Investigate the Relationship between the New Packaging of Chicken on the Consumer's Decision to Purchase

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ABSTRACT: This study has been made with the purpose of investigating the relationship between the new packaging of chicken on consumer's decision to purchase. To achieve this purpose was used product clinic method and Sampling. The used research methodology in terms of purpose is applied type and in terms of research methodology is descriptive-survey, and is quantitative in terms of data type. The statistical universe of this study includes all purchasers of chicken in two regions of Gorgan city from the chicken supply stores. Study was done with the sample consisted of 410 persons from customers and was examined using simple random sampling method. Data needed for this study was collected using a questionnaire that was tested with the reliability of 0/81. This information was analyzed in the software environment of SPSS & AMOS by applying structural equation modeling and confirmatory factor analysis tests according to research hypotheses and Kolmogorov-Smirnov test was used to investigate for normality, correlation analysis, Cronbach's alpha to investigate reliability of questionnaire, and to investigate the explanatory amount of variables by any of the relevant questions in the questionnaire was used confirmatory factor analysis. The results from confirmatory analysis showed that all questions of questionnaire are appropriate indicators to measure the relevant variables and according to the obtained results can be indicated that there is significant relationship between factors affecting on packaging and consumer's decision to purchase.

Keywords: Packaging, Effective factors of chicken packaging, Product clinic and Sampling.

INTRODUCTION

It is the years that the role of packaging in the sale of products is specified obviously among various industries. Owners of industries especially in recent years using packaging system pay to divide the market and sell their products and reach to this important that to attract customers and influence in competitive markets must use this element of marketing. In this study, we attempted to help the chicken slaughterhouse industry with attention to the packaging industry. Until a few years ago, a chicken was distributed in bulk at stores across the country that thanks to the Veterinary Authority we achieved to this important that put in the hands of consumers full chicken as packed and more sanitary and with the shelf life of three days. However, due to population growth and technological changes, which will follow change in eating habits of consumers, by changes in the current packaging system we seek to achieve the main elements in food packaging that is increase of shelf life and increase of food safety.

Consumers need over time is changing due to population growth, rising incomes and changing lifestyles. These changes have caused that consumers are seeking higher quality, easier and more nutritious demand, and higher safety of new food products (Qing Chen, 2012). Thus, the demand for innovation at firm level in order to maintain competitiveness and more attractive products create to satisfy consumers' needs. For example, packaging with modified atmosphere for salad or genetical modification for food safety of oilseeds that was done to enhance the health benefits (Qing Chen, 2012), or the packaging as segmented (thigh, fillet, wing and etc.).

To date, significant amounts of time and money have been invested so that chicken industry researchers achieve to identify strategies in the context of innovation. Consumers emphasize more on how comfortable of chicken products, and especially how quickly of products for consumption (Qing Chen, 2012). According to Brunner et al., opinion (2010), undoubtedly one of the major trends existed in chicken industry for more convenient use is using modern methods of chicken packaging.
Advanced packaging technologies can protect chicken products against change of color, taste, smell, loss of nutrients and tissue changes (Qing Chen, 2012). Chicken packaging technology has changed significantly over the past decades. However, many of these innovations have not been available to consumers for a long time and conventional products of packaged chicken still dominate on the retail. Main goal of this research is this fact that by changes in the packaging of this product, in addition to increase the quality and safety of chicken, we can estimate welfare and changes that in food habits of the people tend to innovate in the best manner and thereby help to this industry by attracting customers and influence in new markets.

Theoretical bases of research

**Packaging:** Product packaging includes any container or package that the product is marketed for sale in it or the necessary information is transferred by it to the consumers (Rosta et al., 2002). Packaging is described as a coordinated system that its goal is to prepare goods for transport, distribution, storage, sale and consumption.

**Packaging cost:** One of the most important factors in the purchase of packaged product is its price, in other words, the price attraction is a vital affair in the purchase for the masses and especially the low-income classes. That is why consumer spectrum of product must be specified before choosing a package type and for low-income people up to possible is uses cheaper packaging.

