Measuring the Impact of Service Quality Dimensions and Product Quality on Customer Satisfaction: The Case of Retail Market in Egypt

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Abstract
Customer satisfaction importance is increasing, as it is a key factor in any business success story. Retailers are very careful regarding the customer satisfaction factor, as it is a key determinant in customer’s decision whether to continue or discontinue their association with the retailer. In the recent years, the number and size of retailers in Egypt increased due to the swift growth in Egyptian population. Foreign hypermarkets such as Spinneys, Carrefour, Lulu, Makro, Panda, etc. have created a severe competition with the local modern hypermarkets and traditional markets. Retailers need for a reliable measure or model to test their service quality and product quality and their impact on customer satisfaction to ensure a sustainable competitive advantage. Therefore, the aim of this research is to measure the impact of service quality dimensions (physical aspects, reliability, personal interaction, policy, and problem solving) and product quality on customer satisfaction in the hypermarket sector in Alexandria, Egypt. In order to achieve this aim, a questionnaire has been created and distributed over a sample of 450 respondents to hypermarket buyers in Alexandria, Egypt. 390 questionnaires were collected with 86.7% response rate from the participants and were analysed by using the SPSS. The results of this research showed that there is a significant positive impact of five variables (physical aspects, personal interaction, policy, problem solving, and product quality) on customer satisfaction. Particularly, the hypermarket policy has the strongest impact on customer satisfaction in hypermarket sector followed by personal interaction, product quality, and physical aspects, where problem-solving factor has the least effect on customer satisfaction.

Keywords: Service quality dimensions, product quality, retail market, hypermarket sector, customer satisfaction, Egypt

1. Introduction
Egypt is considered as one of the biggest markets in the Middle East with population more than 90 million, which makes Egypt an attractive profitable market in the Arab world. The retail market is the most increasingly growing market in Egypt as it comes in the 13th position as the most attractive retail market worldwide (infomineo, 2014). For the past 10 years, many shopping outlets have been opened in Egypt such as City Stars, Mall of Arabia, Cairo Festival City and many others. The franchising sector in Egypt supported the growth of hypermarket sector for the last ten years, the number of international brands increased from just 25 in 1999 to 360 in 2010 and reached 430 in 2012. The retail food sales from supermarkets, grocers, stores and hypermarket reached EGP 226 billion in 2017 and it is expected to increase by 11% to reaches EGP 250 billion by 2018 (Unidha, 2017) (Euromonitor, 2018).

Nowadays, the hypermarket sector play a vital role in the world economy, the modern hypermarket that contains every product category is booming across the world (Toili, 2017). Therefore, it is essential for retailers particularly hypermarkets to use strategies that focus on how to fulfill customers’ requirements and to determine the factors that affect their satisfaction in order to attract more customers to buy from them. Most of the previous studies focused on customer satisfaction and its factors in service industries such as healthcare, banks, beauty centres etc. Service quality was found to be one of the main factors influencing customer satisfaction. Service quality is defined as the attitude, related but not equivalent to satisfaction that results from the customer's comparison of expectation with actual performance as the customer use certain criteria in the evaluation of the service quality by examining reliability, responsiveness, assurance, empathy and physical aspects (Felix, 2017). Current studies of service quality of retailers particularly the hypermarket sector in the global market are scarce. Therefore, this research will focus on the factors that affect customer satisfaction of the retailers in the hypermarket sector. As a result, the research problem is defined in the following research question:

“What is the impact of service quality dimensions and product quality on customer satisfaction in the
retail market particularly the hypermarket sector in Egypt?"

2- Literature review
This part is divided into four main parts, which consists of retail market, customer satisfaction, service quality dimensions and product quality.

2.1 Retail Market
Retailers create value to consumers by offering the right goods, creating a pleasant atmosphere, increasing shopping convenience and decreasing price by controlling costs (Kent, 2003), or through advanced technology like adding a Self-checkout system (Kazancoglu, 2018).Retailing is considered the last stage in the distribution supply chain (Berman, 2004). The rise of shopping malls and hypermarkets have been one of the major retailing trends in developing countries for decades (Renko, 2018).Egypt is a natural fit for retail business with a market of over 90million consumers (business, 2017). In Egypt, modern retailers such as hypermarkets and supermarkets are gaining and increasing their market share over the traditional retailers (Euromonitor, 2018), such as Lulu hypermarkets chain from the United Arab Emirates and Panda from Saudi Arabia (Euromonitor, 2018). The main success factor in the retail market is customersatisfaction through creating a pleasant experience between the hypermarket and the customer (Ramly, 2017).

