

Means-end chain approach for exploring the motivation of ready-to-drink tea consumers

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Received 4 August 2015
Revised 9 November 2015
28 December 2015
Accepted 28 December 2015

Abstract

Purpose – Ready-to-drink (RTD) tea beverages are widely consumed worldwide and play a prominent role in people's daily lives, yet few studies have investigated the motivation of RTD tea beverage consumers as well as their underlying attitudes and desires. The purpose of this paper is to explore why these attributes are motivational factors by focussing on the attributes of RTD tea beverage products that motivate consumers to purchase RTD tea.

Design/methodology/approach – The attribute-consequence-value model of the means-end chain approach was employed to investigate consumer motivations for purchasing RTD tea beverages. Data were collected through a qualitative face-to-face survey of 153 RTD tea beverage consumers in Taiwan.

Findings – The results indicate that consumers purchase RTD tea beverages because the taste, flavor, packaging, and ingredients (attributes) satisfy their desire to drink RTD tea and fulfill the benefits of being delicious to drink, possessing thirst-quenching properties, and possessing health-promoting properties (perceived consequences), thereby fulfilling their ideal goal of experiencing enjoyment (perceived product value).

Originality/value – The findings may serve as a reference for producers of RTD tea beverages regarding product development and marketing.

Keywords Product attributes, Consumption motivation, Means-end chain (MEC), Ready-to-drink (RTD), Tea beverages

Paper type Research paper

Introduction

Tea is one of the most widely consumed beverages worldwide because of its low cost, which is second only to water (Hazarika, 2013), and polyphenol content, which is associated with potential health benefits (Del Rio *et al.*, 2010; Subramanian *et al.*, 2014; Shinozaki and Harada, 2014). In contrast to coffee, which is perceived as a stimulant, tea is viewed by people in Eastern countries as a health drink (M2 Presswire, 2014). Therefore, drinking tea plays a prominent role in the lives of people of all ages and social statuses (Hazarika, 2013); moreover, two-third of the world's population drink tea (Kim *et al.*, 2011; Jingxia and Zhaodan, 2012).

As carbonated drink sales continue to drop, the international market for ready-to-drink (RTD) tea, which comprises tea in bottles, cans, and polyethylene-terephthalate packaging, has expanded (Cho *et al.*, 2005) and undergone steady development (Shinozaki and Harada, 2014) because of people's fast and busy lifestyles (M2 Presswire, 2014). The global RTD tea market is valued at approximately US\$65 billion, and sales are predicted to increase by 4.5 percent annually between 2014 and 2018 (First Research Industry Profiles, 2015). With numerous RTD tea beverages currently available on the market (Lee and Liao, 2009) and new types of RTD tea beverage continually being introduced (Manufacturing Close-Up, 2013), it is imperative for tea marketers to increase their understanding of the attitudes and desires of RTD



tea beverage consumers. Although numerous studies have examined beverage consumer behavior (Su, 2007; Prawono *et al.*, 2013; Kim and House, 2014), few studies have focussed specifically on the motivation of RTD tea consumers as well as their underlying attitudes and desires. In addition, previous studies have shown that consumers tend to evaluate products according to product attributes (Richardson *et al.*, 1994) such as price, color, brand, packaging, and sensory features (Min *et al.*, 2012), which are the primary drivers of product success (Li *et al.*, 2015). However, few studies have investigated how product attributes are related to consumer motivation specifically in the context of purchasing RTD tea beverages.

Despite previous studies indicating that RTD tea sales volumes are increasing because of its convenience (Jingxia and Zhaodan, 2012) and perceived health benefits (Wu and Wu, 1998; Subramanian *et al.*, 2014; Storelli, 2014), the product attributes that are critical to driving consumer purchases of RTD tea and the relationship between such attributes and consumer motivation remain unclear.

