Segmenting consumer decision-making styles (CDMS) toward marketing practice: A partial least squares (PLS) path modeling approach

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ABSTRACT

The way consumers make decisions across online and offline channels according to their perceptions of retailers' marketing practices is not well understood in the current literature. A few empirical studies have examined consumer decision-making styles (CDMS) and marketing practice among online and shopping mall consumers. This research endeavors to understand CDMS as market segments on the perception of marketing practice across retail channels. A total of 315 online and paper–pencil-questionnaires were collected to conduct the statistical analysis for the measurement and structural model using the partial least squares (PLS) path modeling approach, a structural equation modeling (SEM) technique. Six consumers' characteristics–perfectionist, brand consciousness, price conscious, fashion conscious, recreational and impulsive shoppers–were assessed in respect of retail products, price, advertising and retailing across-channels. The study contributes to retailing management by enabling it to implement effective retail segmentation and cross-channel strategy according to CDMS. The study limitations and implications are discussed.

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1. Introduction

Consumer decision processes are one of the universal and influential assumptions in consumer behavior literature (Olshavsky and Granbois, 1979) and reflect the comparatively long lasting character of consumers (Baoku et al., 2010). Consumer decision-making includes research in several disciplines, such as sociology, psychology, consumer behavior and marketing, computer science and artificial intelligence (Roozmand et al., 2011). Shopping motivations, value and consumer decision-making styles (CDMS) are three different and related streams of research in the investigation of shopping motivation (Jamal et al., 2006). Knowledge of CDMS is essential in marketing efforts, such as market segmentation, positioning, and marketing strategies (Anic et al., 2012; Sinkovics et al., 2010), as they are relevant for market segmentation strategy (Anic et al., 2014; Hanzaee and Aghasibeig, 2008; Park and Gretzel, 2008). Although the theoretical development on decision styles is increasing it continues to lack an "established theoretical framework" (Dewberry et al., 2013). Whereas the current literature mostly focused on CDMS according to consumer's demographic differences (Akturan et al., 2011; Anic et al., 2012, 2014; Bakewell and Mitchell, 2004, 2006; Granot et al., 2010; Hanzaee and Aghasibeig, 2008; Kwan et al., 2008; Leo et al., 2005;

Solka et al., 2011; Yang and Wu, 2006), little research has been conducted to assess CDMS in respect of marketing practices.

Online and brick-and-mortar stores have little control over where consumers search for information and purchase (Heitz-Spahn, 2013). Each decision involves several results which might be measured in terms of relative value or cost saving (Alba and Hutchinson, 2008; Bonoma and Johnston, 1979). Understanding CDMS is a significant issue for businesses aiming to deliver the best value in the online and offline markets (Lin, 2009; Wesley et al., 2006) and shopping malls that have become important retail venues (Gilboa, 2009; Wagner and Rudolph, 2010). While it is inevitable that the implementation of electronic shopping helps consumers in their purchase decision process (Häubl and Trifts, 2000), CDMS is becoming complex (Hanzaee and Lotfizadeh, 2011; Jamal et al., 2006; Lysonski et al., 1996). Thus, a multichannel environment is one of the key encounters for retailers in understanding consumer behavior (Konuş et al., 2008). In addition to traditional retailing formats, such as shopping mall stores, the Internet, and catalogs, new technology models include mobile telephones, tablets, and Internet-connected television retail (Heitz-Spahn, 2013). Although Poddar et al. (2009) claim that there is a connection between an online store and offline store, studies have revealed a dual decision-making format in different but synonymous forms (Chang and Wu, 2012). Since humans are able to adapt their decision-making styles to certain situations or environments (Häubl and Trifts, 2000), explanation and prediction of CDMS is important to marketing and retailing (Shocker et al., 1991).

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Furthermore, little research has been conducted to understand online CDMS despite the tremendous growth in Internet shopping (Park and Gretzel, 2008), which is developing as an important mechanism for transactions between buyers and sellers (Liang et al., 2014; Niu, 2013; Sinkovics et al., 2010). Online retail implements several strategies to capture shopping activities (Niu, 2013) as the Internet offers a tremendous shopping experience in several ways (Yan and Dai, 2009). The advancement of the Internet influences marketing practices and consumers now prefer to buy products online (Poddar et al., 2009). Although online consumer behavior research is growing, it is still difficult to understand online CDMS (Yan and Dai, 2009). According to Yan and Dai (2009), online consumer shopping is related to their decision-making styles. Currently, the significant growth in online retailing makes it essential for researchers and practitioners to understand consumer characteristics and shopping behavior according to CDMS (Niu, 2013). The way that consumers are making decisions across online and offline channels, and the perception of retailer's marketing efforts is not well understood in the current literature. A few empirical studies have examined CDMS and marketing practice among online and shopping mall consumers. Therefore, this study attempts to examine CDMS based on the perceptions of retailers' marketing practices across retail channels.

1.1. Marketing practice

Traditionally, tools to influence consumers' decisions are the product itself, advertising, pricing, physical distribution and the display of the product (Alba and Hutchinson, 2008). "Attitudes toward marketing practices are reflections of how individuals perceive businesses according to products, retailing, advertising and pricing" (Crutsinger et al., 2010, p. 197). The product, price, distribution or availability and promotion or advertising are considered as marketing efforts (Henry, 1991). Shoppers might respond differently to marketing efforts depending on price (Smith and Brynjolfsson, 2001) or even a product's color (Puccinelli et al., 2013). Therefore, this study considers retailers' marketing practices in terms of product, retailing, advertising and pricing.

1.1.1. Product

In a competitive and dynamic business environment, the ability to understand consumer wants and their consumption experience determines the effectiveness of the designated product. Business survival highly depends on offering products that the consumers want (Lin, 2009). It has been suggested that shoppers engagement and concern about product classes affects CDMS (Anic et al., 2014). A "Product possesses inherent physical characteristics, such as appearance, size, color and taste" (Henry, 1991 p. 6,). Products are different in terms of whether they are primarily consumed for fun and enjoyment (hedonic products) or if they are primarily consumed for functionality (utilitarian products) (Grewal et al., 2014). Consumers are faced with a substantial amount of retail and product choices, and as retailing becomes more global (Mitchell, 1998), the product selections are influenced by certain decision-making processes and styles that ultimately control CDMS (Kwan et al., 2008). The retailers products should not be limited to offerings in order to fulfill consumer needs and expectations (Lin, 2009). Therefore, the product is recognized as a key concept in decision-making and information processing research (Raju et al., 1995).

1.1.2. Price

Price is a criterion in decision-making and determines the acceptability of retail products considering consumers' limits (Gauzente and Roy, 2012). Consumer price sensitivity varies and depends on the shopping behavior (Sethuraman and Gielens, 2014) and CDMS. Price

oriented retailers have a tendency to work on pricing strategies (González-Benito and Martos-Partal, 2012). In addition, consumers who obtain discount rates for a product will value present consumption (Guiltinan, 2010). Price comparison advertisements, price-matching or price-beating policies, reference price anchoring, semantic cues and everyday low pricing are some tactics and policies that are employed by retailers (Ho et al., 2011). "Store price perceptions refer to consumer perceptions of the overall price level of the retailer relative to competition" (Kukar-Kinney et al., 2007, p. 2012). Evidence shows that retailer reference prices are important in shaping consumers' valuations of a product (Popkowski Leszczyc et al., 2009).

1.1.3. Advertising

Since the Internet has significantly changed the sources for the delivery of information and marketing messages, retail centric messages are no longer effective (Lu et al., 2014). The effectiveness of traditional marketing practices has been shown to be diminishing as consumers often perceive advertising to be irrelevant or simply irresistible in quantity (Pescher et al., 2014), while, generally, decision-makers are trying to use processing strategies that are facilitated by a given display format (Häubl and Trifts, 2000) for new and established products (Oliver et al., 1993). Many scholars have found that a credible advertising source is positively related to consumer attitudes toward advertisements (Lu et al., 2014). Therefore, it is important for retailers to understand and examine the relationship of advertising and consumers (Alba and Hutchinson, 2008).