2.2 Customer satisfaction
Satisfaction can be defined as “a post-choice evaluating judgment related to purchase decision” (Homburg, 2001).“Customer satisfaction determines if having an experience in retail is enjoyable and encourage customers to continue shopping with the intent to make purchase” (Porat, 2012), (Tynan, 2014), (BRCIC, 2016). The staff helps and supports customers to enjoy their time in the retail market and make them satisfied about their experience (BRCIC, 2016). Retails' staffs influence customers regarding buy/no-buy decisions (Goudge, 2017). Nowadays, many companies use customer satisfaction level as an indicator in evaluating their products/services and tie customer satisfaction level to their employees compensation (Anderson, 1993)(Biskaia, 2017), as many studies have emphasized that there is a significance relationship between service quality and customer satisfaction ((Cronin, 1992); (Taylor, 1994))(Nunkoo, 2017). Furthermore, the studies also stated that customer satisfaction is considered a function of perceived quality ((Olsen, 2002); (Gustafsson, 2005); (Rigopoulos, 2008); (Cerri, 2012); (Kitapci, 2013)).

2.3 Service Quality
Early studies defined service quality as a level to which a service meets customer requirements, and include a comparison between customer expectations with their perception of actual service performance ((Parasuraman, 1985),(Parasuraman, 1988);(Lewis, 1990)).Customer always looking for a high quality of service (Sherden, 1988), and the companies should concentrate on the quality to improve their image which result in more sales, revenues, and profit (Buzzell, 1987) (Hamzah, 2017).

2.4 Hypermarket service quality dimensions
Hypermarkets have promoted from providing the physical product that customers need, to offering solution center that contain physical products and value added services with competitive advantages to customers (Davies, 2006). Many researches, such as (Dabholkar, 1996), (Sweeney, 1997), (Siu, 2001), (Kim, 2002), and (Long, 2004), have explored the retail sector service quality dimensions. (Vázquez, 2001), (Huang, 2009) concluded that physical aspects, reliability, personal interaction, policy and problem solving are the important service quality dimensions especially within hypermarket sector, these dimensions have been adopted for the aim of this study.

2.4.1 Physical aspects
Physical aspects can be defined as “the retail store appearance and store layout” ((Huang, 2009), (Vázquez, 2001)). Retail facilities and environment are factors that retailers can use in order to attract customers and at the same time, they had an impact on customer satisfaction (Dabholkar, 1996). The physical environment of the hypermarket plays an important role for the service encounter specially for grocery sector (Keillor, 2004) and ideal retailers insist on hypermarket cleanliness and the layout that enables customers’ orientation and merchandise identification (Vázquez, 2001). (Abu, 2004) Stated that, a good hypermarket layout configuration will lead to reduce the time spent by customers in searching for the products they need. Finally, hypermarket appearance provides physical clue about service quality ((Yan, 2011); (Dholakia, 2010); (Bittner, 1990)) and is a base in the determinants of the buyers’ experience (Dabholkar, 1996). As Customers visit hypermarkets not only to fulfill their needs from merchandises but also to enjoy the environment of it (Cortázár, 2017).

2.4.2 Reliability
Reliability is defined as the measurements of hypermarket capabilities and ability to provide the promised service to their customers exactly without any error ((Vázquez, 2001); (Huang, 2009)). The hypermarket must have the
ability to keep what it promises, offers timely and accurate information to customers (Newman, 2001). Accurate information includes items such as correct and precise information related to the products and clear prices for the products (Vázquez, 2001). Additionally, the unavailability of products stock or long queues lines for cash register reflect the poor reliability of the hypermarket and will lead to decreasing customer satisfaction ((Grewal, 2003) ;(Rigopoulou, 2008)).

2.4.3 Personal interaction

Sales assistantsplay an important role in a customer service situation, with the most significant attributes such asattitude and serving customers ((Gagliano, 1994) ;(Gounaris, 2008); (Gounaris, 2010) ). The service provided by sales person to customer is perhaps the most important attribute of the service encounter(Sparks, 2008). To ensure good personal interaction, the hypermarket staff should have the required knowledge to answer customers’ questions, being friendly and polite, always willing to help customers, able to handle customer complaints in short time and able to provide the prompt service to customers((Gagliano, 1994) ;(Gounaris, 2008) ;(Gounaris, 2010)).

