Changing Familial Food Consumption Ritual and Practice: An Empirical Study among Saudi Arabia

Abdullah M. Alhidari¹ and Soad Abdullah Almeshal²

¹,²(Marketing Assistant Professor, Marketing Department/King Saud University, Riyadh Saudi Arabia)

Abstract: The current study aims to investigate families’ behavior in buying bottled water and consumption in Saudi Arabia. An attempt to illustrate the factors influencing the purchase intention as a result of changing habits and practices. Familial food purchasing and consumption is a powerful in understanding consumer behavior and can be a powerful tool to enhance purchase intentions towards food in the future given that families have changed their lifestyle. This paper has made an attempt to study changing families’ food consumption for bottled water purchase intention. Not many studies have been conducted to study the changing in families bottled water consumption in developing countries like Saudi Arabia.

Keywords: Food consumption, Families life style, bottled water, product design.

I. INTRODUCTION

Family as unit of analysis in consumption and decision making is an important phenomenon in marketing. Marketers are interested in understanding family’s decision making because it considered as the most decision in the consumption domain (Assael, 1998). It is estimated that the purchasing power parity (PPP) is $21,417,150 for China – ranked number 1 on PPP –, $18,569,100 for United States – ranked number 2 and $1,756,793 For Saudi Arabia-ranked number 15 (Worldbank, 2017).

Rapid growth of population, limited water supply, and changing in lifestyle have increased the bottled drinking water consumed. Families have changed their lifestyle, preferences, and consumption of water in the past several years (Huff and Cotte, 2015). Accordingly, the increase in bottled water consumption and the families’ perception of bottled water as a safe source of water in many countries even who has clean tap water (Ferrier, 2001). Bottled water in this study means the bottled that can be carried with one hand and might come in different sizes (from 8 US fluid ounces to 1 liter). Bottled water is the most consumed beverages in the U.S. with 39.3 per capita in 2016 (compare to 38.5 per capita for soft drinks) (Fortune, 2017).

Bottled water industry is growing rapidly in the recent years as healthy supernumerary to tap water and soda drinks (Doria, 2006). More than that, the bottled water market is success to attract consumers to consume more bottled water (Feliciano, 2014). In addition, the cost of bottled water advertisements is less than any other brand/product in the beverage industry (International Bottled Water Association, 2014). In 2016, Saudi drink 5.1 billion of liters of bottled water (Passport, 2017).

The shifting in consuming bottled water is due to several causes such as; the taste of tap water, health purposes, changing in life style, changing in drinking rituals and the availability of bottled water (Al-Zahran, Albaqshi, & Alhelal, Mohamed, Alagha, Isam, 2017). It is not surprising that marketers are looking at bottled water consumption with great potential, especially the change in family lifestyle who moved from tab water and soda to bottled water due to convenience and health reasons (Prithviraj, 2009).

Further, researcher have been studying families from different perspectives such as family life cycle (Huff and Cotte, 2015), children’s consumption experience within families (Kerrane amd Hogg, 2011), and family decision (Berey and Pollay, 1968). Prior research in marketing has focused in families and not changing in life style with food consumption. These changing in life style and food practices invite further research.

In this study, we are investigating families’ behavior in buying bottled water and consumption. Families and home consumption of water depends on many factors such as product design and perceived price. Each construct might have pulled the whole family to consume more bottled water. The study investing the different construct together to get better understanding of the important reasons that made the families increase their consumption of bottled water.

Importance of the Study

One important issue when developing nations is to study the people lifestyle, ritual and in specific culture. Thus, his study addresses families’ behavior in buying bottled water and consumption as water is the most necessary source of life. The current study focuses on certain variables that may affect the families and home consumption of bottled water, namely; product design, perceived value, perceived price, e-WOM, Brand trust, and purchase intention. This study will shed light on consumer behavior in Saudi Arabia context and the cultural factor affecting the market.