1.1.4. Retailing

Understanding the shopping pattern of consumers has managerial implications, which determine market segmentation and retail marketing strategies (Wagner and Rudolph, 2010). The analysis of consumers' characteristics leads to the development of an effective retail image and retail strategy (Williams et al., 1985). Across retail channels, promotional activities create a retail environment that is saturated with competitors that are competing for the consumers' pocket-share (Solka et al., 2011), while consumers' intention toward a retailer is influenced by several elements, such as brand, product and the retailer itself (Anic et al., 2014). In the clothing and personal computers retail context, for example, browsing and information processing is related to perceptions of relevance to the retailing environment itself (Bloch et al., 1989). An online shoppers' perception of a retailer's assistive intent positively affects their patronage intentions (Shobeiri et al., 2014). Furthermore, the salesperson constitutes a part of the final touch point that consumers face before making purchases, and, therefore, their behavior toward the retailers can be determined (Pornpitakpan and Han, 2013). Crutsinger et al. (2010) declare that the interaction styles of consumers are constant behavior patterns that they use in the transaction environment in markets.

2. Hypotheses development

In a retail environment, the literature has focused on the shopping selection and decision processes or in store retail preferences (Granot et al., 2010). The consumer behavior literature proposes the psychographic/lifestyle approach, consumer typology approach and consumer characteristics approach (Akturan et al., 2011). A consumer's mental orientation characterizing an approach to make a choice is defined as their decision-making style (Solka et al., 2011). While need recognition, information search, evaluation of alternatives, purchase, and post-purchase behavior are proposed as the consumer decision-making process (Roozmand et al., 2011), the decision-making style is defined as "a mental orientation characterizing a consumer's approach to making choices" (Sproles and Kendall, 1986, p. 276). The term decision-making is used

to refer to thoughts during brand choice (Bao et al., 2003; Gardner and Hill, 1990). Based on the consumer characteristics approach, eight characteristics of CDMS were proposed by Sproles and Kendall (1986) in the form of a Consumer Style Inventory (CSI). The CSI consists of eight fundamental CDMS including *perfectionistic and high-quality conscious consumers, brand-conscious and price-equals-quality consumers, novelty and fashion-conscious consumers, recreational and hedonistic consumers, price-conscious and value-for-money consumers, impulsive and careless consumers, confused-by-overchoice consumers, and habitual and brand-loyal consumers.* These styles describe the mental characteristics of a consumer's decision-making, which are directly linked to consumer choice behavior (Wang et al., 2004; Wickliffe, 2004). The CSI scale is the most promising and explanatory approach to consumer decision-making (Akturan et al., 2011). Therefore, CDMS demonstrates a consistent style of cognitive and affective consumers responses toward retail (Leo et al., 2005) because consumers are involved with shopping through certain important decision-making patterns, such as rational, brand conscious, quality conscious and impulsive shopping (Jamal et al., 2006).

However, there is a lack of generalizability and contradictions within the literature implying a difference in the understanding of CDMS (Solka et al., 2011) and the literature concerning CDMS is fragmented (Dewberry et al., 2013). Some studies applied original CSI in examining food related products (Anic et al., 2014), consumer goods (Zhou et al., 2010) and retailing in general (Lysonski and Durvasula, 2013; Park et al., 2010). Zhang and Kim (2013) examined consumers' attitude toward purchasing luxury fashion goods and purchase intention by adopting brand consciousness from the CSI instrument. Jensen and Grunert (2014) categorized consumers' characteristics as price consciousness, value consciousness, brand and store loyalty. Furthermore, Anic et al. (2012) empirically found that young consumers are classified in five segments according to their decision-making style. Hanzaee and Aghasibeig (2008) characterized female CDMS suggesting an eleven-factor model. Solka et al. (2011) empirically validated the five CDMS including enjoyment, shopping aversion, price consciousness, quality consciousness and brand consciousness. Kavkani et al. (2011) found seven CDMS among young Iranian consumers. Based on a cross-cultural study, Akturan et al. (2011) found that CDMS include four segments–fashion-brand conscious consumers, indifferent consumers, recreation seekers and quality seekers. Kwan et al. (2008) empirically identified seven CDMS among young fashion consumers in China.

Sproles and Sproles (1990) further proposed the causal relationship of CDMS with factors, such as learning style. Therefore, this study argues that different decision styles shape different market segments and that such segments have different perceptions toward marketing efforts and practices. Fig. 1 presents the theoretical research model.

2.1. Perfectionistic/high quality conscious consumers

Perfectionistic/high quality conscious consumers "search for the highest or very best quality in products" (Mitchell, 1998, p. 202). Notwithstanding that there is a lack of a clear definition of perfectionism, this segment set "especially high personal standards" (Gilman et al., 2005) and they "systematically search for the best quality products possible" (Wesley et al., 2006, p. 536). Likewise, generally, the quality evaluation takes place prior/during purchase and after purchase/during consumption (Papanagiotou et al., 2013). Shoppers normally use the price level to assess the product's quality and to rank different options by quality before a choice presuming a positive price-quality correlation (Panzone, 2014). The perception regarding quality could be derived from products (Das, 2014). Marquardt et al. (1975) found that the more the products were advertised the more they received a high amount of top quality ratings by consumes. Consumers always think about which product fits their needs best in relation to the expected brand/model/seller combinations (Geistfeld, 1977). Shin et al. (2013) argue that website quality has an effect on the repurchase intention of Internet shopping and Wu et al. (2011) found that service quality is an important factor that affects a consumer's decision style and pattern. Furthermore, shoppers might know a better product but they may select to stay with a given retailer and their offers (Andreasen, 1985). Thus, the following hypotheses are proposed:

H1. *Perfectionistic/high quality conscious consumers have positive attitudes toward product (H1a), price (H1b), advertising (H1c) and retailing (H1d) across channels.*

2.2. Brand consciousness/price equals quality consumers

"A store brand strategy often aligns with a retailer's price-quality positioning" (González-Benito and Martos-Partal, 2012, p. 238). Jacoby et al. (1977) argue that when the retail brand name is available and consumed, consumers might require less information
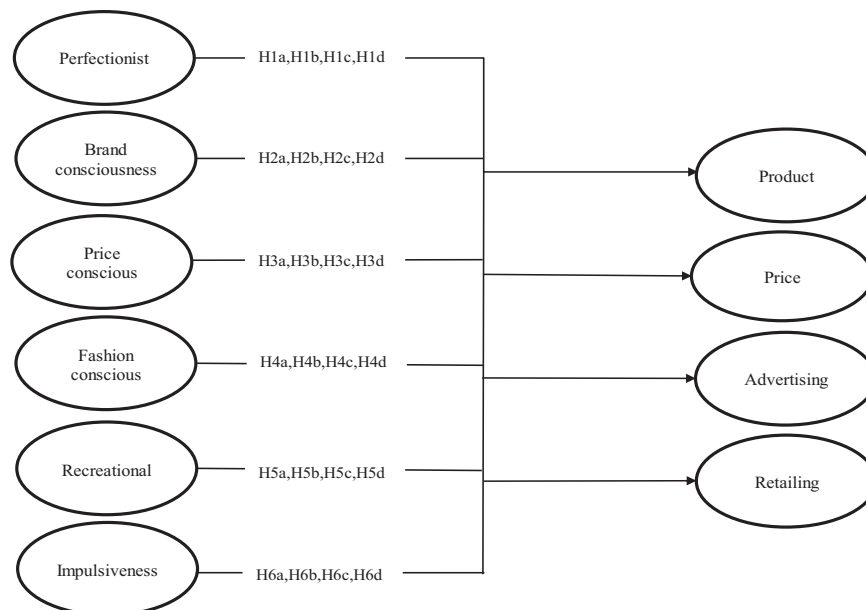

Fig. 1. Research model.

in the purchase decision process. Branding is considered as a utility and assistant to the shoppers search through which they might find a retailer for a certain product (Smith and Brynjolfsson, 2001). Brand consciousness/price equals quality consumers represents a "decision style of consumers concerned with getting the most expensive, well-known brands" (Wesley et al., 2006, p. 536). Previous studies on the assessment of the consumer's actual relationship between price and quality have found that consumers do not perceive a higher price as a signal of higher quality (Boyle and Lathrop, 2013). Shoppers have a tendency to consider quality on the basis of price (Boyle and Lathrop, 2013; Ding et al., 2010). However, consumers might rate a low price product with a high quality perception. In addition, shoppers will choose the brand with a better retail image in order to lessen the risk (Wu et al., 2011). For example, non-store retailing uses the recognized national brand names as a secure source of decision-making (Korgaonkar, 1984). The preference of brand loyal consumers from a post-purchase evaluation of product performance is influenced by its better quality and performance over alternatives (Hoyer, 1984).