2.4.4 Policy

Retailer's policy defined as its verdict related to the top to bottom of the hypermarketmerchandise, their authoritative programs and credit facilities, working hours, auxiliary facilities, and other services offered to customers(Carman, 1990),(Berman, 2004),(Biscaia, 2017). (Thang, 2003)Stated that; hypermarkets capabilities to provide excellent services to their customers must probably ensure a favorable consumer perception. In other words, the hyper market policy is the broad guidelines that shape, control and monitor the general practices to be followed by all staff to fulfill the hypermarket objectives, meet customers’ needs and exceed what they desire or expect,such as opening 24/7, credit policies, return policy, customer care, friendly physical environment, housekeeping(cleanliness and orderliness) , stock of a wide range of productswith superior value and the freshness of products(meat, vegetables, and fruits) and finally security ((Dabholkar, 1996);(Yoo, 1998);(Vázquez, 2001)).

2.4.5 Problem solving

Problem solving is the ability of a hypermarket representatives to handle and process customers’ complaints, problems, exchanges and returnsimmediately and efficiently(Swanson, 2001),(Vázquez, 2001)), as customers prefer to deal with the hypermarket that could handle their problems and complaints in an effective way(Huang, 2009). Therefore, the hypermarket must ensure that there is an adequate and effective system in place to implement and measure customers’ problems and complaints.

2.5 Product quality

Product quality criteria consist of the store ability to provide high quality products, the good assortment of goods that customer may need, the variety of products, the ability of the store to handles returns and exchanges regarding to product quality, and the after sale services. (Gavin, 1987)Stated that product quality is described using eight criteria, which are; Performance, Additional features, Conformance, Durability, Reliability, Serviceability, Aesthetics, Customer perceived quality. (Yuen, 2010) Stated that not all features used by (Gavin, 1987) are adequate and found that some of them are less measurable, as their study showed that only three dimensions (Physical aspects, Reliability and Problem solving) are positively related to customer loyalty to store, and one dimension (Personal Interaction) of retail service quality is positively associated with customer loyalty to staff.

Based on the literature review that was presented and according to the objectives of this study, the research model is presented in Fig 1.1 as follows: the independent variables arephysical aspects, reliability, personal interaction, policy, product qualitywhile, the dependent variable is customer satisfaction. The conceptual framework was created to study the impact of independent variables on the dependent variable.
Based on the model, seven hypotheses were developed to be tested in the hypermarket sector:

- **H1**: Physical aspects have a significant positive impact on customer satisfaction.
- **H2**: Reliability has a significant positive impact on customer satisfaction.
- **H3**: Personal interaction has a significant positive impact on customer satisfaction.
- **H4**: Policy has a significant positive impact on customer satisfaction.
- **H5**: Problem solving has a significant positive impact on customer satisfaction.
- **H6**: Product quality has a significant positive impact on customer satisfaction.

### 3- Methodology

This study aims to develop a clear understanding of the impact of physical aspects, reliability, personal interaction, policy, problem-solving and product quality on customer satisfaction in the retailers of the hypermarket sector in Alexandria, Egypt. An explanatory study used to test the research hypotheses to provide a clear understanding of the impact of the independent variables (physical aspects, reliability, personal interaction, policy, problem-solving and product quality) on the dependent variable (customer satisfaction).

Primary data gathering method was quantitative by using self-administered questionnaires. According to (Kuder, 1937), the required sample size for a population of 1,000,000 or more is 384. The time horizon was single cross sectional as the data was collected only once over a period of two months (November and December 2017).

### 3.1 Face validity and Data reliability

A preliminary questionnaire was drafted and evaluated by a committee consisting of many experts and academics; the purpose of this test is to know how the questionnaire content is valid and to make sure that the sentences are clear. Then the draft questionnaire is adjusted according to judgment committee notes.

Reliability is referring to consistency of findings (Saunders, 2009). Unreliable results mean that they change from time to time. Reliability can be estimated by using internal consistency reliability, which measures the consistency of results across items, often measured with Cronbach’s Alpha (Shuttleworth, 2015).