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II. LITERATURE REVIEW

Theoretical Background

The current study focuses mainly on changing in family consumption buying behavior and how this behavior can be interpreted among bottled water consumption. Equity theory (Adams, 1963, 1965) is one of the oldest theories that succeeded to explain human behavior, this theory basically based on the assumption that assumes all individuals have the equal importance to equity; means the outcomes and the inputs should be equal. Based on equity theory consumers' cares about the outcomes they expected from the inputs they paid, thus, the intention to purchase a product is based on the contribution the product added. Furthermore, the theory stated that the equality is an essential condition to ensure the intended fulfillment for the needs for all consumers. To gain more understanding of the way families as unit of analysis in this study Leventhal (1976) illustrated the meaning of equity by three rules namely; (a) the contribution rule of the inputs to the outputs, (b) the needs rule, which stated that the legitimate needs is the base to rewarded people, and (c) the equality rule, means the outcomes are equal for everybody.

More than that, bottled water is a daily necessary product where trust is a must to meet the rapid changing in families' life style, commitment-trust theory Morgan and Hunt (1994) illustrated the importance of long relationship between consumers and suppliers. Furthermore, S-D logic recommend the two-way communication with consumers to ensure the expected perceived value (Vargo and Lusch, 2008).

Product Design

According to many environmental conditions changes in Saudi Arabia, the cost of water production increased which affect the selling prices. More than that, the families raised the living standard (Al-Zahrani et al., 2017). Many family customs and traditions are started to be more rational and logical, thus, Saudi Government helped people to reduce water loss rate by well-established guides and materials (Al-Omran et al., 2013). Referring to the equity theory, Leventhal (1976) stated that contribution, needs and equality are the major factors that explain the consumers’ behavior. From this illustrated perspective comes the importance of the perceived price that consumers accept to satisfy their needs. Simon (1982) pointed that consumers search for the satisficing alternative. The “satisficing alternative” happened when consumers believe maximizing utility comes at high cost, so they settle for less

The perceived price was defined “the consequence of making the purchase, which is deemed to be fair and worthwhile” (Du Plessis & Rousseau, 2007:178; Monroe, 2012:135-136,146). According to this definition

H1a: Product design positively influence brand trust
H1b: Product design positively influence e-WOM

Perceived Price

According to many environmental conditions changes in Saudi Arabia, the cost of water production increased which affect the selling prices. More than that, the families raised the living standard (Al-Zahrani et al., 2017). Many family customs and traditions are started to be more rational and logical, thus, Saudi Government helped people to reduce water loss rate by well-established guides and materials (Al-Omran et al., 2013). Referring to the equity theory, Leventhal (1976) stated that contribution, needs and equality are the major factors that explain the consumers’ behavior. From this illustrated perspective comes the importance of the perceived price that consumers accept to satisfy their needs. Simon (1982) pointed that consumers search for the satisficing alternative. The “satisficing alternative” happened when consumers believe maximizing utility comes at high cost, so they settle for less

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consumers evaluate the price with the expected value from the product to enhance the intention to purchasing decision process (Du Plessis & Rousseau, 2007; Monroe, 2012). The level of the perceived price is vary between customers because it based on social and economic factors (Maxwell, 1995). On the other hand, the perceived accepted prices depends on many important elements namely; product design, brand trust and word of mouth.