Product attributes are crucial to consumers (Kelley *et al.*, 2015) because consumers rely on product attributes to shape their opinions about the quality of the product (Veale and Quester, 2009; Sanyal and Datta, 2011) and overall satisfaction with the product (Chang and Kukar-Kinney, 2011). Previous studies have suggested that consumer evaluations of product attributes are cognitive processes (Wang and Han, 2014) and that this process can be explained using the attribute-consequence-value of the means-end chain (MEC) approach (Lin and Fu, 2005; Lin and Chang, 2012; Le *et al.*, 2013). The MEC approach assumes that links between cognitions form hierarchical belief systems (a series of linked beliefs that are associated with each other) in the human memory and that these association chains determine a person's perceptions and behaviors toward objects (Koo *et al.*, 2008). The MEC approach has been employed to investigate the dominant motivations of purchasing behavior that link product attributes to consumer motivations (Wagner, 2007). The MEC approach can be adopted to determine the connection between products and consumers (Reynolds and Gutman, 1988) as well as that between product attributes and perceived product value (Le *et al.*, 2013). Therefore, the present study adopted the MEC approach to investigate the product attributes of RTD tea beverages to determine how they satisfy consumer motivation to purchase RTD beverages. This study addressed the following core research questions:

- RQ1. What are the critical product attributes of RTD tea beverages that affect consumer purchasing behavior?
- RQ2. How do these product attributes drive consumer motivation for purchasing RTD tea beverages?

The findings of this study may serve as a reference for product design and marketing.

Literature review

Tea contains caffeine (Hewlett and Wadsworth, 2012), which can enhance alertness and mental functioning when consumed in moderation (Smith, 2002). Therefore, people typically drink tea when they feel sleepy in the afternoon and when they require a stimulant (Su, 2007). As people's health awareness has increased (Shinozaki and Harada, 2014), consumption of tea beverages has increased worldwide because tea polyphenols are beneficial to health (Wu and Wu, 1998; Subramanian *et al.*, 2014).

Among the various types of tea that consumers purchase, the sales volumes of RTD tea beverages are increasing in numerous countries (Kumar *et al.*, 2013). RTD teas

account for nearly 60 percent of total tea consumption in the USA, with a sales volume of US\$4 billion and a market growth rate of 1.9 percent in 2012 (Kennedy, 2013). From 2006 to 2011, China's RTD tea market exhibited double-digit annual growth (M2 Presswire, 2012a, b). In addition, teens and young adults are the largest groups of RTD consumers, with 52 percent of 12-17-year-olds drinking tea (First Research Industry Profiles, 2012). Market research has predicted that RTD tea consumption will continue to grow over the next five years (Storelli, 2014), with young adults and health-conscious consumers being the primary targets of marketing (Manufacturing Close-Up, 2013).

Because of the beneficial effects of tea on the human body and the size and value of the tea market, several scholars have further attempted to elucidate consumer behavior toward tea. For example, Wu and Wu (1998) explored consumer considerations regarding the benefits of tea beverages such as the uplifting effect, health benefits, brand, flavor, fashion, convenience, and time convenience. Su (2007) suggested that scent and flavor are the main factors that consumers consider when selecting and purchasing tea. Lee and Liao (2009) indicated that attributes of tea beverages such as brand reputation, price, flavor, volume, packaging, advertising, quality, and the degree of thirst quenching determine the perceived position of tea brands. Despite these studies focussing on the attributes of tea beverages, relatively little is known about what product attributes of RTD tea beverages consumers consider when making purchase decisions and how such attributes satisfy consumer motivation to purchase RTD tea beverages.

The MEC approach explains how desirable product attributes (attributes) lead to positive outcomes or product usage (consequence), which then fulfill ideal end goals (value) (Lin and Fu, 2005). In other words, the MEC approach enables explicitly linking product attributes and perceived positive or negative consequences, thereby revealing consumer goals and motivations in purchasing a product (Zanoli and Naspetti, 2002). The approach has been adopted to identify consumers' motivations for adopting specific products and services (Kaciak and Cullen, 2006; Lin and Chang, 2012) such as organic foods (Zanoli and Naspetti, 2002), domestic products (Arsil *et al.*, 2014), table grapes (Jianying *et al.*, 2014), mobile internet protocol television (Kang *et al.*, 2014), retail food (Devlin *et al.*, 2003), and furniture and home accessories (Lin and Chang, 2012).