**Shelf life:** The most important goal that is considered in the food packaging is to increase the shelf life of the product. Packaging material by setting the appropriate atmosphere inside the package due to the characteristics of the product maintenance increases its shelf life. In this case, especially coordination between the characteristics of packaging material and product maintenance needs should be provided.

**The types of Chicken packaging:** The types of packaging should be able to stabilize and maintain smell and dainty taste of chicken and prevent from penetrating smell and taste to the chicken. If the selected folder easily can transfer smell of environment to the product, definitely cause to decrease the chicken quality (Movahed, Sarah, 2011). For chicken packaging are used various coatings. One of these coatings which chicken in Iran often is packaged by it is polyethylene wrapper that somewhat is permeable toward oxygen and has great flexibility even at temperature of -15 degrees centigrade. These wrappers are used for packaging as different bags. However, in some cases is used several layers of wrappers that its advantages include greater resistance of packaging, increase the resistance of pack against moisture and fat, better printing, allowing better tailoring packages and more favorable appearance (Movahed, Sarah, 2011).

**Absence of serum:** Existence of serum inside the packaging has several factors that can refer to the non-religious slaughter or lack of bleeding or improper washing and improper temperature to cool the chicken carriion that existence of each of the above carcass cause to decrease the quality of chicken carrion. Existence of serum inside the packaging cause that the chicken inside packaging spoil earlier than published time due to the faster growth of microbes on the surface of chicken. If the foregoing cases including religious slaughter, bleeding, proper washing, and cooling carrion are properly taken, we will not see existence of serum inside the packaging.

**Design of packaging:** Communication between packaging and consumer is established by many variables like color, image, design, shape, size etc. (Kermani Nezhad, 2006). That is why the packaging of physical appearance of product, in addition to the task of protection and maintenance of the goods, can undertake other tasks that are very important. In fact, two overall and main purpose or function exist for packaging that include: 1) the protection and maintenance of the product, 2) attract customers and help to sell the product (Patsula, 2001). The first objective is followed by proper design, choosing the appropriate structure and using good raw materials by paying attention to the content, distribution channel etc. However, the second goal can be achieved by choosing the proper color, shape, structure, images, composition, writing, and other variables (Ampuero, 2006).

**The color of chicken:** Consumer communicates between the color of chicken and its freshness and overall quality. Chicken compared with other types of meat is unique in two respects: chicken is marketed as two cases, skinless and with skin and naturally is marketed with different colors (white to black). Poultry meat color difference depends on the biochemistry and histology of the cells. Raw chicken breast has pale pink color and chicken thigh has dark red color. Sometimes a chicken does not have its natural color and this causes particular problems in the poultry market. Chicken color is affected by several factors such as the age of the bird, gender, species, diet, intramuscular fat, the amount of moisture and condition before and after the slaughter. Chicken color depends on the existence of pigments of myoglobin, hemoglobin and cytochromes of thirty muscles. Myoglobin in chicken like other animals is the main source of the color of muscle; however, it is less in the chicken compared to the other animals. After the slaughter, at the best status in terms of leaving the blood from body still remains about 20 to 30 percent hemoglobin in the carrion that affect on the color of carrion. Breast and thigh myoglobin of male chicks are more than female chicks and myoglobin of chicken breast is equal to 15mg to g (Iran Aviculture Institute, 2005. chicken quality and phenomena of pale chicken.

**Segmentation of Chicken:** By passing time, population growth, change in attitude of people and technological development was created changes in food habits of people. Consumers of food industries were not looking to complete
purchase of a product but they were looking to buy a part of that product. Therefore, the chicken packaging industry according to the customers need through the types of segmentation methods seek to obtain new markets and new customers. Chicken supply centers should move toward this way that offer pre-segmented packs. By implementing this plan, in addition to this fact that sanitary issues are respected more, people can buy and consume pieces of chicken that like them more. When we go to the segmented chicken, product diversity is created and attracts more customers.