Brand names influence shoppers decision-making styles even in an environment in which a unique product becomes difficult to maintain for a retailer (Alba and Hutchinson, 2008). Switching from one brand to alternative brands is mostly influenced by higher quality perception, such as better features, higher reliability, and other favorable brand associations or by lower prices or both quality and price element (Nowlis and Simonson, 2000). Confident brand/quality shoppers like recognized brands, good quality department retailers and agree strongly with the statement "the higher the price of the product, the better its quality" (Bakewell and Mitchell, 2004). Zhang and Kim (2013) argue that brand consciousness shoppers have a positive attitude toward purchasing luxury fashion products. Some shoppers might postpone their purchase of a product until they have sufficient budget to purchase a high priced name branded product to achieve social status (Bao et al., 2003). Consumer decision-making is highly influenced by brand elements (Workman and Lee, 2013). Therefore, the hypotheses are as follows:

H2. *Brand consciousness consumers have positive attitudes toward a product (H2a), price (H2b), advertising (H2c) and retailing (H2d) across channels.*

2.3. Price conscious consumers

Price conscious consumers desire to get the best value for money (Park and Gretzel, 2008). (Nowlis and Simonson, 2000) propose that sales promotions and the choice set composition have a strong effect on brand switching between the price and quality paradigm. Price conscious consumers are a segment in which "their decision style are concerned with getting lower prices" (Wesley et al., 2006, p. 536). Price consciousness shoppers are consumers who are not willing to pay the extra price for the distinctive dimension of goods. This segment of consumer possibly looks for sale prices and always makes comparisons among the offerings on the market (Lysonski and Durvasula, 2013). Less price conscious shoppers are normally not very engaged with the price aspect of the retail products (Kukar-Kinney et al., 2007). Shoppers consider costs and benefits while they are making a purchase decision upon psychological factors, such as economic trade-off (Alba and Hutchinson, 2008). The high price conscious consumers generally encounter the lower search and information processing costs due to the fact that their focus is on price information (Gauzente and Roy, 2012), while products with a high deal share or with high price range may stimulate shoppers to become involved in another type of information processing, which is intentional price information search (Grewal et al., 2014). Purchasing expensive products might enhance one's perceived social

position, while frequently looking for cheaper prices and purchasing at sale prices may be perceived by others as cheap (Bao et al., 2003). Similarly, shoppers might make a decision when they focus exclusively on paying lower prices (Wu et al., 2011) and they preserve certain insights of prices toward a retailer in a channel, thus, the perceptions of a channel will influence channel choice decision (Konuş et al., 2008). Therefore, the following hypotheses are proposed:

H3. *Price conscious/value for money consumers have positive attitudes toward a product (H3a), price (H3b), advertising (H3c) and retailing (H3d) across channels.*

2.4. Novelty and fashion conscious consumers

Nowadays, consumers are becoming more fashion oriented and concerned about the latest fashion trends (Casidy, 2012), and marketers acknowledge that the innovativeness of a product is highly relevant to consumer behavior and behavioral science (Muzinich et al., 2003). "Fashion is a unique tangible consumer product with the following features: timeliness, styles, trendiness, and many knock-offs" (Moon et al., 2013, p. 392). Novelty and fashion conscious consumers enjoy being in style and seeking diversity is quite important to this segment (Lysonski and Durvasula, 2013). Novelty and fashion conscious is the "decision style of consumers who like new and innovative products and who gain excitement from seeking out new things" (Wesley et al., 2006, p. 536). In addition, purchasing prestigious and fashion goods is considered as an indicator of status and wealth in which extremely expensive purchases increase the value of this indicator (Zhang and Kim, 2013). Novelty seeking is defined "as a trait involving activation or initiation of behaviors such as exploratory activity and approach to potential rewards" (Bustin et al., 2012, p. 948). Fashion retail is leading in retailing by the number of stores, brand proliferation and importance for urban atmosphere (Tambo, 2014).

Furthermore, consumers' innovativeness is usually seen as a character attribute that shows a willingness to change (Park et al., 2010). Novelty and fashion conscious consumers tend to place value on pleasure by looking for new products (Park and Gretzel, 2008). Because the nature of the fashion market is dynamic, an individual frequently reconsiders the styles they have adopted to remain current (Lertwannawit and Mandhachitara, 2012), and they recognize that they should voluntarily replace it with another fashion (Guiltinan, 2010). In contrast, less innovative shoppers are usually more prejudiced toward an innovative product and are late adopters because they might get higher product complexity (Hoffmann and Broekhuizen, 2010). "Consumers with high novelty and fashion consciousness are likely to gain excitement and pleasure from seeking out new things" (Zhou et al., 2010, p. 47). Park et al. (2010) were among the few and the first to explore the relationship between consumer innovativeness and consumer shopping styles. People who are highly fashion-consczious see fashion shopping as a high involvement purchase decision (Casidy, 2012). Lertwannawit and Mandhachitara (2012) argue that fashion consciousness positively relates to consumption. Thus, this study hypothesizes that:

H3. *Novelty and fashion conscious consumers have positive attitudes toward a product (H4a), price (H4b), advertising (H4c) and retailing (H4d) across channels.*

2.5. Recreational consumers

Hedonic consumption experiences and consumer choices or buying decisions for recreational purposes have important academic and research implications (Holbrook et al., 1984). Additionally, the recreational concept of the shopping aspect, which is a dimension of the consumer's self-concept, is compared with

simple shopping enjoyment, which has considered most past research on fun shopping (Guiry et al., 2006). Accordingly, the sensation of getting pleasure and enjoyment from a retailer are both acknowledged outside of academic pursuits (Bäckström, 2011). Recreational shoppers are not discount shoppers (Williams et al., 1985). Recreational consumers consider shopping as a pleasant activity and usually shop just for the fun of it (Kamaruddin and Mokhlis, 2003). Recreational shopping is a "decision style of consumers who take pleasure in shopping and who shop just for the fun of it" (Wesley et al., 2006, p. 536), while consumers who are not seeking shopping enjoyment might be referred to as economic and convenience shoppers (Williams et al., 1985). Excitement is a mixture of pleasure, which influences unplanned acquisitions and hedonic spending value (Wong et al., 2012). Furthermore, shoppers appear to enjoy the process of joining in marketing campaigns (Grau and Folse, 2007). Recreational consumers have been found to consider the sensory physiognomies of the purchase experience, such as retailers atmospherics and product diversity (Bloch et al., 1989). Shopping creates an attractive and expanded atmosphere in which it can be an element that leads to a leisure experience during the shopping decision process (Murphy et al., 2011). Although pleasure is a key constituent of recreational shopping, the notion of shopping as leisure or recreation appeals and creates satisfaction beyond simple fun and enjoyment (Guiry et al., 2006). Recreational, entertainment and hedonic shopping refer to an effective retailing strategy (Arnold and Reynolds, 2003) that might relate to a multi-channel consumer behavior decision style (Konuş et al., 2008). Thus, the following hypotheses are proposed:

H4. *Recreational conscious consumers have positive attitudes toward a product (H5a), price (H5b), advertising (H5c) and retailing (H5d) across channels.*

2.6. Impulsive/careless consumers

Online impulse shopping is predominant, but relatively inadequate knowledge is currently available on this phenomenon (Liu et al., 2013) because a noteworthy part of shopping may not be preceded by a set of decision process styles (Kalla and Arora, 2011; Olshavsky and Granbois, 1979), which has important retail implications (Amos et al., 2014; Beatty and Elizabeth Ferrell, 1998; Pornpitakpan and Han, 2013; Yi and Baumgartner, 2011). Impulsive shoppers, who are careless about how much they spend and are unconcerned about getting a "good buy" (Lysonski and Durvasula, 2013), are predominant not only in the offline market but also in the online environment (Liu et al., 2013). Impulse buying is also a tenacious issue for consumers (Yi and Baumgartner, 2011). Thus, a profounder examination of online impulse buying is increasingly necessary (Floh and Madlberger, 2013; Verhagen and van Dolen, 2011). Impulse shoppers are not likely to plan their shopping and are not concerned about how much they spend in shopping (Jamal et al., 2006). Impulsive/careless is the "decision style of consumers who tend to buy spontaneously and who are unconcerned about how much money they spend" (Wesley et al., 2006, p. 536). High impulsiveness shopping goes along with a lack of discussion and strong emotional responses during shopping (Büttner et al., 2014). Whether consumers regret their decisions depends on the final judgment they might make between the results of their decisions (Liang et al., 2014). Impulse shopping happens once an individual experiences a sudden, strong, and persistent urge to purchase a specific item and then the choice quickly happens upon observing the product (Lucas and Koff, 2014). Impulse shoppers might have a strong understanding about the effect of the retailers' product (Amos et al., 2014). The service quality of the salesperson is an important cause of sales, specifically sales from purchase decisions that occur at the store without prior planning or impulse buying (Pornpitakpan and Han, 2013). Kukar-Kinney et al. (2012) found that

Table 1
Demographic profile of respondents.

