Studying the Behavior of Consumers Dairy Products (Milk, Cheese, Yogurt) in Kermanshah and Kurdistan

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ABSTRACT

Consumer behavior analysis is based on consumer’s buying behavior. It aims at improving business performance through an understanding of the customer’s preferences and desires. In today’s world of growing competition where there are numerous brands selling the same products, consumers have an abundant number of choices and many diverse factors influence their buying behavior. The purpose of present paper is to compare and analyze the behavior of Dairy products consumers in Kermanshah and Kurdistan which addresses to the relationship between the aspects of consumers' behavior, demographical variables and their importance in each studied city. 92 individuals in Kermanshah and 102 individuals in Kurdistan were randomly sampled and accepted to answer. By measuring each index by determining variables which could measure them, we studied and compared both communities by using Kolmogorov – Smironov as well as Cramers V and Freedman tests. Research findings show that mental and personal factors in Kurdistan have more impacts on the behavior of processed meats than Kermanshah so that there is a significant difference between such factors in studied cities. In the meantime, it became clear that the importance degree of each behavioral aspect of consumers in Kurdistan and Kermanshah is somehow in harmony: 1. Personal factors, 2. Mental and hidden stimulant factors, 3. Social factors.

Keywords

Consumers,
Consumers’ Behavior Analysis,
Dairy Products.

Introduction

Consumer is a person who buys or uses things (goods) or services. Marketers are the persons who provide these services. The most challenging questions for marketers are why buyers do what they do (or don’t do). Such knowledge is critical for marketers, since having a strong understanding of buyer’s behavior will shed light on what is important for the consumer and also suggest the important influences on consumer decision-making. Factors affecting consumers’ buying decisions are extremely complex. It is deeply rooted in psychology with dashes of sociology thrown in just to make things more interesting. It explains the influences on the consumer from groups such as family, friends and society in general. Consumers’ buying behavior result from deeply held values and attitudes, their perception of the world, their place in it, from common sense, from impulse or just plain take. Consumption of dairy products (milk, cheese, powdered milk, cream, ice cream, yogurt, and butter) in the GCC countries has grown at an average rate of 4% during the 90’s and the Iran with 15% of the region’s consumption leads other countries in per capita share (O’Brien, 1998). Dairy products have been a major component of diet since prehistoric times (Addison, 1999). A higher income level may have contributed to increased consumption and variety but little may have changed in consumption patterns through the years. Consumers' behavior is a new debate. The first textbooks on this issue were authored in 1960s though the origin of such thinking backs to many years ago. Consumers' behavior includes various mental and social processes occurred before and after purchase and consumption (Roosta, 2009). Recognizing consumers’ behavior can help a public policymaking on consumers’ behavior principles. Population explosion and new conditions at urban communities have decreased physical access to fresh foodstuffs such as fruits and vegetables and people has to spend more time outside their homes and at workplaces for further economic prosperity of their families. Therefore, they have recourse to fast foods for easy access to foodstuffs (Yaghobiifar, 2009). The consumers’ tastes and preferences become more pronounced as affluence increases and hence variables, such as demographics, education, and ethnicity have more influence on demand. In this study a survey was conducted to elicitation information to analyze and understand some aspects of Iran consumers’ behavior and to estimate expenditure elasticity’s for the above major dairy products for different income levels; possible differences between nations and expatriates will also be highlighted. In Iran, Milk, Cheese and Yogurt are produced as a mixture of Dairy products. Owing to the fact that Milk, Cheese and Yogurt consist a remarkable segment of daily food of many people in different social and age levels, we are planning in this research to study their behavioral determinants.