**Information contained on the packaging:** Today, chicken is supplied to the consumer as packaged; therefore, consumer expects to disclose the characteristics and contents inside it by food labels (Mirnezami, 2010). One of the important indicators of packaging in terms of informing and attracting customer is label. According to the Iranian Veterinary Organization standard, mention of below cases is required on the packaging of chicken:

- Information that must be included in the first side of packaging:
  - Name and type of product: "Fresh Broiler", the name and address of the abattoir, slaughter date(according to day-month-year); pure weight, code and number of sanitary license, expiration date, storage conditions, “0 to 4 degrees centigrade.” Information that must be included in the second side of packaging: Features of fresh, healthy and sanitary chicken. Of course, the use of other symbols and marks is optional. For example, using ISO symbol or protection of the environment etc. that although existence of these symbols and icons is optional but cause to strengthen the product place.

- **Being Marble of chicken:** Fat in the chicken is found three different types of subcutaneous, intra-muscle and inter-muscle. Fat mainly accumulate in the abdomen or under the skin which is known as storage fat. Another form of fat is the fat inside the muscles that is the last type of available fat. In addition, fat among muscular cells is adipose tissue which is known as being marble and often is a positive factor in the quality of meat in the criteria of choosing meat (Movahed, Sarah, 2011). Meat taste depends on the amount of being marble. Whatever the amount of being marble is greater, meat taste is more pleasant. Also whatever meat contains more connective tissue, it is stiffer but more palatable and whatever the meat is tenderer, it needs less time for cooking. The juiciness of the meat also depends on the amount of being marble. Whatever the insensible adipose tissue is more, the meat will be juicier. However, whatever the amount of fat accumulated near the anus of chicken is small, it is far more indicative of health and proper nutrition of chicken.

- **Reduction in the consumption time:** In the following of changes in today lifestyle and food habits, people are looking for food which is readied faster and can consume easier. So many companies by importing conserve and processed foods in shopping centers can open the proper place among this group of consumers. This rule was not isolated from chicken packaging industry and can reduce the speed of cooking by importing the cleaned chicken with automatic devices which have no pollution and added wastes. Also they make the chicken packages in a way that consumers can put them directly in the microwave and use it.

- **Consumers’ decisions to purchase:** Steps that the buyer passes to decide about choosing the products and services is called process of decision to purchase (Rosta et al., 2005).

- **Consumer:** Consumer is as a unit of decision making that pay to collect information and consciously or unconsciously processing in the current situation and act to achieve satisfaction and improve lifestyle.

- **Consumer behavior:** They are activities that people in them are involved in the actual or potential use from various products of market that include goods, services, ideas and environment of stores (Berkman & Gilson, 1981).

- **Product Clinic:** Product clinic is a marketing research method in which opinion of customers were asked about the company’s product and company make its decisions at different levels based on these opinions.

- **Sampling:** Sampling word, which literally means the sampling or tasting, is associated with presenting free samples of product, advertising clothing and dummies and using new advertising techniques for making culture to promote the public use from the product and increase the popularity of a brand, in order to the long-term utilization in predicted future, in simple terms when a new and unfamiliar product is marketed or people do not welcome it, we encourage them to buy or even push by offering smaller samples of this product freely and acquaint the public with benefits of that product.

**Theoretical framework**

In this model, the researcher seeks to investigate the relationship between modern packaging of chicken on the consumer's decision to purchase. In surveys conducted among other countries in the context of chicken packaging were found that the most important factors affecting on the chicken packaging is health and shelf life of chicken. Studies also suggest that other factors such as cost of packaging, packaging type, packaging design, color of chicken, segmentation, information contained on the packaging, being marble reduction in the consumption time of chicken, absence of serum are effective.
Figure 1. Factors affecting on the packaging of chicken.

**Purposes and research hypotheses:**

The main purpose of this study is to investigate the relationship between modern packaging of chicken on the consumer's decision to purchase.

Research hypotheses are:

**The main hypothesis:** There is significant relationship between the factors affecting on packaging and consumers' decision to purchase.