	Profile	Characteristic	*N*	%
1	Age	18 to 24	56	20.3
		25 to 31	86	32.1
		32 to 40	124	35.2
		Above 40	49	12.4
2	Gender	Male	148	47.0
		Female	167	53.0
3	Ethnicity	Malay	120	38.1
		Chinese	124	39.4
		Indian	57	18.1
		Other	14	4.4
4	Education	Doctorate/Ph.D.	27	8.6
		Master	76	24.1
		Bachelor	103	32.7
		Diploma	84	26.7
		Other	25	7.9
5	Occupation	Business owner	21	6.7
		Managerial level	50	15.9
		Employee level	112	35.6
		Student	116	36.8
		Other	16	5.1
6	Monthly Income	Below RM1,000 per month[a]	19	6.0
		RM1,100–RM2,000 per month	94	29.8
		RM2,100–RM3,000 per month	115	36.5
		RM3,100–RM4,000 per month	62	19.7
		More than RM5,000 per month	25	7.9
7	Consumer shopping experience	Shopping malls[b]	187	59.4
		Online retails[c]	128	40.6

[a] USD1=RM3.25.
[b] Shopping malls: Suria KLCC, Berjaya Times Square, Fahrenheit88, Bukit Bintang Plaza, Pavilion KL.
[c] Online retails: Lazada.com.my, Lelong.com.my, Zalora.com.my, Groupon.my, Livingsocial.com/my.

compulsive shoppers achieve greater transaction value for price promotions and are more price conscious and sale prone than impulsive shoppers. Shoppers might make unplanned shopping impulsively and instinctively once they are exposed to stimulating cues, such as sales, advertisements and attractive product attendance (Liu et al., 2013). Finally, the following hypotheses are proposed:

H6. *Impulsive/careless consumers have positive attitudes toward a product (H5a), price (H5b), advertising (H5c) and retailing (H5d) across channels.*

3. Research method

In order to empirically test the proposed research model (Fig. 1), a quantitative technique was performed using the cross-sectional data collection approach. For the purpose of this study, experienced consumers were targeted to statistically test and examine CDMS in association with the marketing practice among online retailers and shopping mall consumers. Accordingly, both online and paper–pencil-questionnaires were used to collect the primary data from the target population. The questionnaires were categorized into two sections. The first part of the questionnaire captures the information pertaining to the demographic profile of the respondents, such as age, gender, ethnicity, education, occupation and monthly income (See Table 1). In addition, the second section captures the information regarding the research construct relationships. To measure consumers characteristics including perfectionist, brand consciousness, price conscious, fashion conscious, recreational and impulsiveness, items were adopted from Zhou et al. (2010), and to measure product, price, advertising and retailing, items were adopted from Gaski and Etzel (1986). Appendix shows the measurement items of the research constructs. Prior to main data collection, a pre-test (*N*=22) and pilot test (*N*=132) were undertaken to ensure that the questionnaire was free of wording mistakes, easy to understand and could effectively capture the information from consumers.

Once the questionnaire successfully passed the pre-test and the pilot test, the study proceeded with the main data collection, in which 225 paper-and-pencil questionnaires were distributed among shopping malls in Malaysia of which 191 questionnaires were collected. In Malaysia, Internet usage (Ramayah et al., 2014b) retailing and online retailing are growing tremendously (Colomo-Palacios et al., 2013; Rezaei and Amin, 2013; Rezaei et al., 2014). These shopping malls were located in the Klang Valley; namely, Suria KLCC, Berjaya Times Square, Fahrenheit88, Bukit Bintang Plaza, and Pavilion KL. Out of 191 paper-and-pencil collected questionnaires, five were not useful or were not completed properly. Thus, 187 valid paper-and-pencil questionnaires were obtained with a response rate of 83.11%. In addition, 210 email invitations were sent to collect responses from online retail consumers. A total of 128 online questionnaires were collected with a response rate of 60.95%. The respondents have had experience with online retailers; namely, Lazada.com.my, Lelong.com.my, Zalora.com.my, Groupon.my and Livingsocial.com/my. Although the online survey is helpful (Yetter and Capaccioli, 2010), in this research the response rate from the paper-and-pencil approach shows a higher response rate. Therefore, a total of 315 online and paper–pencil-questionnaires were collected to conduct the statistical analysis for measurement and structural model using the partial least squares (PLS) path modeling approach; a structural equation modeling (SEM) technique.

3.1. Missing value treatment

"Missing data is a pervasive problem in sample surveys" (Little, 1988, p.287), which leads to trouble in the analyses of multivariate data in social and behavioral science (Rezaei and Ghodsi, 2014; Schafer and Olsen, 1998). Missing values occur in data collection through the questionnaire because the respondents might be unable, unwilling or fail to respond to some items in the questionnaire, which is not under the control of the researchers. Accordingly, the statistical analysis to deal with missing values is challenging (Fokianos, 2007). A comparative study by Gold and Bentler (2000) of the different approaches to the treatment of missing values (e.g. resemblance-based hot-deck imputation, iterated stochastic regression imputation, structured-model expectation-maximization and saturated-model expectation maximization) found that the expectation maximization method (EMM) is effective. Multiple imputation (Rubin, 1987) is "a simulation technique that replaces each missing datum with a set of complete data > 1 plausible values" (Schafer and Olsen, 1998, p. 545). Furthermore, EMM reduces the measurement error (Ghosh-Dastidar and Schafer, 2003) and is helpful for the treatment of missing data in large data sets. Therefore, the expectation maximization algorithm (EMA) (Little, 1988) was performed using SPSS software (Version 19) to impute missing values. Firstly, Little's MCAR (Missing Completely At Random) $\chi 2$ statistic was obtained from the EMA procedure as an indicator to ensure that data were missing at random. The results show that Little's MCAR test Chi-Square=601.565, DF=586, Sig.= 0.319 implying that missing data were at random. Secondly, the EMA was performed to impute data accordingly. Thus, the EMA was performed to impute missing values and address the problem of missing values.

3.2. Common method variance (CMV)

Common method variance (CMV) is problematic in quantitative studies and any self-report survey (Spector, 2006), as it threatens the validity of the findings on the linkage results between constructs (Reio, 2010; Williams and Brown, 1994). CMV mostly occurs when the data are collected from a single source (Avolio et al., 1991). As an attribute of the measurement method, CMV is a threat to the research findings in social and behavioral science, which should be considered by the researcher (Podsakoff et al., 2003). CMV may contribute to item reliabilities and the covariation between latent constructs (MacKenzie and Podsakoff, 2012), which influence the structural relationship (Kline et al., 2000). According to Reio (2010), procedural design and statistical control are two solutions to reduce the probability of CMV. Following Podsakoff et al. (2003), this study addressed the CMV issue at the questionnaire design stage (common rate effects, acquiescence biases (yea-saying and nay-saying), item characteristic effects, common scale formats, item priming effects and scale length were avoided throughout the questionnaire). Secondly, a statistical technique, i. e. Harman's one-factor test was conducted. Therefore, the statistical results demonstrate that CMV is not a concern in this study.