Literature

Our perception of consumers’ behavior is improving continuously and marketers’ energy is spent on refining consumers’ behavior. However, there is important point should be learned: marketing success is widely depended on the reasons of consumers’ behavior (Stanton, 1991). Consumers’ behavior refers to the behavior of end-users and families who purchase goods and services for their personal consumption (Kotler, 1998).
To understand consumers’ behavior, we should determine the reasons for buying services and goods by consumers. Overall, people buy goods and services when they bring double value for them (Crewal, 2008).
Consumers' purchases are strongly impacted by their mental, personal, social and cultural traits shown by Kotler in figure 1 (Kotler, 2007).

Figure 1: affecting factors on consumers' behavior (Kotler, 1994).

Figure 2 outlines a segmented model of affecting factors on customers' purchase behavior.

Figure 2. buyer's behavior model (Kotler, 1994).

1. Social factors

Social factors impact on consumers' decision making process through psychological factors existed in any individual. Decision making process is also affected by external factors such as consumers' families, focus groups, etc. (crewel et al., 2008)

Focus groups

Focus groups consist of one or more individuals who are considered by other people as a criterion to measure beliefs, feelings and behaviors. One consumer may have several focus groups such as family, friends, colleagues or important persons to whom consumers like to imitate. These groups impact on individuals' consumption decision in two ways: (a) provided information and (b) soaring consumers' self-recognition (Kotler, 1991).

Main groups

They are groups with continuous relation to people. They can be family, friends, neighbors and classmates. Radically, family members can impact on buyer’s behavior. We can distinguish two lifestyles among buyers in terms of their families. The parents of buyers may create familial tendencies (Kotler, 1991).

Personal factors and social class

Buyer’s decision can be impacted by personal traits such as age, the stage of life, social conditions, personality, etc. (Farthing, 1998). One can define social class as a set of people with relative similar and permanent traits in a society who possess different values in terms of status, position, wealth and educations. Although educations, income and profession (covered by our analysis) are important, they are not always recognized as abstract indicators (Samadi, 2003).

Personality

Personality is one of the most important individual factors which can be useful in analyzing consumers' behavior to select and buy most goods and certain brands (Dargi, 2007). Personality is general concept with various meanings. First, it refers to a person's character namely a set of certain behavioral traits. Second, we may consider it as self-smart. Third, it is the individual's social mask. Fourth, it is an overall impact by person on other (Fatehi, 2008). It is a thinking style on individuals and their personalities which is publicly admitted. It is based on a concept which is highly credited by both professionals and ordinary people. It is called A & B personality type (Fatehi, 2008)

A&B personality

Type A-persons are fighter, competitiveness, aggressive and impatient and punctual. They eat, walk and speak quickly. Type B-persons are less ambitious and impatient. They are more disciplined and cautious. Type A-persons are more competitive than type B-persons (Ganji, 2002). In their behavioral pattern, one can observe such behaviors as quickness, quick speaking, and impatient lifestyle against calmness (Ross, 1999).

Knowledge

One aspect of individual behavior is knowledge. Knowledge consists of two parts including familiarity with product and technical statement both involved in buyer's capabilities to use a product. Period and severity of decision making process depend on buyer's familiarity with product and past experience (Dibb, 1991).

Mental factors

Purchase and selection behavior is impacted by inner drives such as needs, learning, insights and personal traits. Such factors impact individual's behavior like buying behavior (Courtland, 1992).

Motivation

Any person has paramount needs in any time. Needs change to motivations when there is enough feeling to needs (Kotler, 1994). Motivation includes inner factors which conduct behavior in some directions. Motivations stimulate people to act. Actions can be working, playing, sleeping or buying a product (Courtland et al, 1992).

Learning

The ability to describe and forecast consumers’ learning intends to increase understanding their consumption behavior. Learning process can play a vital role in each stage of buying decision process. Today, there is no a universal plausible learning theory (Stanton et al, 1991).

Insight

It refers to positive or negative feeling on one purpose or activity. These purposes and actions cause that we express visible and invisible insights on phenomena. A person learns his/her insights through experiences and interactions with other people (Dibb et al., 1991). Concepts, beliefs, insights and behaviors are closely related and enjoy a particular importance in studying consumers' behavior (Samadi, 2003).