Previous literature pointed out the balance between brand trust and relative price. As the Saudi Markets have several new bottled water brands which have been introduced to the market, families who is the major consuming part need to be comfort and trust the water brand by accepting the price (Kahneman, Knetisch, and Thaler 1986; Maddah, and Alzhrani, 2017). When consumers feel committed to the brand as a result of the trust they will be willing to pay higher prices (Aaker, 1996). Therefore, we hypothesis the following:

\[ H2a: \text{Brand trust is positively influence brand trust.} \]
\[ H2b: \text{Brand trust is positively influence e-WOM.} \]

**Brand Trust**

Brand trust is one of important factors that must be presents to gain consumers satisfaction and increase the profit and finally the market share for the producers. It is an obligation from the producers of the brand to fulfil customers' expectations (Ahmed et al., 2014). One of the definitions of brand trust is; Mayer et al. (1995) as "the willingness of a party to believe the actions of another party based on the expectation that the other will perform a particular action properly, irrespective of the ability to monitor or control the other party." (Grabner-Krauter, 2002) stated that "trust reduces complexity in situations of uncertainty". Literature shows brand trust has positive relationship between perceived brand quality and the brand trust (Corritore et al., 2003). Also, commitment is considered as critical component of brand trust aims to increase the understanding of consumers' relationship which lead to perceive higher value (Morgan and Hunt, 1994).

Additionally, brand trust helps customers to reduce the uncertainty level (Kenning, 2008). Some scholars stated that there is significant relationship between perceived value and brand trust Chaudhuri and Holbrook (2001), where product value would increase if customers' brand trust is high.

As bottled water is considered to be under the Food and Drugs Authority. Saudi Market has diversity of bottled water brands which diffused in the Kingdom (Al-Omran et al., 2013). On other hand, bottled water competes with different types of cold/hot beverages were families recently cares heavily to encourage water consumption (Maddah, and Alzhrani, 2017). Thus, brand trust is a must to maximize the perceived value which is one of the aims of the current study. Thus, we hypothesize the following:

\[ H3: \text{Brand trust positively influence perceived value} \]

**E-WOM**

Word-of-Mouth (WOM) is a concept that has been known in the market long time ago. WOM was defined as “a process of personal influence, in which interpersonal communications between a sender and a receiver can change the receiver’s behavior or attitudes” (Sweeney et al., 2008). E-WOM was defined as “when consumer provide or search for informal product-related advice through the unique applications of these sites” (Chu and Kim, 2011, p. 50). Consumers usually perceive and belief information from their connections such as friends more due to the credibility and relevance (Liang & Scammon, 2011).

Recently, e-WOM become an essential tool that gain power because of its affect decisions of all market players such as; suppliers, competitions, substitutions, and new entry (King et al., 2014). More than that, e-WOM as a social media tool reflects the voluntarily choices and judgments, and the highly exposition to commercials at any given time (Chu and Kim, 2011). E-WOM become more useful to customers' retailers such as; families due to speed, convenience, and availability (Kamtarin, 2012).

Additionally, e-WOM provides content that consumers look for which enhance the perceived value. For example, consumers are classified to different categories regarding water consumption; some people drink tap water as a safer option, others use bottled water as an alternative to other beverages, others consumers drink bottled water because it taste different than tap water (EPA, 2013). For each category in the previous example consumers based heavily on e-WOM to justify their choice along with any other sources.

Abdolvand and Norouzi (2012) pointed that there is positive impact for customer perceived value and word-of-mouth. Pervious research shows that positive customer perception can enhance word of mouth and consumers’ purchase intentions (Liu and Lee, 2016; Oluwafemi and Dastane, 2017).

\[ H4: \text{e-WOM positively influence perceived value}\]

**Perceived Value**

The ultimate goal of each activity is to gain a value, in business language value a collection of benefits of a product at the certain point of time according to available information, thus the consistency of product attributes/characteristics will enhance the customer values (Blythe, 2013). Dodds and Monroe (1985) pointed that the perceived value is highly important in consumers’ purchasing decision. Therefore, for each individual consumer the level of perception of the advantages and disadvantages for the product is vary and influence the purchasing decision (Oluwafemi and Dastane, 2017).
With the advanced shift in life style in the GCC, bottled water consumption will rise by 50% to more than 21 billion liters by 2020 according to Gulf Organization for Industrial Consulting (GOIC) 2017 report. Families as major consumer for water need to rationally utilize and management water demand which is affected by many factors namely; social, economic, environmental and technical dimensions. On the other hand, Women play a central part in the provisions, management and safeguarding the water. (Al-Zahrani, 2010).

