-.83	.37	-2.25	.03	-1.5528	-.1024
1.87	6.70	-.97	.42	-2.33	.02	-1.7906	-.1477
2.17	7.00	-1.11	.47	-2.38	.02	-2.0319	-.1896

To testify the third hypothesis, a moderated mediation analysis was conducted by using the model 12 from SPSS macro PROCESS [Hayes, 2013, bootstrap samples: 5.000]. As a floodlight test was not possible with a moderated mediation analysis, we applied the spotlight test and picked the same five percentile points. The results showed that there was a moderation mediation effect through risk perception on purchase intention ($b = .15$, $SE = .08$, 95% CI [.0329, .3544]) and attitude toward the brand ($b = .23$, $SE = .10$, 95% CI [.0470, .4486]).

Uncertainty avoidance moderated the indirect effect of quality labels luxury products, but not for non-luxury products. For non-luxury products, quality labels had no significant effect at any value of UA. However, for luxury products, a quality label enhanced the purchase intention and attitude toward the brand due to reduced risk perceptions for high and slightly high UA individuals. For medium and slightly low UA individuals, the observed effect was attenuated. However, for low UA individuals, a quality label decreased the purchase intention and attitude toward the ad due to an increase of perceived risk (please see Table 5 and 6 for detailed conditional indirect effect). Lastly, we did not observe a three-way interaction effect directly on PI and Ab. As such, hypothesis 3 was verified.

Table 5: Conditional Indirect Effect of Quality Label on PI at Different Values of UA

Product	UA (MC)	UA (raw)	Effect	SE	BootLLCI	BootULCI
Non-luxury	-1.58	3.25	.01	.08	-.1491	.1734
Non-luxury	-.83	4.00	-.02	.06	-.1558	.0819
Non-luxury	.17	5.00	-.06	.05	-.2000	.0200
Non-luxury	.92	5.75	-.09	.07	-.2831	.0196
Non-luxury	1.17	6.00	-.10	.08	-.3138	.0232
Luxury	-1.58	3.25	-.15	.10	-.4143	-.0162
Luxury	-.83	4.00	-.07	.06	-.2320	.0175
Luxury	.17	5.00	.04	.05	-.0374	.1642
Luxury	.92	5.75	.12	.08	.0137	.3282
Luxury	1.17	6.00	.15	.09	.0236	.3865

Table 6: Conditional Indirect Effect of Quality Label on Ab at Different Values of UA

Product	UA (MC)	UA (raw)	Effect	SE	BootLLCI	BootULCI
Non-luxury	-1.58	3.25	.00	.12	-.2294	.2406
Non-luxury	-.83	4.00	-.04	.08	-.2070	.1246
Non-luxury	.17	5.00	-.09	.07	-.2502	.0435
Non-luxury	.92	5.75	-.13	.10	-.3455	.0535
Non-luxury	1.17	6.00	-.14	.11	-.3865	.0617
Luxury	-1.58	3.25	-.25	.13	-.5312	-.0386
Luxury	-.83	4.00	-.12	.09	-.3077	.0230
Luxury	.17	5.00	.05	.07	-.0796	.1885
Luxury	.92	5.75	.17	.10	.0035	.3974
Luxury	1.17	6.00	.22	.11	.0174	.4701

5. General Discussion and Practical Implication

Over a decade ago, an article in Bloomberg [2000] titled "online luxury has limits" predicted that selling luxury was not a good idea for luxury brands. The main reason is that consumers will feel risky when purchasing luxury online. However, this study proposes a possible way for luxury brands to reduce consumers' risk perceptions. It shows that sometimes a simple label can be very effective. More specifically, for luxury products, a quality label can lead to higher purchase intention and attitude toward the brand due to reduced perceived risk for high UA individuals. However, we also found that for low UA individuals, a quality label produces adverse effects. When a peacock is flaunting, it also has potential costs of being found and attacked by its enemies. Adding a quality label can also have costs. For low UA individuals, adding a quality label may not be necessary and even make it more suspicious. This may be because luxury products already imply good quality.

For non-luxury products, displaying a quality label does not produce any effect. This seems to be contradictory to the study by van Noort et al., [2008] which suggests that safety cues can enhance the purchase intention and reduce the risk perception for an online music store. However, the reason can be the strength of the manipulation of safety cues. In the study of van Noort et al., [2008], safety cues are manipulated by displaying a great number of persuasive cues together, not only including the quality guarantee, but also the warranty policy, money back guarantee, safety warranty, and general terms and conditions, which is much stronger than the current study.