Hidden stimulants

Often, some variable may exist but we do not use them in our researches due to lack of recognition which can reduce research robustness. By using data collection method through
interviews, we studied more indicators than what provided by the model such as price, propaganda, the existence of alternative goods, etc.

**Price**

Judgment on proper or improper price of a product is done by consumers. Research on the price and customers' behavior is an important issue for marketers (Rosta, 2009). There is a relationship between prices and perceived quality in many products (Lancaster, 2001).

**The existence of alternative goods**

Alternative products are compared to other products with certain characteristics. As a result, customer defines a set of alternatives based on shared traits. Usually, consumer selects preferred options among categorized groups as alternative product (Hoek, 2011). By a few interviews, we addressed existence/nonexistence of alternative products and we added it as a hidden stimulant which is no mentioned in the model but impacts on consumers' behavior.

**Propaganda**

Perhaps, one of the first purchase encouragement tools which forces us to think and is considered as the clearest sectors is propaganda (Lancaster et al., 2001). In the meantime, propaganda is a marketing tool which stimulates demand and impacts on level and traits of demand (Masrur, 2007).

**Interest**

Many times, purchase situation impacts on purchase decision process. Purchase situation impacts on purchase process include the role of buying, the reason of buying, physical factors, social factors, time, state and conditions of buyer. The role and reason of buying are the first factors in decision making (Rusta et al., 2009). According to interview, people introduced interest as the reason for purchase and we also studied it as a hidden stimulant.

Rowing consumers' awareness of the relationship between a diet and health, reducing the need to consume high energy foods due to a static life, considering apparent characteristics and paying attention to fashion would change consumers' habits quickly. So, demand for foods effective in health promotion (due to low fatness) such as low fat meats is increased. Regarding serious competition in food industry, consumers' demands are highly important for producers (Mohammadi and Velayi, 2006). In Iran, sausage and salami are produced as a mixture of meat, fats, ice pieces, soya, wheat flour (glutton) and many additives such as poly phosphate, ascorbic, nitrate, dried milk, egg, liquid oil, garlic, etc (Jahed and Rokni, 1995). There is long history of using potassium nitrate and sodium nitrite as processing agents. Nitrite is used to maintain such foodstuffs as processed meats (sausage, salami, and hamburger), cooked poultry and fish, cheese, etc. sodium Nitrite (NaNO3) and sodium nitrate (NaNO2) are used to process meats in order to stabilize their red color and to prevent microorganisms as the agents of corruption and poisoning as well as better taste. A study case in Canada on the relationship between human contact with nitrite and nitrate in order to maintain meat products showed remarkable increase in the danger of stomach cancer (Nasehinia, 2008). The diversity of prices makes it possible for all people (the richest to the poorest classes) to buy such foods. Sausage and salami per se consumption in Iran is about 4 kilograms (Yaghobifar, 2009).

In present research, we studied affecting factors on consumers' behavior in Tehran and Shiraz. Our first purpose was to assess factors which impact on the behavior of sausage, salami and hamburger consumers in both cities. Based on Kotler's model, affecting factors on sausage, salami and hamburger consumers' behavior are mental, social, personal and hidden stimulants. On this basis, research hypotheses are provided as follow:

Hypothesis 1: there is a significant difference between affecting factors on consumers' behavior in studied cities.

1.1. There is a significant difference between mental factors (motivations, insight, and learning) of consumers' behavior in studied cities.

1.2. There is a significant difference between hidden stimulants (price, propaganda, alternative products, interest) of consumers' behavior in studied cities.

1.3. There is a significant difference between social factors (focus groups and main groups) of consumers' behavior in studied cities.

1.4. There is a significant difference between personal factors (knowledge and personality) of consumers' behavior in studied cities.

2. There is a significant difference between the importance degrees of all four affecting factors on consumers' behavior in studied cities.