**Secondary hypotheses:**
1) There is significant relationship between the price of the product and the consumer's decision to purchase.
2) There is significant relationship between the shelf life of chicken and consumers' decisions to purchase.
3) There is significant relationship between the type of chicken packaging and consumers' decisions to purchase.
4) There is significant relationship between the absence of serum inside the packaging and consumer's decision to purchase.
5) There is significant relationship between packaging design and consumer's decision to purchase.
6) There is significant relationship between the color of chicken and the consumer's decision to purchase.
7) There is significant relationship between segmentation type of chicken and consumer's decision to purchase.
8) There is significant relationship between the information contained on the packaging and consumer's decision to purchase.
9) There is significant relationship between being marble (low fat) and the consumers' decisions to purchase.
10) There is significant relationship between the reduction in the consumption time of chicken and consumers' decisions to purchase.

**METHODOLOGY**

The present study in terms of purpose is applied type and in terms of research methodology is descriptive-survey, and is quantitative in terms of data type. The study is applied because the results from it are used in the packaging industry of chicken slaughterhouses. The statistical universe of this study includes all purchasers of chicken who buy their consumption chicken in two regions of Gorgan city from the chicken supply stores. The sample size was chosen according to krecjie and Morgan table that due to the infinite number of universe members at least 384 person (roughly among 100,000 person) were determined as the number of sample members that due to the lake of return of questionnaires increase to 440 questionnaires and finally, the data of 410 questionnaires were used for data analysis and the method of sampling used in this method is simple random. The tools of data collection include 4 standard
questionnaires and all questions of questionnaires evaluated based on 5-points Likert scale from the responses such as (totally disagree, disagree, no opinion, agree, totally agree). Reliability and validity of the questionnaire used in this research were investigated using Cronbach's alpha coefficient and confirmatory factor analysis.

RESULTS

The first hypothesis of research is as follows: “There is significant relationship between the factors affecting on packaging and consumers' decision to purchase.”

According to Table 1, the amount of Pearson and Spearman correlation coefficients are 0.61 and 0.62 respectively which is significant at the 5% error level (Sig <0.05). Therefore, the hypothesis is accepted and can be said that there is significant relationship between the factors affecting on packaging and consumers' decision to purchase.

Table 1. Pearson and Spearman correlation coefficients of the first hypothesis.

<table>
<thead>
<tr>
<th>Sig.</th>
<th>Coefficients</th>
<th>Correlation coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>0.61</td>
<td>Pearson</td>
</tr>
<tr>
<td>0.000</td>
<td>0.62</td>
<td>Spearman</td>
</tr>
</tbody>
</table>

The second hypothesis of research is as follows: “There is significant relationship between the price of the product and the consumer's decision to purchase.”

According to Table 2, the Pearson and Spearman correlation coefficients are respectively 0.53 and 0.55 which is significant at the 5% error level (Sig <0.05). Therefore, the hypothesis is accepted and we can say that there is significant relationship between the price of the product and the consumer's decision to purchase. On the other hand, the results from the factor analysis (Table 3) indicate that the variable of product prices at 5% confidence level (Sig <0.05) to the amount of 0.322 is effective in the factor of consumer's decision to purchase.

Table 2. Pearson and Spearman correlation coefficients of the second hypothesis.

<table>
<thead>
<tr>
<th>Sig.</th>
<th>Coefficients</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>0.53</td>
<td>Pearson</td>
</tr>
<tr>
<td>0.000</td>
<td>0.55</td>
<td>Spearman</td>
</tr>
</tbody>
</table>

Table 3. Regression coefficient of the second hypothesis.

<table>
<thead>
<tr>
<th>Sig.</th>
<th>Standard deviation</th>
<th>Coefficients</th>
<th>Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>0.133</td>
<td>0.322</td>
<td>S₁→F₃</td>
</tr>
</tbody>
</table>

The third hypothesis of research is as follows: “There is significant relationship between the shelf life of chicken and consumers' decisions to purchase.”