Methodology

Research sample and data collection

This research was conducted in Taiwan, which has one of the world's leading RTD tea markets with an annual per capita consumption of over 40 L/person (M2 Presswire, 2012a, b). The growth in the per capita consumption of RTD tea is a trend in Taiwan (Business Monitor International, 2015). According to ACNielsen Taiwan, advertising expenditure on RTD teas in 2007 was more than twofold that on other RTD beverages, which was attributed to RTD tea being considered the market leader among all beverage categories (Smith, 2008); RTD tea beverages continued to be the highest-selling drink category in Taiwan in 2011 (M2 Presswire, 2012a, b). In 2006, RTD tea beverages accounted for 32 percent of the total market volume for beverages and had the highest demand among all beverages in Taiwan (Lee and Liao, 2009). Although the RTD tea beverages market is growing and new products are continually launched, the RTD tea beverages industry in Taiwan is highly competitive (Lin and Hsu, 2002).

The present study focussed primarily on investigating the motivations of RTD tea beverage consumers from the perspective of product attributes. Consumers who purchased RTD tea beverages were included as the research sample. By conducting interviews outside convenience stores, we collected consumer opinions on purchasing

RTD tea beverages. The interviewers approached consumers and invited them to participate in the study as they exited convenience stores. The consumers were informed that the questionnaires were anonymous and that the data were collected for academic purposes. The MEC approach was adopted as the basis of this study and soft laddering was used to elicit consumer opinions. The soft laddering method is “an interview form where the respondent’s natural flow of speech is restricted as little as possible” (Sonne *et al.*, 2012, p. 89). Previous studies have indicated that, in soft laddering, more than 20 people must be individually interviewed and that the manner or content of the answers must not be limited in order to effectively determine and analyze consumer perceptions toward the product attributes and the consequences and values of using the product (Gutman and Miaoulis, 2003). Thus, after the consumers agreed to participate, they were asked the following question for sample classification: “Do you habitually purchase RTD tea beverages?” If the consumers answered affirmatively, they were then formally interviewed. To acquire the first-level attributes (A) of purchasing RTD tea beverages, the interviewers probed the interviewees by using the following questions: “What are the product attributes you consider when purchasing RTD tea beverages?”; “What other product attributes do you consider?”; and “Can you think of any other product attributes you would consider when purchasing RTD tea beverages?” Further probing continued until the respondents could no longer explain any additional product attributes that they consider when purchasing. Following the recommendations of Reynolds and Gutman (1988) to acquire second-level consequences (C) of purchasing RTD tea beverages, the interviewers proceeded to use the first-level attributes (A) as a basis for ascertaining the consequences of each attribute, as follows: “You mentioned A1 as an important attribute affecting your purchase of RTD tea beverages – why is that important to you?” This procedure was repeated (“What other reason?” and “Can you think of any other reason?”) until the respondents could not think of any other consequence. Subsequently, the interviewers proceeded to use these second-level consequences (C) as a basis for determining the consumers’ ideal end goals by employing the following question: “You mentioned C1 as a reason affecting your purchase of RTD tea beverages – why is that important to you?” This procedure was repeated until the respondents had no additional response and the ideal end goal (value) was acquired. The entire process was repeated for each first-level attribute. Next, a content analysis was conducted to aggregate the descriptors mentioned by the respondents in order to organize and simplify the interview content. Finally, by calculating the frequency of each chain, we constructed a hierarchical value map (HVM).

Demographic information of the interviewees

A total of 206 consumers were approached to participate in the interviews; 53 were excluded because they had either never purchased RTD tea or provided incomplete answers. Thus, 153 valid responses were obtained, yielding a response rate of 74.4 percent. As shown in Table I, most of the interviewees who purchased RTD tea beverages were younger than 20 years ($n = 53$), followed by those aged 20-29 years ($n = 43$), and possessed a bachelor’s degree ($n = 66$).