### 3.2 Questionnaire reliability findings

Cronbach’s alpha is commonly used to assess the internal consistency of a survey that is made up of multiple Likert-type scales and items. The internal consistency is used to measure the interrelationship between items in the questionnaire) (Cortina, 1993). In this study, the overall Cronbach alpha’s for this study was 0.912, since overall Cronbach alpha value > 0.8 therefore the internal consistency is good.
Table 1: Reliability findings

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Variable</th>
<th>Cronbach's Alpha Value</th>
<th>No. of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Physical Aspects</td>
<td>0.785</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Reliability</td>
<td>0.871</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Personal Interaction</td>
<td>0.807</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>Policy</td>
<td>0.608</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Problem Solving</td>
<td>0.887</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>Product Quality</td>
<td>0.790</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>Satisfaction</td>
<td>0.785</td>
<td>5</td>
</tr>
</tbody>
</table>

4- Results and analysis

A descriptive statistic was used to gather the minimum, maximum, means and standard deviation for each variable, the highest mean was for satisfaction variable with mean of 3.89 and standard deviation equal to 0.761, the second highest mean was 3.789 for policy variable followed by physical aspects variable with mean 3.775. Product quality is in the fourth ranking with mean 3.691 followed by personal interaction with mean 3.532. Finally, reliability factor was in fifth ranking with mean of 3.355, while the lowest mean is 3.3283 for problem solving factor.

4.1 Correlation Analysis

Correlation analysis (Pearson or Spearman's correlation) was used for inferential statistics, to measure the significant of linear bivariate between the dependent and independent variables in order of achieving the objective of this study (Sekaran, 2000). The correlation interpretation guide by (Losh, 2004) has been used in this study to describe relationship between dependent and independent variables, according to (Reinard, 2006) the correlation value (r) is described as follow:

Table 2: Correlation findings

<table>
<thead>
<tr>
<th>Variables</th>
<th>S.N.</th>
<th>Correlation Coefficient</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Aspects</td>
<td></td>
<td>.530*</td>
<td>.000</td>
<td>390</td>
</tr>
<tr>
<td>Reliability</td>
<td></td>
<td>.049</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Interaction</td>
<td></td>
<td>.571*</td>
<td>.000</td>
<td>390</td>
</tr>
<tr>
<td>Policy</td>
<td></td>
<td>.515*</td>
<td>.000</td>
<td>390</td>
</tr>
<tr>
<td>Problem Solving</td>
<td></td>
<td>.441*</td>
<td>.000</td>
<td>390</td>
</tr>
<tr>
<td>Product Quality</td>
<td></td>
<td>.570*</td>
<td>.000</td>
<td>390</td>
</tr>
</tbody>
</table>

4.2 Regression Analysis

In order to examine the relations between the dependent variable (customer satisfaction) and the independent variables (physical aspects, reliability, personal interaction, policy, and product quality), a linear regression analysis was used (Buglear, 2001). The linear regression analysis shows that the hypermarket policy factor is the most significant factor that affects customer satisfaction with beta value of 0.404, which means a 1% change in hypermarket policy leads to 40.4% increase in customer satisfaction. The second important factor was personal interaction factor with beta value of 0.179. The third important factor was product quality factor with beta value of 0.142. The fourth important factor was physical aspects factor with beta value of 0.121. The fifth important factor was problem solving factor with beta value of 0.070 as shown in the following table:
Table 3: Linear regression analysis results

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>(Constant)</td>
<td>0.465</td>
<td>0.205</td>
<td>2.267</td>
<td>0.24</td>
<td></td>
</tr>
<tr>
<td>Physical Aspects</td>
<td>0.121</td>
<td>0.051</td>
<td>0.133</td>
<td>2.374</td>
<td>0.018</td>
</tr>
<tr>
<td>Reliability</td>
<td>0.014</td>
<td>0.029</td>
<td>0.018</td>
<td>0.489</td>
<td>0.625</td>
</tr>
<tr>
<td>Personal Interaction</td>
<td>0.179</td>
<td>0.047</td>
<td>0.217</td>
<td>3.842</td>
<td>0.000</td>
</tr>
<tr>
<td>Policy</td>
<td>0.404</td>
<td>0.048</td>
<td>0.351</td>
<td>8.467</td>
<td>0.000</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>0.070</td>
<td>0.034</td>
<td>0.086</td>
<td>2.041</td>
<td>0.042</td>
</tr>
<tr>
<td>Product Quality</td>
<td>0.142</td>
<td>0.052</td>
<td>0.149</td>
<td>2.735</td>
<td>0.007</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Satisfaction

5- Final model
Figure 1.2 below shows an update version of the study model, the black lines used to show the factors that statistically significantly affect customer satisfaction, while the red line shows the factor that don’t statistically significantly affects customer satisfaction.