According to Table 4, the Pearson and Spearman correlation coefficients are respectively -0.34 and -0.33 which is significant at the 5% error level (Sig <0.05). Therefore, the hypothesis is accepted and we can say that there is significant relationship between the shelf life of chicken and consumers' decisions to purchase. On the other hand, the results from the factor analysis (Table 5) also show that the variable of shelf life of chicken to the amount of -0.127 is effective in the factor of consumer's decision to purchase which is not significant at the 5% error level (Sig > 0.05).

Table 4. Pearson and Spearman correlation coefficients of the third hypothesis.

<table>
<thead>
<tr>
<th>Significant level</th>
<th>Coefficients</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>-0.34</td>
<td>Pearson</td>
</tr>
<tr>
<td>0.000</td>
<td>-0.33</td>
<td>Spearman</td>
</tr>
</tbody>
</table>

Table 5. Regression coefficient of the third hypothesis.

<table>
<thead>
<tr>
<th>Significant level</th>
<th>Standard deviation</th>
<th>Coefficients</th>
<th>Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>-0.151</td>
<td>0.127</td>
<td>S₂→F₃</td>
</tr>
</tbody>
</table>
The fourth hypothesis of research is as follows:
"There is significant relationship between the type of chicken packaging and consumers' decisions to purchase."

According to Table 6, Pearson and Spearman correlation coefficients are 0.23 and 0.23 respectively which is significant at the 5% error level (Sig <0.05). Therefore, the hypothesis is accepted and we can say that there is significant relationship between the type of chicken packaging and consumers' decisions to purchase. On the other hand, the results from the factor analysis (Table 7) show that the variable of type of chicken packaging at 5% confidence level (Sig <0.05) to the amount of 0.32 is effective in the in the factor of consumer's decision to purchase.

\begin{table}[h]
\centering
\begin{tabular}{lll}
\hline
Sig. & Coefficients & Correlation coefficient \\
\hline
0.014 & 0.234 & Pearson \\
0.014 & 0.234 & Spearman \\
\hline
\end{tabular}
\caption{Pearson and Spearman correlation coefficients of the fourth hypothesis.}
\end{table}

\begin{table}[h]
\centering
\begin{tabular}{lll}
\hline
Sig. & Standard deviation & Coefficients & Path \\
\hline
0.031 & 0.015 & 0.32 & S_3 \rightarrow F_3 \\
\hline
\end{tabular}
\caption{Regression coefficient of the fourth hypothesis.}
\end{table}

The fifth hypothesis of research is as follows:
"There is significant relationship between the absence of serum inside the packaging and consumer's decision to purchase."

According to Table 8, the Pearson and Spearman correlation coefficients are 0.60 and 0.60 respectively which is significant at the 5% error level (Sig <0.05). Therefore, the hypothesis is accepted and we can say that there is significant relationship between the absence of serum inside the packaging and consumer's decision to purchase. On the other hand, the results from the factor analysis (Table 9) indicate that the variable of absence of serum inside the packaging at 5% confidence level (Sig <0.05) to the amount of 0.41 is effective in the in the factor of consumer's decision to purchase.

\begin{table}[h]
\centering
\begin{tabular}{lll}
\hline
Sig. & Coefficients & Correlation Coefficient \\
\hline
0.021 & 0.602 & Pearson \\
0.021 & 0.602 & Spearman \\
\hline
\end{tabular}
\caption{Pearson and Spearman correlation coefficients of the fifth hypothesis.}
\end{table}

\begin{table}[h]
\centering
\begin{tabular}{llll}
\hline
Sig. & Standard deviation & Coefficients & Path \\
\hline
0.000 & 0.152 & 0.41 & S_4 \rightarrow F_3 \\
\hline
\end{tabular}
\caption{Regression coefficient of the fifth hypothesis.}
\end{table}

The sixth hypothesis of research is as follows:
"There is significant relationship between packaging design and consumer's decision to purchase."