3.3. Non-response bias

Non-response bias is a "serious concern" in survey methods that should be addressed by researchers (Etter and Perneger, 1997; Lewis et al., 2013; Rezaei and Ghodsi, 2014), especially in electronic surveys (Menachemi, 2010). Non-response bias limits the generalizability of the research findings, and thus needs to be addressed by researchers (Michie and Marteau, 1999). "Response bias occurs when individuals who respond to a survey differ systematically from those that were invited to participate but did not respond" (Menachemi, 2010, p. 5) in which "the participants do not represent non-participants" (Thompson et al., 2014). Methods to adjust for nonparticipation are complex and the effect of nonparticipation on the total sample is difficult to assess due to the fact that researchers rarely have information about nonparticipants (Lin and Schaeffer, 1995). Researchers should deal with non-response bias to minimizing non-response concerns (Bowling, 1997). Analysis of known characteristics, the subsample of non-responders, wave analysis and linear extrapolation are commonly reported methods of non-response bias analysis (Lewis

et al., 2013). To ensure that non-response bias is not an issue in this study, three steps were conducted based on the continuum of resistance theory (Lin and Schaeffer, 1995). Firstly, analysis of known demographic characteristics, such as age, occupation, gender, ethnicity, and income show no significant differences between groups. Furthermore, respondents shopping experience including shopping mall and online retails were compared to ensure that the samples obtained from the two modes of data collection are essentially the same. The results show no significant differences between groups, i.e. shopping mall and online retails. Secondly, wave analysis was conducted in which the variables were compared between early and late responders. Thirdly,

comparing the key constructs of the study, such as consumer's characteristics including perfectionist, brand consciousness, price conscious, fashion conscious, recreational and impulsiveness and retailers' product, price shows no significant differences between the groups using t-test analysis.

3.4. Method of measurement and structural model analysis

Performing the SEM technique for parameter assessment and hypothesis testing for the causal model is an advantage (Cenfetelli and Bassellier, 2009; Esposito Vinzi et al., 2008; Hair et al., 2011;

Table 2
Construct validity.

Construct	Item	Outer loading	AVE[a]	Composite reliability (CR)[b]	Cronbach's alpha	Outer T-statistic
Advertising	ADV1	0.907	0.815	0.969	0.962	43.689[c]
	ADV2	0.877				34.709
	ADV3	0.923				61.563
	ADV4	0.879				43.235
	ADV5	0.918				53.243
	ADV6	0.902				50.380
	ADV7	0.911				41.476
Brand Consciousness	BRN1	0.882	0.756	0.903	0.838	39.669
	BRN2	0.839				28.810
	BRN3	0.887				48.474
Fashion Conscious	FSH1	0.850	0.762	0.941	0.922	33.117
	FSH2	0.873				46.189
	FSH3	0.884				47.821
	FSH4	0.877				49.667
	FSH5	0.880				47.286
Impulsiveness	IMPL1	0.871	0.774	0.932	0.903	47.456
	IMPL2	0.897				48.070
	IMPL3	0.883				44.712
	IMPL4	0.868				48.059
Price	PRC1	0.847	0.772	0.959	0.950	38.900
	PRC2	0.883				47.104
	PRC3	0.923				68.898
	PRC4	0.910				57.816
	PRC5	0.914				61.992
	PRC6	0.861				31.625
	PRC7	0.807				21.687
Price conscious	PRCC1	0.912	0.839	0.940	0.904	67.213
	PRCC2	0.918				72.249
	PRCC3	0.919				74.973
Product	PRD1	0.853	0.796	0.965	0.957	31.719
	PRD2	0.901				50.146
	PRD3	0.909				57.488
	PRD4	0.884				46.488
	PRD5	0.909				48.712
	PRD6	0.907				55.783
	PRD7	0.881				41.571
Perfectionistic	PRF1	0.897	0.821	0.948	0.927	44.486
	PRF2	0.941				92.017
	PRF3	0.877				33.437
	PRF4	0.908				58.796
Recreational	RECR1	0.894	0.777	0.913	0.856	60.613
	RECR2	0.848				38.147
	RECR3	0.902				63.664
Retailing	RTL1	0.846	0.774	0.960	0.951	28.871
	RTL2	0.883				39.614
	RTL3	0.876				39.590
	RTL4	0.891				43.405
	RTL5	0.924				65.059
	RTL6	0.889				47.792
	RTL7	0.845				29.411

[a] Average variance extracted (AVE)=(summation of the square of the factor loadings)/{(summation of the square of the factor loadings)+(summation of the error variances)}.

[b] Composite reliability (CR)=(square of the summation of the factor loadings)/{(square of the summation of the factor loadings)+(square of the summation of the error variances)}.

[c] t-values for two-tailed test-value 2.58 (sig. level=1%).

Henseler et al., 2009) over the first generation technique (factor analysis, principal component analysis and regression analysis) (Chin, 1998). SEM integrates various research processes in a "holistic fashion" (Chin, 2000). The maximum likelihood estimation (MLE) (Jöreskog, 1970, 1978) and PLS (Lohmöller, 1989; Wold, 1975) are two well-known methods in the second generation of multivariate data analysis with different applications in research (Vinzi et al., 2010). Selecting appropriate statistical analysis remains a challenging decision for business management and social sciences researchers (Ramayah et al., 2014a). PLS, which is known as a variance-based SEM, provides tremendous advantages in marketing and consumer behavior studies (Hair et al., 2011; Henseler, 2010; Reinartz et al., 2009; Sarstedt, 2008), and helps to understand the relations among the sets of observed variables (Hair et al., 2012; Rigdon et al., 2010). According to Chin (2010) and Fornell et al. (1990), maximum likelihood estimation is based on the factor construct concept (suitable for theory testing) that demands more data; in contrast, PLS is based on a component construct concept (suitable for explaining complex relationships) (Sarstedt, 2008). PLS is an approach that does not need strong assumptions, such as distribution, sample size and the measurement scale (Vinzi et al., 2010). The PLS path modeling approach is a method for complex cause-effect-relationship models (Gudergan et al., 2008; Hair et al., 2011) involving several latent constructs that are indirectly measured by several indicators (Ringle et al., 2005a), which is not suitable for confirmatory testing (Chin, 2010; Westland, 2007). In addition, PLS captures the heterogeneity within the path modeling framework and it is an advantage when the primary concern of the analysis is the prediction ordinated or prediction accuracy (Hair et al., 2011; Sarstedt, 2008).

According to Chin (2010), and Henseler and Chin (2010) the first step in evaluating SEM is the measurement model, and, secondly, the structural model results (the two-stage approach). The PLS path modeling algorithm presents the outer and the inner estimation stages (Hair et al., 2013; Vinzi et al., 2010). According to Ringle et al. (2010), non-parametric assessment criteria, such as construct reliability (>0.6), outer loadings (>0.7), indicator reliability (>0.5), and average variance extracted (>0.5), must satisfy the minimum requirements. For measurement assessment, construct validity is defined as "the extent to which an operationalization measures the concept it is supposed to measure" (Bagozzi et al., 1991, p. 421). Furthermore, the structural model would assess the R^2 measures and the level and significance of the path coefficients by performing the bootstrapping procedure of 5000 resamples (Hair et al., 2011). Thus, using SmartPLS software 2.0 (M3) (Ringle et al., 2005b), the PLS algorithm, bootstrapping and blindfolding procedure were performed in this study to assess the measurement and structural model.

4. Results

4.1. Assessment of measurement model

Outer loadings, composite reliability (CR), average variance extracted (AVE=convergent validity) and discriminant validity were assessed to reflectively examine the measurement models (Hair et al., 2013). As depicted in Table 2, all the outer loadings of the reflective constructs are well above the minimum threshold value of 0.70. As shown by the CR values, all the reflective constructs have high levels of internal consistency reliability. Furthermore, the AVE values (convergent validity) are well above the minimum threshold level of 0.50 thereby demonstrating convergent validity for all constructs. The internal consistency reliability measures of the Cronbach's Alpha are also well above the minimum threshold level of 0.70. The outer t-statistic is also depicted to assess the significant level of items.

To assess discriminant validity, the Fornell and Larcker (1981) criterion and cross-loading criterion were evaluated. As shown in Table 3, the off-diagonal values are the correlations between the latent constructs. The shared values between the constructs are square correlations. Comparing the loadings across the columns, Table 4 depicts that in all cases an indicator's loadings on its own construct are higher than all of its cross-loadings with other constructs, thus, the results indicate there is discriminant validity between all the constructs.

4.2. Assessment of structural model

As discussed above, once the measurement model has been confirmed as reliable and valid, then, the next step is to evaluate the structural model results, which, in return, involves examining the model's predictive capabilities and the relationships between the constructs (Hair et al., 2013). Nevertheless, before evaluating the structural model, the structural model for collinearity should be considered. In PLS path modeling, multicollinearity should be considered to ensure that the results are valid (Jagpal, 1982). To assess collinearity, each set of predictor constructs for each subpart of the structural model were examined separately by SPSS software (Version 19) using the linear regression option. The results show that the tolerance level is well below the VIF value of 5.00 in the predictor constructs as being indicative of collinearity. Secondly, the significance of the path coefficients, thirdly, the level of the R^2 values, fourthly, f^2 effect size, and, finally, the predictive relevance including Q^2 and q^2 effect size were assessed.