Data analysis and results

Content analysis

Table II shows the statistical data regarding the frequency of the reasons for purchasing RTD tea beverages. By relevance, the most frequently mentioned product

Table I.
Demographic
information of the
interviewees

Demographic information	Frequency	Percentage
<i>Gender</i>		
1. Male	81	52.9
2. Female	72	47.1
<i>Age</i>		
1. Under 20 years	53	34.6
2. 20-29 years	43	28.1
3. 30-39 years	37	24.2
4. 40-49 years	14	9.2
5. 50-59 years	5	3.3
6. 60-69 years	1	0.7
<i>Education</i>		
1. Below junior high school	9	5.9
2. Junior high school	30	19.6
3. High school	35	22.9
4. College	66	43.1
5. Master	13	8.5

attributes were “taste” (44.4 percent of respondents), “flavor” (28.8 percent), “packaging” (15.7 percent), “ingredients” (12.4 percent), “price” (7.8 percent), and “brand” (5.2 percent). The results revealed that taste and flavor were the most crucial product attributes that consumers considered when making purchasing decisions. By relevance, the desired consequences of purchasing RTD tea beverages were “delicious to drink” (19.6 percent), “thirst-quenching properties” (15.0 percent), “health-promoting properties” (7.8 percent), “low cost” (4.6 percent), “oil-reduction properties” (2.6 percent), “time convenience” (2.0 percent), “refreshing effect” (2.0 percent), “relaxing effect” (1.3 percent), and “reliability” (0.4 percent). Finally, based on the results of this study, “enjoyment” (54 percent) and “uplifting effect” (2.7 percent) were the most crucial perceived product values of RTD tea beverages.

HVM

After the relationship of each chain was determined on the basis of its crucial path, the HVM was constructed (Reynolds and Gutman, 1988). Because there were more than 50 interviewees, a cutoff value of 3-5 was considered to avoid generating an overly complex map and to allow for contextual adjustments. Furthermore, because we adopted open-ended interviews and the interview responses were decentralized, the cutoff value for generating the HVM was set at 3 (Figure 1). We organized the main product attributes of RTD tea beverages that the consumers considered, as well as the desired consequences and perceived product values that they derived from purchasing the RTD tea beverages.

The strongest chain was from attribute (A3) “taste” through consequence (C6) “delicious to drink” to value (V2) “enjoyment.” This result indicated that the interviewees generally selected an RTD tea beverage according to whether it was delicious to drink. The second strongest chain was from attribute (A4) “flavor” through consequence (C9) “health properties” to value (V2) “enjoyment.” This result showed that product flavor was associated with perceived health-promoting properties, which resulted in perceived enjoyment for the consumers. The third strongest chain was from

Cause	Effect
A1. Price (12)	C1. Money saving (12)
A2. Packaging (24)	C2. Time-saving convenience (19) V2. Enjoyment (4)
A3. Taste (68)	C8. Relaxing effect (1) C6. Delicious to drink (37) V2. Enjoyment (15) C4. Thirst-quenching properties (6) C9. Healthy properties (4) C5. Oil-reduction properties (3) C8. Relaxing effect (2) C7. Refreshing effect (1)
A4. Flavor (44)	C9. Healthy properties (21) C6. Delicious to drink (12) C4. Thirst-quenching properties (7) V2. Enjoyment (4)
A5. Ingredients (19)	C9. Healthy properties (14) C7. Refreshing effect (4) C5. Oil-reduction properties (1) C3. Reliability (8) V2. Enjoyment (7)
A6. Brand (8)	V2. Enjoyment (3) C9. Healthy properties (1) V2. Enjoyment (12) C9. Healthy properties (10) C8. Relaxing effect (1) C9. Healthy properties (4) V2. Enjoyment (26) C8. Relaxing effect (3) C9. Healthy properties (1) V1. Uplifting effect (3) V2. Enjoyment (2) V2. Enjoyment (10) V1. Uplifting effect (2)
C1. Money saving (7)	
C2. Time-saving convenience (3)	
C3. Reliability (1)	
C4. Thirst-quenching properties (23)	
C5. Oil-reduction properties (4)	
C6. Delicious to drink (30)	
C7. Refreshing effect (3)	
C8. Relaxing effect (2)	
C9. Healthy properties (12)	