According to Table 10, the Pearson and Spearman correlation coefficients are 0.34 and 0.34 respectively which is significant at the 5% error level (Sig <0.05). Therefore, the hypothesis is accepted and we can say that there is significant relationship between packaging design and consumer's decision to purchase. On the other hand, the results from the factor analysis (Table 11) indicate that the variable of packaging design at 5% confidence level (Sig <0.05) to the amount of 0.13 is effective in the in the factor of consumer's decision to purchase.

\begin{table}[h]
\centering
\begin{tabular}{lll}
\hline
Sig. & Coefficients & Correlation coefficient \\
\hline
0.014 & 0.261 & Pearson \\
0.013 & 0.261 & Spearman \\
\hline
\end{tabular}
\caption{Pearson and Spearman correlation coefficients of the sixth hypothesis.}
\end{table}
Table 11. Regression coefficient of the sixth hypothesis.

<table>
<thead>
<tr>
<th>Sig.</th>
<th>Standard deviation</th>
<th>Coefficients</th>
<th>Path</th>
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<tr>
<td>0.003</td>
<td>0.106</td>
<td>0.13</td>
<td>S₅→F₃</td>
</tr>
</tbody>
</table>

The seventh hypothesis of research is as follows:
"There is significant relationship between the color of chicken and the consumer's decision to purchase."
According to Table 12, the Pearson and Spearman correlation coefficients are 0.65 and 0.65 respectively which is significant at the 5% error level (Sig <0.05). Therefore, the hypothesis is accepted and we can say there is significant relationship between the color of chicken and the consumer's decision to purchase. On the other hand, the results from the factor analysis (Table 13) indicate that the variable of color of chicken at 5% confidence level (Sig <0.05) to the amount of 0.57 is effective in the in the factor of consumer's decision to purchase.

Table 12. Pearson and Spearman correlation coefficients of seventh hypothesis.

<table>
<thead>
<tr>
<th>Sig.</th>
<th>Coefficients</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>0.647</td>
<td>Pearson</td>
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<tr>
<td>0.000</td>
<td>0.645</td>
<td>Spearman</td>
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</tbody>
</table>

Table 13. Regression coefficient of the seventh hypothesis.

<table>
<thead>
<tr>
<th>Sig.</th>
<th>Standard deviation</th>
<th>Coefficients</th>
<th>Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>0.140</td>
<td>0.57</td>
<td>S₆→F₃</td>
</tr>
</tbody>
</table>

The eighth hypothesis of research is as follows:
"There is significant relationship between segmentation of chicken and consumer's decision to purchase."
According to Table 14, the Pearson and Spearman correlation coefficients are 0.38 and 0.38 respectively which is significant at the 5% error level (Sig <0.05). Therefore, the hypothesis is accepted and we can say that there is significant relationship between segmentation of chicken and consumer's decision to purchase. On the other hand, the results from the factor analysis (Table 15) indicate that variable of segmentation of chicken at 5% confidence level (Sig <0.05) to the amount of 0.12 is effective in the in the factor of consumer's decision to purchase.

Table 14. Pearson and Spearman correlation coefficients of the eighth hypotheses.

<table>
<thead>
<tr>
<th>Sig.</th>
<th>Coefficients</th>
<th>Correlation Coefficient</th>
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</thead>
<tbody>
<tr>
<td>0.006</td>
<td>0.379</td>
<td>Pearson</td>
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<tr>
<td>0.004</td>
<td>0.379</td>
<td>Spearman</td>
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</table>

Table 15. Regression coefficient of the eighth hypothesis.

<table>
<thead>
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<th>Standard deviation</th>
<th>Coefficients</th>
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<tbody>
<tr>
<td>0.024</td>
<td>0.307</td>
<td>0.120</td>
<td>S₇→F₃</td>
</tr>
</tbody>
</table>

The ninth hypothesis of research is as follows:
"There is significant relationship between the information contained on the packaging and consumer's decision to purchase."
According to Table 16, the Pearson and Spearman correlation coefficients are 0.38 and 0.38 respectively which is significant at the 5% error level (Sig <0.05). Therefore, the hypothesis is accepted and we can say that there is significant relationship between the information contained on the packaging and consumer's decision to purchase. On the other hand, the results from the factor analysis (Table 17) indicate that variable of information contained on the packaging at 5% confidence level (Sig <0.05) to the amount of 0.41 is effective in the in the factor of consumer's decision to purchase.
Table 16. Pearson and Spearman correlation coefficients of the ninth hypothesis.