Assessing the significance and relevance of the structural model relationships was conducted by applying the PLS–SEM algorithm, which estimates the structural model relationships (the path coefficients) to demonstrate the hypothesized relationships between the reflective constructs. In addition to assessment of the size of the path coefficients, their significance was obtained using the bootstrapping option (5000 resample). Table 5 shows the results of the hypothesis testing and structural relationships.

The R^2 values of the endogenous latent construct were also obtained using the PLS algorithm procedure. Table 6 shows the results of R^2 versus Q^2. As the endogenous latent construct the R^2 value for advertising is 0.655 with a Q^2 value of 0.533, which is relatively high. Price R^2=0.540, 0.398, product R^2=0.632, Q^2=0.499, retailing R^2=0.650, Q^2=0.501 also show a large effect size. Accordingly, the magnitude of the R^2 values is a criterion of predictive accuracy, while the Q^2 value is an indicator of the model's predictive relevance. According to Hair et al. (2013), in SEM models, Q^2 values bigger than zero for a reflective endogenous construct imply the path model's predictive relevance for a particular construct (Using cross-validated redundancy is recommended). By performing blindfolding procedures, all Q^2 values are considerably above zero, which supports the model's (Fig. 1) predictive relevance for the four endogenous constructs. In addition, the f^2 effect size, which shows the impact of a specific predictor construct on an endogenous latent construct, and the q^2 effect size for the predictive relevance are presented in Table 7.

5. Discussion

The results in this study imply that 1) perfectionist, brand consciousness and fashion conscious are advertising oriented, 2) price conscious and impulsive shoppers are price oriented, 3) perfectionist, price conscious, recreational and impulsive shoppers are product oriented, and 4) perfectionist, price conscious, and impulsive shoppers are retail oriented. Statistically, Park and Gretzel (2008) found a significant effect of product type on perfectionism consciousness, brand consciousness, novelty and variety consciousness. Perfectionist

Table 3
Discriminant validity–Fornell–Larcker criterion.

Research Constructs	Advertising	Brand consciousness	Fashion conscious	Impulsiveness	Perfectionist	Price	Price conscious	Product	Recreational	Retailing
Advertising	**0.815**[a]									
Brand consciousness	0.455	**0.756**								
Fashion conscious	0.577	0.489	**0.762**							
Impulsiveness	0.505	0.475	0.525	**0.774**						
Perfectionist	0.408	0.515	0.361	0.316	**0.821**					
Price	0.561	0.365	0.420	0.444	0.285	**0.772**				
Price conscious	0.526	0.408	0.513	0.555	0.348	0.475	**0.839**			
Product	0.583	0.457	0.513	0.495	0.385	0.550	0.456	**0.796**		
Recreational	0.443	0.693	0.531	0.524	0.449	0.426	0.523	0.502	**0.777**	
Retailing	0.682	0.446	0.509	0.486	0.427	0.570	0.392	0.610	0.477	**0.774**

[a] The off-diagonal values in the above matrix are the square correlations between the latent constructs and diagonal are AVEs.

Table 4
Discriminant validity–loading and cross-loading criterion.

Items	Advertising	Brand consciousness	Fashion conscious	Impulsiveness	Price	Price conscious	Product	Perfectionist	Recreational	Retailing
ADV1	**0.907**[a]	0.658	0.627	0.668	0.683	0.506	0.582	0.610	0.621	0.532
ADV2	**0.877**	0.605	0.573	0.629	0.653	0.629	0.675	0.617	0.584	0.424
ADV3	**0.923**	0.599	0.602	0.636	0.666	0.665	0.699	0.538	0.604	0.545
ADV4	**0.879**	0.580	0.521	0.525	0.680	0.624	0.654	0.530	0.598	0.670
ADV5	**0.918**	0.575	0.673	0.633	0.670	0.633	0.666	0.532	0.561	0.697
ADV6	**0.902**	0.596	0.685	0.655	0.697	0.660	0.540	0.574	0.606	0.551
ADV7	**0.911**	0.643	0.710	0.642	0.685	0.661	0.505	0.626	0.531	0.601
BRN1	0.598	**0.882**	0.633	0.593	0.566	0.586	0.601	0.695	0.513	0.617
BRN2	0.548	**0.839**	0.562	0.583	0.485	0.527	0.585	0.591	0.555	0.550
BRN3	0.613	**0.887**	0.626	0.624	0.521	0.551	0.578	0.583	0.506	0.572
FSH1	0.613	0.617	**0.850**	0.562	0.546	0.657	0.617	0.521	0.603	0.582
FSH2	0.665	0.599	**0.873**	0.462	0.570	0.533	0.635	0.512	0.663	0.626
FSH3	0.651	0.628	**0.884**	0.440	0.540	0.527	0.594	0.514	0.632	0.596
FSH4	0.503	0.588	**0.877**	0.536	0.591	0.480	0.653	0.516	0.645	0.656
FSH5	0.678	0.620	**0.880**	0.517	0.577	0.680	0.625	0.557	0.634	0.649
IMPL1	0.618	0.653	0.727	**0.871**	0.583	0.625	0.607	0.468	0.662	0.590
IMPL2	0.669	0.606	0.762	**0.897**	0.599	0.694	0.649	0.536	0.683	0.653
IMPL3	0.592	0.611	0.741	**0.883**	0.549	0.529	0.562	0.508	0.584	0.575
IMPL4	0.618	0.560	0.764	**0.868**	0.609	0.669	0.651	0.466	0.614	0.632
PRC1	0.595	0.495	0.561	0.558	**0.847**	0.617	0.502	0.405	0.542	0.649
PRC2	0.613	0.509	0.560	0.584	**0.883**	0.585	0.587	0.433	0.538	0.652
PRC3	0.696	0.537	0.594	0.587	**0.923**	0.633	0.497	0.504	0.566	0.511
PRC4	0.686	0.564	0.591	0.629	**0.910**	0.596	0.494	0.496	0.566	0.685
PRC5	0.469	0.561	0.568	0.601	**0.914**	0.604	0.544	0.500	0.560	0.523
PRC6	0.577	0.541	0.601	0.591	**0.861**	0.585	0.584	0.492	0.557	0.664
PRC7	0.570	0.506	0.508	0.545	**0.807**	0.532	0.612	0.451	0.522	0.651
PRCC1	0.673	0.562	0.599	0.686	0.622	**0.912**	0.649	0.532	0.542	0.654
PRCC2	0.648	0.636	0.575	0.576	0.623	**0.918**	0.646	0.566	0.660	0.685
PRCC3	0.673	0.558	0.647	0.686	0.611	**0.919**	0.652	0.522	0.626	0.681
PRD1	0.586	0.631	0.689	0.636	0.522	0.660	**0.853**	0.589	0.672	0.565
PRD2	0.510	0.634	0.679	0.647	0.543	0.673	**0.901**	0.584	0.668	0.628
PRD3	0.501	0.629	0.691	0.503	0.548	0.654	**0.909**	0.588	0.682	0.620
PRD4	0.655	0.604	0.573	0.586	0.516	0.590	**0.884**	0.575	0.508	0.603
PRD5	0.692	0.606	0.615	0.618	0.672	0.593	**0.909**	0.535	0.612	0.686
PRD6	0.670	0.589	0.611	0.597	0.807	0.635	**0.907**	0.541	0.602	0.508
PRD7	0.642	0.516	0.599	0.593	0.807	0.607	**0.881**	0.447	0.562	0.661
PRF1	0.594	0.624	0.539	0.516	0.500	0.544	0.567	**0.897**	0.593	0.595
PRF2	0.588	0.655	0.543	0.496	0.487	0.549	0.568	**0.941**	0.632	0.601
PRF3	0.520	0.658	0.474	0.467	0.411	0.453	0.489	**0.877**	0.561	0.528
PRF4	0.605	0.567	0.611	0.553	0.528	0.580	0.613	**0.908**	0.638	0.634
RECR1	0.642	0.539	0.655	0.624	0.563	0.627	0.646	0.631	**0.894**	0.642
RECR2	0.544	0.675	0.509	0.618	0.551	0.580	0.597	0.571	**0.848**	0.588
RECR3	0.571	0.689	0.662	0.674	0.542	0.647	0.629	0.568	**0.902**	0.594
RTL1	0.623	0.608	0.691	0.542	0.511	0.652	0.668	0.559	0.602	**0.846**
RTL2	0.561	0.650	0.629	0.617	0.666	0.642	0.598	0.628	0.649	**0.883**
RTL3	0.526	0.554	0.627	0.604	0.649	0.623	0.690	0.531	0.592	**0.876**
RTL4	0.696	0.523	0.570	0.572	0.665	0.617	0.699	0.546	0.571	**0.891**
RTL5	0.536	0.587	0.636	0.630	0.560	0.654	0.522	0.531	0.642	**0.924**
RTL6	0.682	0.568	0.617	0.615	0.695	0.660	0.696	0.599	0.589	**0.889**
RTL7	0.658	0.611	0.618	0.607	0.653	0.672	0.635	0.617	0.603	**0.845**

[a] Bold values are loadings for each item that are above the recommended value of 0.5; and an item's loadings on its own variable are higher than all of its cross-loadings with other variable.