Notes: A, product attributes; C, consequences of product use; V, perceived product value. The numbers in parentheses are representative values for the number of times participants mentioned in the survey

Table II.
The data of relations
for the attributes of
packaged tea
beverages

attribute (A2) “packaging” through consequence (C2) “time convenience” to value (V2) “enjoyment.” The RTD packaging of tea beverages was convenient to carry, which saved time when drinking RTD teas, and elicited feelings of enjoyment in the consumers. The fourth strongest chain was from attribute (A5) “ingredients” through consequence (C9) “health properties” to value (V2) “enjoyment.” This result showed that the ingredients of the beverages were perceived to demonstrate health benefits and elicited enjoyment in the consumers. According to our analysis, the consumers purchased packaged tea beverages primarily because they were delicious to drink, which induced feelings of enjoyment.

Discussion

One objective of the current study was to employ the MEC approach to explore the effects of the product attributes of RTD tea beverages and to determine how they

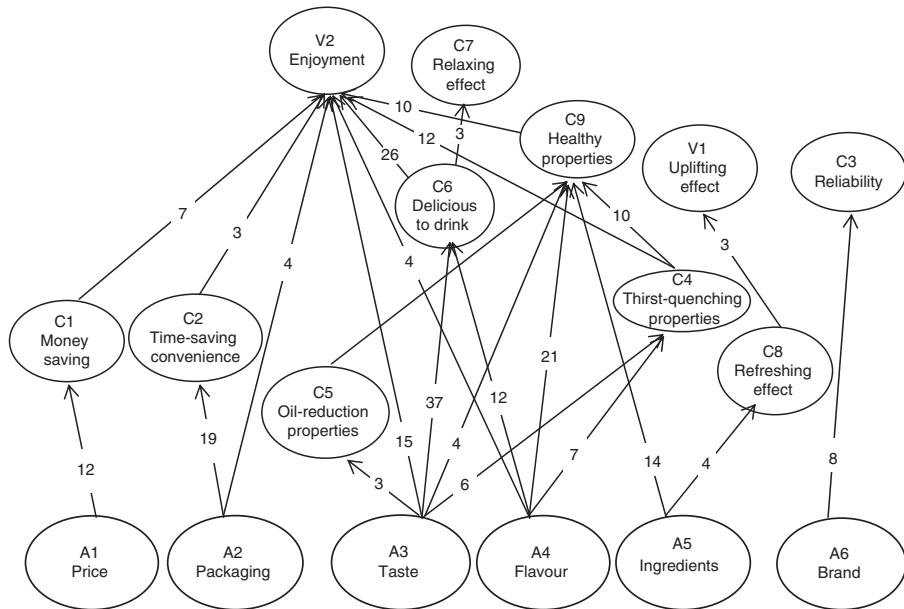


Figure 1.
Hierarchical value
map of packaged tea
beverages

motivate consumers to engage in purchasing behavior. Because of intense competition in the RTD tea beverage market, determining how consumers develop purchasing motivations is critical. This study provides empirical evidence regarding the motivation of RTD tea beverage consumers and indicates three salient findings regarding the attribute preferences of RTD tea beverage consumers. First, the taste and flavor of RTD tea beverages are the two dominant motivational attributes associated with such beverages being delicious to drink. In addition, the flavor and ingredients contribute to the degree of positive health benefits experienced. Furthermore, consumers associate the packaging of RTD tea beverages with convenience. Second, although brand is not a dominant motivational attribute, it builds consumer trust in RTD tea products. Third, fulfilling enjoyment is a critical end goal and perceived product value in motivating consumers to purchase RTD tea beverages.