From behavioral perspective, consumers change their behavior through past experience and learning. For instance, consumers who had a bad experience with a restaurant are likely to avoid the restaurant and they also avoid restaurants with negative reviews or found to be very crowded (Voight, 2007). Swait and Sweeney (2000) found that there is logical relationship between customer perceived value and consumer purchase intention specifically in retailing industry.

**H5: perceived value positively influence purchase intention**

**Purchase Intention**

Purchase intention is one of the important factors that predict how consumer will behave (Fishbein & Ajzen, 1975). It is an indicator of the possibility of purchase decision and the willingness to search, evaluate the available options (Schiffman & Kanuk, 2000).

However, several cultural changes had been noticed in the last ten years among Saudi consumers, for example, the level of the awareness increased and the buying selection process tend to be more rational (Maddah and Alzhrani, 2017). The rate of beverages consumption such as; juices and bottled water is increased in Saudi context because of the increased in the population taken in consideration family is the core of the population (Al-Zahrani et al., 2017). Which force beverage manufactures in Saudi market to meet the market new demand (Maddah and Alzhrani, 2017).

To address the mental reasoning which enhance the purchase decision studies found that the perceived value is a good sign used by consumers to influence their intention to purchase to solve the problem of incomplete information (Nam et al., 2017). A positive relationship was noticed between attitude towards green products and purchase intention, (Cowan and Kinley 2014; Zheng and Chi 2015). Furthermore, if consumers perceive the expected value of a product they are be more likely to purchase it (Chen et al., 2017; Monroe and Krishnan (1985).

### III. RESEARCH MODEL

This study will be based on the following proposed model

![Research Model Diagram](image)

**Research Methodology**

The sampling frame for this study consisted of wide range of consumers of bottled water in Saudi Arabia using general population in online channels. The survey starts by asking the participants screening questions such as whether they drink bottled water during at all. After the screening questions, the participants were asked questions related to the main construct in the survey. Finally, demographic information was also collected.

In approximately five weeks, a total of 1079 completed and usable responses from the total participants, of which 37 responses were removed because these respondents did not complete the survey. The final sample size of 1042 survey consisted of 51% female and 49% female. The analysis, in term of bottled water spending, was: 32% spend $4 month on bottled water, 23% spend $ 8 on bottled water, and 44% spend more than $8 a month in bottled water (it cost 26 cents to buy one bottled water in Saudi Arabia). All participants in our study drink bottled water at least once every day. Pleas look at Table 1 for more details.

<table>
<thead>
<tr>
<th>Items</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>512</td>
<td>49</td>
</tr>
<tr>
<td>Female</td>
<td>530</td>
<td>51</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>512</td>
<td>49</td>
</tr>
</tbody>
</table>

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The non-response bias tested by comparing the mean for early response and the late ones. We found evidence that non-bias response is not an issue. We found that no single constructs account for more than 72% of the variance using Harman factor test to control for common method bias (Podsakoff and Organ, 1986) thus indicating that common method bias is not an issue.

Instrument Design

We adopted from previous literature most of our constructs in this study. For example, we adopted a scale to measure product design with seven items from Winnie and Ruto (2015) and E-WOM was measured by four items adopted from Henning-Thurau et al., (2004). Brand Trust scale with four items was adopted from Lau and Lee, (1999). Also, we adopted perceived price scale from Bei and Chiao (2001) and perceived value was measured by ten items adopted from Carunana and Fench (2005). In addition, we measured purchase intention using Spears and Singh (2004) four items scale. The initial scales were adopted in English, then we translated the scale into Arabic. We used experts’ opinion to translate the scale to Arabic. Back translation was conducted to ensure consistency. In our study, we used a 5 point Likert scale items anchored between (1) ‘Strong Disagree’ and (5) ‘Strongly agree’. Demographics were asked and added to the questionnaire.