2.1. There is a significant difference between the importance degrees of all four affecting factors on consumers' behavior in Kermanshah.

2.2. There is a significant difference between the importance degrees of all four affecting factors on consumers' behavior in Kurdistan.

As mentioned above, personal factors are, *inter alia*, affecting factors on consumers’ behavior. Since the research is conducted in two geographical areas, we decided to study the impacts of personal factors on consumers' behavior in both cities. On this basis, following hypotheses are provided:

Hypothesis 3: there is a significant relationship between affecting demographic variables on processed meat consumers’ behavior in studied cities.

3.1. There is a significant relationship between gender and the aspects of processed meat consumers’ behavior in studied cities.

3.2. There is a significant relationship between age and the aspects of processed meat consumers’ behavior in studied cities.

3.3. There is a significant relationship between marital status and the aspects of processed meat consumers’ behavior in studied cities.

3.4. There is a significant relationship between education and the aspects of processed meat consumers’ behavior in studied cities.

3.5. There is a significant relationship between income and the aspects of processed meat consumers’ behavior in studied cities.

**Methodology**

In terms of amount and degree of control and collection method as well as data expansion capability, this is a survey and in terms of purpose it is a descriptive one. The main purpose of the research is to identify and analyze Dairy products (Milk, Cheese and Yogurt) consumers’ behavior. In this line, a 40-option questionnaire in addition to demographic items was devised. All options measured four social, personal, mental and hidden stimulant factors affecting on consumers’ behavior. The apparent and content validity is evaluated and confirmed by experts and connoisseurs. Research population consists of all citizens in Kurdistan and Kermanshah of whom 194 respondents (48 female and 134 male) returned questionnaires. Their average age was +12. A pretest was conducted to confirm research reliability among a 30-subject sample which resulted into plausible 0.85 cronbach alpha.
Due to the largeness of population, a random sampling was conducted in four areas of both cities. The most important used statistical test was Friedman's test used to extract and analyze the importance of affecting factors on processed meat consumers' behavior. In the meantime, one-way variance analysis (Cramers V) was utilized to study the impacts by such variables as gender, marital status, income, education and job on consumers' behavior.

**Findings**

Respondents were provided with 40 options consisted of four various factors including personal, mental, social and hidden stimulants extracted from Philip Kotler's model and were assumed as important affecting factors on consumers' behavior. Respondents were asked to determine the impacts of each mentioned factor on their consumption. Likert's 5-item scale from completely opponent to completely proponent (1= completely opponent; 2 = completely proponent) was used. The results of respondents' demographic data are outline in table 1.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Quantity (Kermanshah)</th>
<th>Quantity (Kurdistan)</th>
<th>% (total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>49</td>
<td>85</td>
<td>69.1</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>42</td>
<td>16</td>
<td>29.9</td>
</tr>
<tr>
<td>Education</td>
<td>Under</td>
<td>13</td>
<td>4</td>
<td>8.8</td>
</tr>
<tr>
<td></td>
<td>diploma</td>
<td>40</td>
<td>27</td>
<td>34.5</td>
</tr>
<tr>
<td></td>
<td>Diploma</td>
<td>13</td>
<td>14</td>
<td>13.9</td>
</tr>
<tr>
<td></td>
<td>Associate of arts</td>
<td>21</td>
<td>37</td>
<td>29.9</td>
</tr>
<tr>
<td></td>
<td>B.A</td>
<td>5</td>
<td>19</td>
<td>12.4</td>
</tr>
<tr>
<td></td>
<td>M.A. and higher</td>
<td>5</td>
<td>19</td>
<td>12.4</td>
</tr>
<tr>
<td>Marital status</td>
<td>Single</td>
<td>47</td>
<td>65</td>
<td>57.7</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>45</td>
<td>37</td>
<td>42.3</td>
</tr>
<tr>
<td>Age</td>
<td>12 – 25</td>
<td>44</td>
<td>59</td>
<td>53.1</td>
</tr>
<tr>
<td></td>
<td>26 – 40</td>
<td>31</td>
<td>28</td>
<td>30.4</td>
</tr>
<tr>
<td></td>
<td>+41</td>
<td>13</td>
<td>9</td>
<td>11.3</td>
</tr>
<tr>
<td>Income (1000 Toomans)</td>
<td>300 – 500</td>
<td>33</td>
<td>42</td>
<td>38.7</td>
</tr>
<tr>
<td></td>
<td>510 – 700</td>
<td>9</td>
<td>12</td>
<td>10.8</td>
</tr>
<tr>
<td></td>
<td>710 – 900</td>
<td>4</td>
<td>7</td>
<td>5.7</td>
</tr>
<tr>
<td></td>
<td>+910</td>
<td>2</td>
<td>12</td>
<td>7.2</td>
</tr>
</tbody>
</table>