Theoretical and managerial implications

Marketers have recognized the importance of studying human motivation in consumer behavior. We used the MEC approach to explore consumer motivations on the basis of their corresponding attribute preferences. Although previous studies have adopted the MEC approach as an interview method (e.g. Zanolli and Naspetti, 2002; Devlin *et al.*, 2003), few of them have focussed on RTD tea beverages. The current understanding of consumer motivation regarding RTD tea beverages is inconclusive. Therefore, this study adopted the MEC approach as the basis for conducting interviews, through which we gained insights into what motivates consumers to purchase RTD tea beverages and determined the consequences of the product attributes of the RTD tea beverages that consumers purchase. Because of the steady increase in RTD tea consumption, understanding the motivations that drive the purchasing behavior of consumers regarding RTD tea beverages remains crucial for producers of RTD tea beverages.

This study explored RTD tea beverage attributes and consumers' perceived values by using the MEC approach. Through interviews with consumers, we found that many consumers consider taste and flavor to be crucial product attributes because they associated these attributes with the drinks being delicious and the enjoyment that they derived from drinking them. In addition, because of increased health awareness, consumers tend to purchase RTD tea beverages because they believe that they provide health benefits according to the product flavor and ingredients. This study hierarchically organized the motivations of RTD tea beverage consumers' cognitive processes that corresponded with the product attributes, desired consequences of product usage, and ideal goals. This finding elucidates the relationship between RTD tea beverages and consumer motivation.

We revealed the relationship between RTD tea beverage attributes and the underlying motivations of RTD tea beverage consumers, providing relevant implications for managers. Therefore, the results of this study may serve as a reference for RTD beverage companies in developing and promoting their products; the MEC approach is useful for deriving practical implications for companies in marketing RTD tea beverages. Because consumers value the taste and flavor of tea beverages, RTD tea beverage companies should focus on these aspects in their product development and marketing. In addition, because of increased health awareness, the health benefits of tea beverages should be communicated to consumers. Finally, because consumers purchase RTD tea beverages to save time (e.g. to avoid having to wait in queues at tea shops or use tea bags or loose tea leaves), convenient packaging, which makes drinking and carrying tea easier, is crucial for encouraging consumers to purchase certain products. Therefore, convenient packing should be considered in product development.

According to our interviews and data, when consumers drink RTD tea beverages, they anticipate being in a positive mood and experiencing enjoyment. Therefore, the taste and flavor attributes of RTD beverage are crucial. The results reveal that enjoyment is the ultimate goal that consumers aspire to when they consume RTD tea beverages. Therefore, "enjoyment" should be included as a key factor in the marketing of RTD tea beverages.

Limitations and future research

This study has several limitations. First, Huang and Yu (1999) suggested that explicit (conscious recall and recognition) and implicit (nonconscious) memory are involved in consumer purchase decisions. Although implicit memory is likely more relevant than explicit memory in consumer choice (Auty and Lewis, 2004) and acting exclusively on the basis of explicit memory can be disadvantageous (Afef and Jamel-Eddine, 2015), further research is required to replicate our findings by using technologies for investigating implicit memory. For instance, although brain imaging provides a neurological explanation (Fugate, 2008), marketers could theoretically experiment with various product attributes to observe changes in neurophysiological processes. Future studies should consider augmenting the survey methodology with an approach that incorporates functional magnetic resonance imaging. Second, a convenience sampling was used, and the generalizability of the results is limited. To improve the generalizability, future research should replicate our approach by using a large sample and adopting a random sampling procedure. Third, this study used the MEC approach to understand consumers' desired beneficial consequences by determining their product-attribute-based choices. Future research should provide precise descriptions of flavors (e.g. green, oolong, and black tea), tastes (e.g. sweet, bitter, and umami), ingredients (e.g. caffeine, polyphenols, and antioxidants), packaging (e.g. typography, colors, graphic shapes, and illustrations), and consumer preferences. Finally,

previous studies have indicated that consumers of various age groups differ in their preferences for categories of RTD tea (Cho *et al.*, 2005). Future research should investigate the effects of individual characteristics on consumer motivation. Because of the increased consumption of RTD tea beverages, future studies should investigate consumer motivation for purchasing RTD tea to assist RTD tea beverage marketers in adapting and improving their product development and marketing strategies.

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