Table 5
Result of hypothesis testing and structural relationships.

Hypothesis	Path	Path coefficient	Standard error	t-Statistic[a]	Decision
H1a	Perfectionist→Advertising	0.190	0.058	3.288***	Supported
H1b	Perfectionist→Price	0.075	0.063	1.207	Not Supported
H1c	Perfectionist→Product	0.146	0.057	2.558**	Supported
H1d	Perfectionist→Retailing	0.223	0.051	4.386***	Supported
H2a	Brand consciousness→Advertising	0.136	0.078	1.733*	Supported
H2b	Brand consciousness→Price	0.109	0.082	1.333	Not Supported
H2c	Brand consciousness→Product	0.087	0.077	1.127	Not Supported
H2d	Brand consciousness→Retailing	0.068	0.067	1.017	Not Supported
H3a	Price conscious→Advertising	0.209	0.071	2.954***	Supported
H3b	Price conscious→Price	0.353	0.095	3.725***	Supported
H3c	Price conscious→Product	0.232	0.091	2.551**	Supported
H3d	Price conscious→Retailing	0.338	0.071	4.743***	Supported
H4a	Fashion conscious→Advertising	0.270	0.093	2.906***	Supported
H4b	Fashion conscious→Price	−0.086	0.107	0.805	Not Supported
H4c	Fashion conscious→Product	0.077	0.105	0.735	Not Supported
H4d	Fashion conscious→Retailing	0.010	0.091	0.115	Not Supported
H5a	Recreational→Advertising	−0.016	0.087	0.187	Not Supported
H5b	Recreational→Price	0.085	0.085	1.006	Not Supported
H5c	Recreational→Product	0.180	0.073	2.474**	Supported
H5d	Recreational→Retailing	0.102	0.074	1.394	Not Supported
H6a	Impulsive→Advertising	0.137	0.087	1.580	Not Supported
H6b	Impulsive→Price	0.297	0.091	3.253***	Supported
H6c	Impulsive→Product	0.193	0.096	2.008**	Supported
H6d	Impulsive→Retailing	0.190	0.076	2.496**	Supported

[a] t-values for two-tailed test:
* 1.65 (sig. level 10%).
** 1.96 (sig. level=5%).
*** t-value 2.58 (sig. level=1%) (Hair et al., 2011).

Table 6
Results of R^2 and Q^2.

Endogenous latent constructs	R^2	Q^2	Effect size[a]
Advertising	0.655	0.533	Large
Price	0.540	0.398	Large
Product	0.632	0.499	Large
Retailing	0.650	0.501	Large

Value effect size.
0.02=Small.
0.15=Medium.
0.35=Large.
[a] Assessing predictive relevance (Q^2).

consumers are more concerned about the product, advertising and retailing while price is not important for this segment. Kuo et al. (2009) found that quality positively influences both the perceived value and customer satisfaction, and Gauzente and Roy (2012) found that high price conscious consumers are more influenced by descriptive content than less price conscious consumers. H1a, which proposed a relationship between perfectionists and advertising was supported with a path coefficient of 0.190, standard error of 0.058 and t-statistic of 3.288, while H1b, which proposed a relationship between perfectionist and price was rejected (path coefficient=0.075, standard error=0.063, t-statistic=1.207). H1c, which proposed a positive relationship between perfectionist and product (path coefficient=0.146, standard error=0.057, t-statistic=2.558), and H1d, perfectionist and retailing (path coefficient=0.223, standard error=0.051, t-statistic=4.386) were supported.

Brand consciousness segment consumers are more concerned about advertising while price, product and retailing are not a concern for them. H2a, which draws a positive relationship between brand consciousness and advertising (path coefficient=0.136, standard error=0.078, t-statistic=1.733) was supported. While H2b,

which proposed a positive relationship between brand consciousness and price (path coefficient=0.109, standard error=0.082, t-statistic=1.333), H2c, which proposed a positive relationship between brand consciousness and product (path coefficient=0.087, standard error=0.077, t-statistic =1.127), and H2d, the relationship between brand consciousness and retailing (path coefficient=0.068, standard error=0.067, t-statistic=1.017) were not supported.

The empirical results in this study support that price conscious consumers are concerned about marketing practice in a retail context. H3a, which proposed a positive relationship between price conscious and advertising was supported with a path coefficient=0.209, standard error=0.071, t-statistic=2.954. H3b, which implied a positive relationship between price conscious and retail price (path coefficient=0.353, standard error=0.095, t-statistic=3.725); H3c, which proposed a positive relationship between price conscious and product (path coefficient=0.232, standard error=0.091, t-statistic= 2.551), and H3d, which proposed a positive relationship between price conscious and retailing (path coefficient=0.338, standard error= 0.071, t-statistic=4.743) were also supported. Like brand consciousness consumers, fashion conscious consumers are more advertising oriented and they do not value price, product, and retailing. H4a, which proposed a positive relationship between fashion conscious and advertising was supported with path coefficient=0.270, standard error=0.093, t-statistics=2.906. In contrast, H4b, which proposed a positive relationship between fashion conscious and price (path coefficient= −0.086, standard error=0.107, t-statistic=0.805), H4c implied a positive relationship between fashion conscious and product (path coefficient=0.077, standard error=0.105, t-statistic=0.735), and H4d, which proposed a positive relationship between fashion conscious and retailing (path coefficient=0.010, standard error=0.091, t-statistic=0.115) were not supported.

Recreational shoppers are product oriented, while price, advertising and retailing are not a concern for this market segment. The results in this study implied that H5c, which proposed a positive

Table 7
Results – Path coefficients, f^2 and $q2$ effect size[a].

Endogenous Latent Constructs / Exogenous latent constructs	Advertising			Price			Product			Retailing		
	Path coefficients	f^2 effect size	q^2 effect size	Path coefficients	f^2 effect size	q^2 effect size	Path coefficients	f^2 effect size	q^2 effect size	Path coefficients	f^2 effect size	q^2 effect size
Brand consciousness	0.136	0.079	0.038	0.109	0.064	0.009	0.087	0.002	0.000	0.068	0.004	0.000
Fashion conscious	0.270	0.151	0.094	−0.086	0.001	0.000	0.077	0.001	0.000	0.010	0.002	0.000
Impulsiveness	0.137	0.092	0.032	0.297	0.102	0.098	0.193	0.107	0.008	0.190	0.093	0.001
Perfectionist	0.190	0.104	0.085	0.075	0.001	0.000	0.146	0.060	0.005	0.223	0.128	0.010
Price conscious	0.209	0.108	0.045	0.353	0.159	0.097	0.232	0.109	0.038	0.338	0.148	0.907
Recreational	−0.016	0.000	0.000	0.085	0.002	0.000	0.180	0.098	0.006	0.102	0.055	0.007

Value effect size.
0.02=Small.
0.15=Medium.
0.35=Large.