IV. DATA ANALYSIS

Structural Equational Modeling (SEM) – AMOS- was used to analyze the data because of the higher order construct in our model (Gerbing and Anderson, 1988). We followed Gerbing and Anserson (1988) two-step process. First, we assessed the measurement model to check the reliability and validity of the model and scales. Convergent validity was assessed by looking at the estimate, all of which were significant (BAgozzi and Ui, 1988; Hair. Black).

Babin, Anderson, and Tatham (2009) Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were conducted to understand the data in hand. EFA extracted 6 factors for this model. After deleting three cross loading items the factor analysis was confirmed by using structural equation modeling (Anderson and Gerbing, 1988). On average the factor loadings are greater than 0.673 for each construct (for more details refer to the Appendix). The AVE and phi scores, along with composite reliability for each construct are presented in Table 2.

<table>
<thead>
<tr>
<th>CR</th>
<th>AVE</th>
<th>price</th>
<th>Value</th>
<th>eWOM</th>
<th>Trust</th>
<th>Design</th>
<th>PUI</th>
</tr>
</thead>
<tbody>
<tr>
<td>price</td>
<td>0.934</td>
<td>0.738</td>
<td>0.859</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td>0.868</td>
<td>0.688</td>
<td>0.44</td>
<td>0.83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>eWOM</td>
<td>0.846</td>
<td>0.65</td>
<td>0.038</td>
<td>0.393</td>
<td>0.806</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>0.899</td>
<td>0.691</td>
<td>0.313</td>
<td>0.101</td>
<td>0.089</td>
<td>0.831</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>0.844</td>
<td>0.524</td>
<td>0.204</td>
<td>0.111</td>
<td>0.283</td>
<td>0.183</td>
<td>0.724</td>
</tr>
<tr>
<td>PUI</td>
<td>0.77</td>
<td>0.529</td>
<td>0.05</td>
<td>0.097</td>
<td>0.499</td>
<td>0.521</td>
<td>0.054</td>
</tr>
</tbody>
</table>

The model fit was appropriate (X²=638.681; df =215; p-value= 0.00; CFI = 0.969; RMSEA = 0.044; NFI = 0.954; IFI = 0.969; RMR (SRMR) = 0.035 (0.000); GFI = 0.950). The literature on global fit indices suggests not looking at any one fit index, but to look at several fit indices, taken together, indicating that the
model fit is acceptable. The positive correlation between the variables can be ascribed an association in which high scores on one variable increase the other variables.

**Hypotheses testing**

Next, the structural model (in Figure 1) was assessed to test the hypothesized relationships (Bagozzi and Yi, 1988; Bentler and Chou, 1987; Grebing and Anderson, 1988). The Global fit indices suggest that the model that we have is acceptable fit for the sample (X²=892.361; df =222; p-value= 0.00; CFI = 0.951; RMSEA = 0.054; NFI = 0.936; IFI = 0.951; RMR (SRMR) = 0.082 (0.00); GFI = 0.932).

The path estimates provide support for H1b, H2a, H3, and H5. Product design influences brand trust in food sector. Perceived price influence brand trust. Brand trust influences perceived value. Perceived value influences purchase intention.

The mediation relationship in this model is reported here. Trust do not mediate the relationship between product design and perceived value. Also, eWOM do not mediate the relationship between product design and perceived value. On the other hand, trust partially mediates the relationship between perceived price and perceived value. Finally, eWOM partially mediate the relationship between product design and perceived value (look at the table 4 for more details)