<table>
<thead>
<tr>
<th>Sig.</th>
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<th>Correlation Coefficient</th>
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<tbody>
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<td>0.008</td>
<td>0.381</td>
<td>Pearson</td>
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<tr>
<td>0.008</td>
<td>0.381</td>
<td>Spearman</td>
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</tbody>
</table>

Table 17. Regression coefficient of the ninth hypothesis.

<table>
<thead>
<tr>
<th>Sig.</th>
<th>Standard deviation</th>
<th>Coefficients</th>
<th>Path</th>
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</thead>
<tbody>
<tr>
<td>0.000</td>
<td>0.135</td>
<td>0.41</td>
<td>S₈→F₃</td>
</tr>
</tbody>
</table>

The tenth hypothesis of research is as follows:

"There is significant relationship between being marble (low fat) and the consumers' decisions to purchase.”

According to Table 18, the Pearson and Spearman correlation coefficients are respectively 0.657 and 0.658 which is significant at the 5% error level (Sig <0.05). Therefore, the hypothesis is accepted. On the other hand, the results from the factor analysis (Table 19) also show that variable of being marble for chic ken to the amount of 0.62 is effective in the in the factor of consumer's decision to purchase which is significant at the 5% error level (Sig <0.05).

Table 18. Pearson and Spearman correlation coefficients of the tenth hypothesis.

<table>
<thead>
<tr>
<th>Sig.</th>
<th>Coefficients</th>
<th>Correlation Coefficient</th>
</tr>
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<tbody>
<tr>
<td>0.000</td>
<td>0.657</td>
<td>Pearson</td>
</tr>
<tr>
<td>0.000</td>
<td>0.658</td>
<td>Spearman</td>
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</table>

Table 19. Regression coefficient of the tenth hypothesis.

<table>
<thead>
<tr>
<th>Sig.</th>
<th>Standard deviation</th>
<th>Coefficients</th>
<th>Path</th>
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</thead>
<tbody>
<tr>
<td>0.000</td>
<td>0.025</td>
<td>0.621</td>
<td>S₉→F₃</td>
</tr>
</tbody>
</table>

The eleventh hypothesis of research is as follows:

"There is significant relationship between the reduction in the consumption time of chicken and consumers' decisions to purchase.”

According to Table 20, the Pearson and Spearman correlation coefficients are respectively 0.48 and 0.48 which is significant at the 5% error level (Sig <0.05). Therefore, the hypothesis is accepted and we can say that there is significant relationship between the reduction in the consumption time of chicken and consumers' decisions to purchase. On the other hand, the results from the factor analysis (Table 21) indicate that variable of reduction in the consumption time of chicken at 5% confidence level (Sig <0.05) to the amount of 0.32 is effective in the in the factor of consumer's decision to purchase.

Table 20. Pearson and Spearman correlation coefficients of the eleventh hypothesis.

<table>
<thead>
<tr>
<th>Sig.</th>
<th>Coefficients</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
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<tr>
<td>0.000</td>
<td>0.482</td>
<td>Pearson</td>
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<tr>
<td>0.000</td>
<td>0.480</td>
<td>Spearman</td>
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Table 21. Regression coefficient of the eleventh hypothesis.

<table>
<thead>
<tr>
<th>Sig.</th>
<th>Standard deviation</th>
<th>Coefficients</th>
<th>Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.004</td>
<td>0.210</td>
<td>0.324</td>
<td>S₁₀→F₃</td>
</tr>
</tbody>
</table>

Prioritization of factors from the perspective of consumers

Coefficients, which each of the variables has in definition of factors and their values, can be prioritized that is presented in Table 22. According to the obtained coefficients can be concluded that in the packaging factor exist respectively variables such as 1- color of chicken, 2- shelf life, 3- absence of serum, 4-type of packaging, 5- being marble, 6-cost, 7-packaging design, -8 reduction in the consumption time, 9- Segmentation type of chicken, 10- information contained on the packaging.
Table 22. Prioritization of packaging factors Variables.