[a] Assessing q^2 and f^2.

relationship between recreational shoppers and product with path coefficient=0.180, standard error=0.073, t-statistic=2.474 was supported. While H5a (Recreational and advertising with path coefficient= − 0.016, standard error=0.087 and t-statistic=0.187); H5b, (Recreational > Price with path coefficient=0.085, standard error=0.085 and t-statistic=1.006), and H5d (Recreational and Retailing with path coefficient=0.102, standard error=0.074 and t-statistic=1.394) were not supported. Impulsive shoppers are mostly price, product and retailing oriented, while advertising is not a concern for this segment. The empirical results in this study show that H6a, which proposed a positive relationship between impulsiveness and advertising (path coefficient=0.137, standard error=0.087, t-statistic=1.580) was not supported. In contrast, H6b, which proposed a positive relationship between impulsiveness and price (path coefficient=0.297, standard error=0.091, t-statistic =3.253), H6c, which proposed a positive relationship between impulsiveness and product (path coefficient=0.193, standard error=0.096, t-statistic=2.008), and H6d, which proposed a positive relationship between impulsiveness and retailing (path coefficient=0.190, standard error=0.076, t-statistic=2.496) were supported.

5.1. Managerial implications

With a deep understanding of market segmentation and marketing efforts, managers would be able to implement a set of effective marketing strategies effectively. To the perfectionistic or high quality conscious segment, getting good quality is very important, as they try to get the very best or a perfect choice. In addition, perfectionistic or high quality conscious shoppers make a special effort to choose the very best quality products, and, in general, they usually try to buy the best overall quality of products. The retail innovative product quality according to advanced technology have a differentiation advantage over competitors (Liu et al., 2014). Furthermore, brand consciousness consumers presume that price should be commensurate with quality. For this segment, higher price implies a better quality. For this segment, the better the quality and department, the better the offer and the best products could be acquired and the most advertised brands are usually very good choices for them.

Price conscious shoppers prioritize value for money in that this segment buy as much as possible at sale prices. Price conscious shoppers perceive the lowest price products as their usual choice and they look carefully to find the best value for the money. Novelty and fashion conscious shoppers have usually one or more outfits of the very newest style; they update their clothing according to the changing fashions. To novelty and fashion conscious shoppers fashionable, attractive styling is very important, hence, to get variety, they shop at different stores and choose different brands

for something new and exciting that would be fun to buy. To recreational and shopping conscious consumers, shopping is a pleasant activity, going shopping is one of the enjoyable activities of their life, shopping in stores does not mean wasting time. To recreational and shopping conscious consumers, shopping is just for the fun of it. Impulsive and careless shoppers are another segment that should be recognized by managers. Impulsive and careless shoppers are impulsive when purchasing, often they make careless purchases, and they do not carefully watch how much they spend.

Furthermore, as the results in this study show that perfectionist, brand conscious and fashion conscious shoppers are advertisement oriented, managers should improve the advertisement aspect of marketing practice to capture the attention of these segments. For these segments, most advertising offers essential information, is very enjoyable and most of the advertising makes the right claims. Additionally, advertisements should not be eliminated for these segments. Therefore, as perfectionist, brand conscious and fashion conscious shoppers enjoy advertisements, advertising should be more closely regulated and most advertising should be designed and intended to inform them about the retailers' products. Price conscious and impulsive shoppers are price oriented, thus, retail managers should consider the pricing strategy in order to influence these two segments. The products should not be overpriced, but charged at lower prices and prices should be reasonable considering the high cost of doing business. Considering the fact that price conscious and impulsive shoppers consider competition between companies keeps prices reasonable, retailers should justify the prices they charge. Therefore, most prices should be fair and this segment should be satisfied with the prices that they pay for the product.

Perfectionist, price conscious, recreational and impulsive shoppers are product oriented. Retail managers should design the quality of products as consumers expected and they should be satisfied with most of the products they have experienced. The products that they buy should not become obsolete quickly and should perform as promised. In addition, products that perfectionist, price conscious, recreational and impulsive shoppers purchase should not be defective in any way. Retailers should care enough about how well the product performs and the quality of products should consistently improve over the years. In order to manage highly complex decision environments, such as multichannel retailing, decision support systems are the best choice (Häubl and Trifts, 2000). Finally, managers should understand that perfectionist, price conscious, and impulsive shoppers are retail oriented. To enhance the retail aspect of marketing practice, retail stores should serve these segments well, provide adequate service and a selection of merchandise. Likewise, retail salespeople should be helpful and when shoppers need assistance in a store, they should be able to obtain it. Because of the way retailers treat shoppers, their shopping would be pleasant/unpleasant.

5.2. Limitations and future research avenues

Despite the contribution and managerial implications of this study, certain limitations should be addressed. Firstly, this study considers marketing practice and effort according to Gaski and Etzel (1986). However, future research should consider service effort in retailing. Secondly, this study was undertaken in a B2C and consumer market context. Future research should apply the proposed model (Fig. 1) in other markets to generalize the findings of the study. Thirdly, the PLS algorithm, bootstrapping and blindfolding procedure were performed to conduct the statistical analysis for measurement and the structural model to find the causal relationship between CDMS and retailers' marketing practices. Future research should perform FIMIX-PLS to treat unobserved heterogeneity in the PLS path modeling. Lastly, future studies should examine the perception of marketing segments as exogenous constructs in relationship with intention, purchase intention and satisfaction as endogenous constructs.

Appendix A. Measurement items

See Table A1.

Table A1
Measurement items.

	Research constructs	Measurement scale
1	Perfectionistic/High quality conscious[a]	**PRF1** Getting very good quality is important to me. **PRF2** When it comes to purchasing product, I try to get the very best or perfect choice. **PRF3** In general, I usually try to buy the best overall quality. **PRF4** I make a special effort to choose the very best quality products.
2	Brand consciousness/Price equals quality[a]	**BRN1** The higher the price of the product, the better the quality. **BRN2** Nice stores offer me the best products. **BRN3** The most advertised brands are usually very good choices.
5	Price conscious/Value for money[a]	**PRCC1** I buy as much as possible at sale prices. **PRCC2** The lowest price products are usually my choice. **PRCC3** I look carefully to find the best value for the money.
3	Novelty and fashion conscious[a]	**FSH1** I usually have one or more outfits of the very newest style. **FSH2** I keep my wardrobe up-to-date with the changing fashions. **FSH3** Fashionable, attractive styling is very important to me. **FSH4** To get variety, I shop different stores and choose different brands. **FSH5** It is fun to buy something new and exciting.
4	Recreational and shopping conscious[a]	**REC1** Shopping is a pleasant activity to me. **REC2** Going shopping is one of the enjoyable activities of my life. **REC3** Shopping from the stores wastes my time. ® **REC4** I enjoy shopping just for the fun of it.
6	Impulsive/Careless[a]	**IMP1** I am impulsive when purchasing. **IMP2** Often I make careless purchases I later wish I had not. **IMP3** I do not carefully watch how much I spend.
9	Product[b]	**PRD1** The quality of most products I buy today is as good as can be expected. **PRD2** I am satisfied with most of the products I buy. **PRD3** Most products I buy wear out too quickly. ® **PRD4** Products are made as well as they used to be. **PRD5** Too many of the products I buy are defective in some way. ® **PRD6** The companies that make products I buy care enough about how well they perform. **PRD7** The quality of products I buy has consistently improved over the years.
10	Price[b]	**PRC1** Most products I buy are overpriced. ® **PRC2** Businesses could charge lower prices and still be profitable. ® **PRC3** Most prices are reasonable considering the high cost of doing business. **PRC4** Competition between companies keeps prices reasonable. **PRC5** Companies are unjustified in charging the prices they charge. ® **PRC6** Most prices are fair. **PRC7** In general, I am satisfied with the prices I pay.
11	Advertising[b]	**ADV1** Most advertising provides consumers with essential information. **ADV2** Most advertising is very enjoyable. **ADV3** Most advertising makes right claims. **ADV4** If most advertising was eliminated, consumers would not be better off. **ADV5** I enjoy most of the advertisements. **ADV6** Advertising should be more closely regulated. **ADV7** Most advertising is intended to inform consumers.
12	Retailing[b]	**RTL1** Most retail stores serve their customers well. **RTL2** Because of the way retailers treat me, most of my shopping is pleasant. **RTL3** I find most retail salespeople to be very helpful. **RTL4** Most retail stores provide an adequate selection of merchandise. **RTL5** In general, most retailers make less profit. **RTL6** When I need assistance in a store, I am usually able to get it. **RTL7** Most retailers provide adequate service.

®: Reverse coding.

[a] 7-Point scale anchored by "strongly disagree" to "strongly agree". Adopted from Zhou et al. (2010).
[b] 6-Point scale anchored by "strongly disagree" to "strongly agree". Adopted from Gaski and Etzel (1986).

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