**Extracting the factors**

Kolmogorov – Smirnov bi-sample test is used to study the differences of all studied aspects and indices in Kermanshah and Kurdistan. It is a test used to compare two independent communities (Safari and Habib pour, 2009).

**Table 2. The results of Kolmogorov – Smirnov test regarding affecting factors on consumers' behavior**

According to this test which performed in 0.05 error level, it was explored that there is not seen a significant difference between social factors and hidden stimulants while there is a significant difference between personal and mental factors in Kermanshah and Kurdistan. Comparing such difference shows that mental and personal factors effect on Dairy products consumers' behavior more than Kermanshah.

In the meantime, Kolmogorov – Smirnov test determined that there is a significant difference between 11 indicators of consumption behavior, knowledge, insight, motivation, focus groups and alternative goods in both studied cities regarding the comparison of positive and negative differences, it was obvious that knowledge, insight and interest of citizens in Kurdistan are higher than their counterparts in Kermanshah. Also, motivation, focus groups and alternative goods have higher impact on processed meat consumption behavior among Kermanshah citizens than Kurdistan ones.

We used Friedman's test to analyze hypothesis 2.1. The results are as follow:

[Noteworthy, studied subjects in both samples by using average assumption test of a single community show that they are more tended to type A personality (sig = .000). Afterwards, personality means type A.]

**Table 2. Friedman's test in Shiraz**

<table>
<thead>
<tr>
<th>Mean Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual factors</td>
</tr>
<tr>
<td>Psychological factors</td>
</tr>
<tr>
<td>Hidden factor</td>
</tr>
<tr>
<td>Social Factors</td>
</tr>
</tbody>
</table>

According to this test, there is a significant difference between consumption behaviors in Kermanshah. Therefore, we used Friedman's test to determine the importance rate of these aspects as pair wise comparison. The analysis shows that there is a significant difference between personal and mental factors (sig = .000). There is no significant difference between mental factors and hidden stimulants (sig = .404). There is a significant difference between social factors and hidden stimulants (sig = .000). These factors are ranked as follow:

1. Personal factors
2. Mental factors and hidden stimulants
3. Social factors

One can rank 11 indicators in Kermanshah based on the importance rate by using Friedman's test:

Insight > knowledge ~ personality type A > interest ~ alternative goods ~ learning ~ main groups ~ price ~ propaganda > focus groups ~ motivation.

To analyze hypothesis 2.2, we repeated steps at hypothesis 2.1 which led into following results:

**Table 4. Friedman's test in Tehran**

<table>
<thead>
<tr>
<th>Mean Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual factors</td>
</tr>
<tr>
<td>Hidden factors</td>
</tr>
<tr>
<td>Psychological factors</td>
</tr>
<tr>
<td>Social Factors</td>
</tr>
</tbody>
</table>

On this basis, there is a significant difference between the aspects of consumption behavior in Kurdistan (sig = .000). Therefore, we used Friedman's test to determine the importance rate of these aspects as pair wise comparison. The results are as follow:

1. Personal factors
2. Hidden stimulants and mental factors
3. Social factors

By using Friedman's test, we ranked 11 indicators in Kurdistan based on the importance rate:

Alternative goods > type A > motivation ~ learning ~ knowledge ~ price ~ main groups > focus groups ~ propaganda > insight ~ interest.