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Packaging factor</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.541</td>
<td>Color of chicken</td>
<td>1</td>
</tr>
<tr>
<td>0.501</td>
<td>Shelf life</td>
<td>2</td>
</tr>
<tr>
<td>0.498</td>
<td>Absence of serum</td>
<td>3</td>
</tr>
<tr>
<td>0.435</td>
<td>Type of packaging</td>
<td>4</td>
</tr>
<tr>
<td>0.312</td>
<td>Being marble</td>
<td>5</td>
</tr>
<tr>
<td>0.234</td>
<td>Cost</td>
<td>6</td>
</tr>
<tr>
<td>0.205</td>
<td>Packaging design</td>
<td>7</td>
</tr>
<tr>
<td>0.187</td>
<td>Reduction in the consumption time</td>
<td>8</td>
</tr>
<tr>
<td>0.173</td>
<td>Segmentation type of chicken</td>
<td>9</td>
</tr>
<tr>
<td>0.120</td>
<td>Information contained on the packaging</td>
<td>10</td>
</tr>
</tbody>
</table>

CONCLUSION

Production managers, veterinarians, authorities of packaging and authorities of springhouse can present strategies to improve the color of packaged chicken to enhance consumer’s decision to purchase including: appropriate slaughter, proper washing, reduce the temperature of the chicken after the stage of entrails discharge, maintaining proper temperature of chicken between 0 to 7, herd health and appropriate bleeding. Production managers, technical managers, authorities of packaging and authorities of springhouse can use carnage and packaging automation system and vacuum and gas packaging system and etc, complete discharge of entrails and its cleaning, proper washing, shorten the manufacturing process especially after entrails discharge until packaging of chicken to increase the shelf life of packaged chicken. Also commercial managers, communication manager, production manager to increase the acceptance from decision to purchase of chicken with the shelf life of more than three days present strategies including: using exhibitions to offer new product, face to face advertising and tasting table, presenting catalog and brochure for new product, inviting nutrition and cooking specialists for getting approvals of product health (TV advertising and exhibitions), using smaller packages of packaging to the extent of consumer need, improving the taste and flavor. Monitoring on proper slaughter of chicken, using bleeding channel and appropriate line length, using plastic and container proportionate with product, shortening the time of packaging, rapid cooling of chicken after the initial stages of slaughtering chicken, maintaining the packaged chicken in proper temperature are strategies that technical managers, production manager, authorities of packaging and authorities of springhouse can apply to decrease existence of serum inside the packaging of chicken. Packaging can be improved by checking raw materials of packaging proportionate with product, monitoring on plastic and packaging container proportionate with product size in two stages before use and during use, reducing work time of personnel and job rotation, maintaining the packaged product in proper temperature, reducing the time of manufacturing process and monitoring on the final product.

Purchase undertaking of herd and technical manager can reduce the amount of being marble of chicken with the proper choice of herd, proper nutrition of herd, using automated devices and increasing monitoring (Checker). If business executive want to reduce the packaging cost, it is recommended that seek a way to find a supplier of packaging equipment in the lowest possible price or use from packaging automation and proper design to reduce cost of plastic and packaging container and suitable planning for the personnel of packaging section to increase efficiency. Identifying the tastes and needs of consumers, using high quality packaging material, respect for the rights of citizens, getting ideas from the projects of other companies can be used to improve the design of packaging. Cleaning and full washing of packaged chicken, using the packages which may be placed directly in the microwave and segmentation of chicken proportionate with consumer needs can be useful to reduce the consumption time. Strategies to enhance decision to purchase of packaged segmented chicken may include: price reduction, efficient use from wastes, segmentation in order to maintain customer, compliance of standards and increasing consumer awareness and also business and production executives by increasing consumer awareness, maintaining product health, increasing customer confidence, using proper color and line and giving additional information to the consumer such as the amount of calorie and energy increase consumer’s decision to purchase through information contained on the chicken packaging.

REFERENCES