![Figure 2: Final model](image)

6- Conclusion
The Kruskal-Wallis test shows that only four of the presented five service quality dimensions (physical aspects, personal interaction, policy, and problem solving) significantly affect customer satisfaction in hypermarket sector in Alexandria, Egypt, while reliability dimension not significantly affect customer satisfaction. Furthermore, the test shows that product quality significantly affects customer satisfaction.

Since the policy factor was extremely stronger than any other factors, this indicates that customers want hypermarkets to implement policy items such as, acceptance of the most major credit cards, convenient operating hours, the extra facilities such as toilets, kids’ area, working trolleys, and to provide a wide assortment of high quality and fresh merchandise on the shelves. Therefore, hypermarket manager should insist to implement and measure these items in order to increase customers’ satisfaction.

Personal interaction also found to be the second most important factor to predict customer satisfaction. This reflects that buyers are looking for personal interaction items and they are very important to satisfy them.
Therefore, hypermarket manager should implement and measure personal interaction items in order to satisfy customer needs. Personal interaction takes the following forms: the hypermarket staff have the required knowledge that enables them to answer customer questions, the staff should be friendly and polite and always willing to help customers, the ability of the hypermarket staff to handle customer complaints directly and immediately, and hypermarket staff must have the ability to give the prompt service to customers.

In addition, product quality also found to be the third most important factor to predict customer satisfaction. Customers always want the hypermarket to; offer a variety of products with high quality, had assortment of goods available when they need and the ability of the hypermarket to handles returns and exchanges regarding to product quality, and the good after-sale service of the hypermarket.

Furthermore, physical aspects also found to be the fourth most important factor to predict customer satisfaction. The customer would like the hypermarket to; have modern-looking equipment and fixture, its physical facilities to be visually attractive, materials associated with this hypermarket’s service to be visually appealing, hypermarket layout make it easier for them to find what they need and convenient to move around.

In addition, problem-solving factor found to be the fifth most important factor to predict customer satisfaction. Problem solving items such as; the professional response to queries, effective system for queries and problem solving, good returns policies, sincere and actual interest in solving the customer’s problem, and hypermarket staff must be willing and have the ability to handle complaints directly and immediately.

Finally, reliability factor was found to be not significantly affecting customer satisfaction. The reliability items such as providing service in-time, correct sales promotions information, adequate queuing line length, providing stocks of products, and product prices clearly visible. The customers found these items are similar in most hypermarkets and there is no difference between them regarding to these items.

6.1 Recommendations
The main success factor in the retail market is customer satisfaction through creating a pleasant experience between the hypermarket and the customer; meanwhile the following points are some recommendations for better hypermarket management
- The hypermarket should concentrate on the quality to improve their image which result in more sales, revenues, and profits
- Physical aspects, personal interaction, policy and problem solving are the important service quality dimensions especially within hypermarket sector
- Retail facilities and environment are factors that retailers can use in order to attract customers and at the same time, they had an impact on customer satisfaction.
- Retailers must insist on hypermarket cleanliness and the layout that enables customers’ orientation and merchandise identification
- The hypermarket must have the ability to keep what it promises, offers timely and accurate information to customers
- The service provided by sales person to customer is the most important attribute of the service encounter, to ensure good personal interaction, the hypermarket staff should have the required knowledge to answer customers’ questions, being friendly and polite, always willing to help customers, able to handle customer complaints in short time and able to provide the prompt service to customers
- Hypermarkets capabilities to provide excellent services to their customers must probably ensure a favourable consumer perception.
- The hypermarket must ensure that there is an adequate and effective system in place to implement and measure customers’ problems and complaints.

7- Limitations & future directions
- This research was conducted in Alexandria, Egypt due to the fact that it is where the researcher lives and time limitation to be in more than one city Therefore, it is important to extended similar study in different cities in Egypt to give comprehensive view on the factors that affect customer satisfaction in hypermarket sector in Egypt.
- Other factors that could affect customers’ satisfaction such as promotional tools, place, price … etc. could be tested in the hypermarket sector in Egypt.
- Convenience sampling was used in this research, which has low level of generalizability. Similar study could be conducted with a large sample size in more than one city in order to generalize the results to a larger population.

References


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