These findings fill a void in the literature and thus contribute to academic research on electronic commerce for luxury products. Purchasing luxury online implies a higher level of risk. However, a quality label can reduce the risk perception for high UA individuals because people with a high level of UA tend to seek cues and signals to relieve their uncertainty when purchasing luxury online. This study can also be seen as an extension of signaling theory in e-commerce. E-commerce for luxury brands is a typical example of information asymmetry. Luxury consumers cannot assess the quality of the product by fully using their senses of sight, hearing, smell, touch and taste [Okonkwo, 2010]. Since quality is a key motive of luxury consumption [Husic & Cicic, 2009] and expensiveness is a key feature of luxury products, consumers who are risk averse have a need of quality signals that can help them to eliminate this

asymmetry. In this case, a quality label works as an effective cue to help high UA consumers to ensure the quality of the product and relieve the risk perception. In this way, this study also links the signaling theory to one of the cultural dimension: uncertainty avoidance. Even though online shopping is already widely accepted in many countries, UA still plays an important role in affecting online consumer behaviors, especially for luxury products. Signals work better for luxury consumers who cannot tolerate uncertainty. These findings are very helpful for luxury marketers during their global expansion. E-commerce is an opportunity for luxury brands to go international. However, this also means that people from different cultural backgrounds can visit the same online store. In this study, we found that two critical points of UA. The lower point is around 3.10 and the higher point is around 5.8. For luxury brands, displaying a quality label can be beneficial for people with UA higher than 5.8, but can be detrimental for people with UA lower than 3.10. If we compare the score with the study by House et al., [2004], we can see almost no country has a score lower than 3.10 or higher than 5.8. However, there are countries with UA from 5.0 to 5.8, such as Thailand (5.71), Russia (5.26) and Morocco (5.77). For these countries, luxury brands may benefit from displaying a quality label in their online store. However, for countries with UA from 3.5 to 4.0 (e.g., Switzerland, 3.2; Sweden, 3.45), showing a quality label next to a luxury product may not be a good idea. Luxury marketers should, therefore, adapt the content of the web shop according to the users' origin by recognizing their IP address. For consumers from high UA countries, luxury marketers can offer proper cues and information to fill the gap of information asymmetry. Apart from quality cues, contextual cues signaling the quality of the product can also be beneficial. For example, popularity cues, warranty, return policy, or money back guarantee also implies the good quality of the product. However, these contextual cues may also produce extra adverse effects. For example, a best-seller label also indicates the popularity of the product, which may reduce the uniqueness value of the product (Yu, Hudders, & Cauberghe, 2018). Additionally, the information asymmetry can also be compensated by the sensory interaction with the product such as a simple video clip or even a virtual reality experience.

For marketers, simply showing safety cues of the transaction may not be sufficient. They should realize the importance of displaying quality cues on their website to reduce the risk perception of the luxury consumers. Apart from a quality label, cues like "100% cotton", "100% leather" or "100% handmade" may also help consumers to infer the quality of the product and consequently, reduce the perceived risk. The higher the price tag, the more details consumers want to know [Kaplan, 2014]. Luxury retailers should not only pursue minimalism when designing the online store. The web page should contain sufficient information and important cues to eliminate users' uncertainty and risk perception, which can convert a shopper to a purchaser.

6. Limitations and Future Research Opportunities

This paper contains certain restrictions that may be addressed in future research. Firstly, the score of individuals' level of UA was used as a moderator in this study. Therefore, the findings of this study should be further confirmed by using cross-cultural samples in different countries. Researchers could recruit respondents from cultures with different levels of UA. For example, low UA condition can be manipulated by using Chinese samples while high UA condition can consist of Japanese respondents. As noted earlier, when conducting such cross-cultural studies, researchers need to pay significant attention to potential methodological issues. Furthermore, this study manipulates the luxury condition by using two different brands, displaying different prices and showing different product information. To determine which feature of luxury brands benefits from a quality label (e.g., the price, the need for quality assurance, conspicuousness, etc.), future research may control the relevant aspects (e.g., price, product information, product type, etc.). Additionally, the use of existing brands in this study may limit the generalizability of the findings due to the pre-existing brand knowledge. Therefore, researchers may use fictitious brands and check if the findings are still valid. Apart from comparing non-luxury and luxury products, it would also be interesting to compare different categories of luxury products (e.g., perfume vs. watch), luxury products of different price levels (e.g., a handbag of 1,000 euro vs. 10,000 euro), and luxury products for different uses (e.g., self-use vs. gift-giving). In addition, this study only focuses on multi-brand luxury retailers, it is interesting to compare the effectiveness of quality labels for multi-brand online retailers (e.g., Yoox.com) and for mono-brand online stores (e.g., Burberry.com). Last but not least, instead of using the quality label, researchers may also test the effectiveness of other safety cues (e.g., bestseller label, return policy, a money-back guarantee, review system). For example, for luxury brands, it is interesting to know whether an authenticity label can also help to reduce the perceived risk.

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