To test the third hypothesis, we used Cramer's V nonparametric relationship a follow:
Testing hypothesis 3.1 indicates that there is no relationship between gender and the aspects of processed meat consumption behavior in both Kurdistan and Kermanshah.

The results of testing hypothesis 3.2 show that there is no relationship between age and the aspects of processed meat consumption behavior in both Kurdistan and Kermanshah.

In the meantime, no significant relationship was seen between marital status and the aspects of processed meat consumption behavior in both Kurdistan and Kermanshah which clarifies that there is no relationship between both cities in testing hypothesis 3.3.

Also, there is no significant relationship between education and the aspects of dairy products consumption behavior in both Kurdistan and Kermanshah which clarifies that there is no relationship between education and the aspects of processed meat consumption behavior in testing hypothesis 3.4.

The results of testing hypothesis 3.5 indicates that there is no significant relationship between income and the aspects of dairy products consumption behavior in both Tehran and Shiraz and there is only a significant relationship between income and social factors (focus and main groups) on consuming processed meats in Kermanshah.

**Findings-based recommendations**

According to research findings and the results of this process, following recommendations are provided:

1. Since knowledge and personality are important indicators of personal factors and such factors impact on selection and consumption of such foods remarkably and owing to the fact that such foods cause various diseases and treating such diseases poses huge costs on domestic economy, we can try to reduce such costs in national and familial economy by providing correct information and reforming individuals' insights.

2. Research findings show that an important factor regarding the consumption of processed meats is the lack of healthy alternative goods with proper prices. Therefore, domestic Dairy industry authorities should try to provide and introduce healthy foods.

3. Regarding broad studies, the quality and value of processed meats are too low. So, we should try to direct people toward using healthy foods through correct culture building.

4. Since the importance rate of affecting aspects on Dairy products consumption behaviors in both studied communities is relatively similar, we can reduce the consumption of such foods by implementing integrated plans.

5. It was determined in analyses that social factors have the lowest impact on consumption behavior of such foodstuffs. In other word, social factors consisted of main and focus groups impacts less on consumption behavior. Noteworthy, individuals are less impacted by focus groups in consuming such foods.

**Conclusion**

The consumers represent the last component within the food chain supply but they are set as a major player on the market, thus they deserve Special attention (Kapsdor and Nagoya, 2005). Significant economic changes and continued evolution of consumers’ preferences, needs and wants for the dairy produce, makes the dairy market become more and more segmented as well as more complex. Therefore, a study of consumers’ buying behavior, their preferences, attitudes, needs and wants towards dairy products helps the dairy industry (local processors) in their plan projections and development of their marketing Strategies. An understanding of the consumers’ buying behavior and identifying the major forces influencing structural changes in their consumption patterns, helps businesses of this industry to improve and get the most rational way to meet the consumers’ needs. In this study the consumption behavior for dairy products was investigated. Products examined included: fresh milk, yoghurt, butter, cheese, ice cream, cream, and condensed and powdered milk in the major urban centers of Linear expenditure equations along different income and ethnic groups were estimated. Regarding the route for future researches, the findings of present research can be valuable for relevant universities and organizations which attempt to promote the health of the people. Since personal factors had the highest importance in consuming Dairy products (Milk, Cheese and Yogurt) in both studied communities and by studying knowledge indicator, we find that people insist on using such foods despite of being aware of their harms. It is due to the strength of hidden stimulants which includes high propaganda, low prices and relatively high interest on such foods. This research can be back-up for future studies to investigate other important factors on consumers’ behaviors in order to be able to establish necessary infrastructure to consume healthy foods.

**References**

24. Wikipedia: *Fast food searches*