**TABLE 3: Structural Relationships**

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Direct without Mediation</th>
<th>Direct with Mediation</th>
<th>Indirect</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a: Design → Trust</td>
<td>0.027(0.425)</td>
<td></td>
<td></td>
<td>Not significant</td>
</tr>
<tr>
<td>H1b: Design → eWOM</td>
<td>0.093(0.011)</td>
<td></td>
<td></td>
<td>Significant</td>
</tr>
<tr>
<td>H2a: Price → Trust</td>
<td>0.307(0.000)</td>
<td></td>
<td></td>
<td>Significant</td>
</tr>
<tr>
<td>H2b: Price → eWOM</td>
<td>0.020(0.556)</td>
<td></td>
<td></td>
<td>Not significant</td>
</tr>
<tr>
<td>H3: Trust → Value</td>
<td>0.303(0.000)</td>
<td></td>
<td></td>
<td>Significant</td>
</tr>
<tr>
<td>H4: eWOM → Value</td>
<td>0.017(0.580)</td>
<td></td>
<td></td>
<td>Not significant</td>
</tr>
<tr>
<td>H5: Value → PIU</td>
<td>0.513(0.000)</td>
<td></td>
<td></td>
<td>Significant</td>
</tr>
<tr>
<td>Design trust value</td>
<td>0.011(0.747)</td>
<td>0.001(0.971)</td>
<td></td>
<td>No mediation</td>
</tr>
<tr>
<td>Design eWOM value</td>
<td>0.011(0.747)</td>
<td>-0.001(0.973)</td>
<td></td>
<td>No mediation</td>
</tr>
<tr>
<td>Price trust value</td>
<td>0.441(0.000)</td>
<td>0.350 (0.000)</td>
<td></td>
<td>Partial mediation</td>
</tr>
<tr>
<td>Price eWOM value</td>
<td>0.441(0.000)</td>
<td>0.367(0.000)</td>
<td></td>
<td>Partial mediation</td>
</tr>
</tbody>
</table>

However, we do not find support for H1a, H2b, and H4. That means product design has no influence on brand trust. Perceived price has no influence on eWOM. Also, eWOM has no influence on perceived value.

**Discussion**

This study attempts to enhance our understanding of familial purchase on the food domain. Families use prices and product design to indicate the best products available and to perceived their value. Also, families from their trust based on the product design and price. The product design and the price of the product might trigger families to spread the word electronically. On the other hand, families perceived their value based on their trust and word they hear electronically.

**V. CONCLUSION**

This study provides insights for marketers to effectively target families regarding their food purchasing habits. It is also adding to the current literature on changing in familial food purchasing and consumption. Our results corroborate the findings in previous research on family and food purchasing (Huff and Cotte, 2015). Familial food purchasing and consumption is a powerful in understanding consumer behavior and can be a powerful tool to enhance purchase intentions towards food in the future given that families have changed their lifestyle. Next, the theoretical and managerial implications are discussed.

**Implications**

This study has several theoretical and managerial implications based on the results we have. To start with, our results extends our understanding of familial food purchasing and consumption. Extant literature investigates the role of family members (Adults children and their elderly parents) in purchasing product or services (Huff and Cotte, 2015; Karrane ad Hoog, 2010; Commuri and Gentry, 2000; Peter, Olson and Grunert, 1999) and family life cycle, (Cox,1975). To the best of our knowledge, this study is one of the few studies linking the families changing purchase behavior and food consumption. Even though food is important and needs more critical look in terms of consumers (families) behavior. Since trust and social influence our activities (Seavae, 2013), eWOM and trust has a potential to influence families’ behavior in buying food. Brands that can
focuses on family consumption may use eWOM and trust to exert an influence on families purchasing intentions.

Limitations and Future Studies

The major limitation faced the authors in this study is, some participants don’t know what tap water is. However, for future research it is recommended that researchers conduct cross-sectional studies in GCC to come up with a holistic understanding of bottled water consumption. Future research can be made using different types of food. It is suggested to conduct qualitative research to support the quantitative approach of for changing families’ consumption on bottled water purchase intention.

Acknowledgment

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VI. REFERENCES