The impact of Overall service quality on Perceived value, Customer Satisfaction and Customer Retention: The case of Vodafone Egypt

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Abstract

The present study examines the relationships between service quality, perceived value, customer satisfaction, and customer retention empirically in the telecommunication sector in Egypt, as based on a survey of the consumers of Vodafone Company in Egypt. The research findings provide evidences to suggest that overall service quality have the positive effect on perceived value, customer satisfaction and customer retention moreover, perceived value mediates the relationship between overall service quality and customer retention. Moreover customer satisfaction has not been mediates the relationship between overall service quality and customer retention.

This is in addition to address that perceived value will mediates the relationship between the overall service quality and customer retention. The overall service quality will provide greater importance, which will then lead building sustainable competitive advantage. Service quality conditions influences a firms competitive advantage by retaining customer. Finally, based on the research findings it could be argued that organizations are required to consider the relationship between overall service quality, perceived value, customer satisfaction and customer retention in the formulation, Developing and maintaining of their retention strategies.

Keywords: Overall Service Quality, Perceived Value, Customer Satisfaction, Customer Retention, and Competitive Advantage.
Introduction:

The Economies of many countries nowadays are highly dependent on the vital role of the Service Industry. Quality Service tends to be very essential, in today’s global competitive environment as strategy for success and survival (Parasuraman et al., 1985).

A growing and significant area for service quality has been dedicated to building customer retention in service sectors.

Service quality’s close conceptual as well as empirical link to customer satisfaction evolved the core marketing research (Fisk et al., 1995). In addition, the accumulated research has linked positively with profitability (Fornell, 1992). This link, however, associates indirectly. (Zeithaml et al., 1996). Based on (Fisk et al. 1995) (Fornell,1992) Zeithmal et al., 1996) there is a contribution of great importance to refer that service quality contributes to customer satisfaction and increases profitability, generally explained by two processes. First, service quality is referred to as one of the few means for service differentiation and competitive advantage which persuade new consumers which significantly increase the market share. Second, Customer retention has been considered to be a main target in firms that are oriented with relationship marketing. Building long-term relationship with customer is considered a vital requirement for the economic survival, success, and prosperity of most service organization today (Hofer and Schendel 1978, p.25) define competitive advantages as” the unique position an organization develops vis-à-vis its competitors”. Competitive advantages are resulted from the resources and capabilities of the firm. (Melam et al, 2015) state that obtaining new customer is expensive than the cost sustained for retaining
existing customers. Service quality conditions influences a firms competitive advantage by retaining customer base.

Customer Satisfaction is the key factor to creating competitive advantage of any organization with various factors which can participate in creating satisfaction is to be created. First factor is a perceived value, which is often used as customer value. Second factor is quality of product/service. Previous studies are evidence to the importance of the perceived value and service quality which significantly increase customer satisfaction, according to (Zeithaml, Berry, & Parasuraman, 1996). Moreover, Service quality has been viewed an antecedent of customer satisfaction (Kim, Hertzman, & Hwanng, 2010), which in turn results in customer retention (Boonlertvanich, 2011). In addition, (Gerpott et al, 2001) when they said “customer satisfaction is a direct determining factor in customer loyalty, which, in turn, is a central determinant of customer retention” (Bansal and Gupta, 2001): “Building customer loyalty is not a choice any longer with businesses: it’s the only way of building sustainable competitive advantage. (Al-Tit, A.A., 2015), found a significant relationship between service, food quality, and Customer Satisfaction. In addition, service quality has a positive influence on customer retention. Likewise, customer satisfaction has positive influence on customer retention and mediates the relationship between service quality and customer retention.

1.1 Research Objectives and Feasibility:

Based on the above argument and relevant literature, the present research has twofold contribution. First, it analytically fetches the relationship between Overall Service Quality, and Customer Retention while considering Perceived Value and Customer Satisfaction as mediating variable. Second, as there is limited literature that shows the relationship between these variables in the
context of service sector in Egypt. The present study will help in adding knowledge to the existing body of literature by examining the impact of these variables in the private telecommunications sector. It will guide managers of the organizations to understand the phenomena on Service Quality and Customer Retention that will build sustainable competitive advantage.

The present research aims at gaining knowledge of employee-organization relationship focusing on such variable of Overall Service Quality, Perceived value, Customer Satisfaction, and Customer Relation; in such a framework, the present research aims at achieving the following objectives:

- Exploring the relationship between the Overall Service Quality and Perceived Value in the service sector in Egypt.
- Exploring the relationship between the Overall Service Quality and Customer Satisfaction in the service sector in Egypt.
- Exploring the relationship between Perceived Value, Customer Satisfaction and Customer Retention in the service sector in Egypt.
- Exploring the relationship between the Overall Service Quality and Customer Retention in the service sector in Egypt.

1.2 Research Problem

The problem is derived from two main issues. First, it is not clear from the literature how these four variables are interrelated in the Egyptian service sector context. Furthermore, there seems to be a paucity of research addressing Overall Service Quality, Perceived Value, Customer Satisfaction and Customer Retention in service sector context.

According to the private telecommunication industry in Egypt, that includes Vodafone Egypt, Orange, and Etisalat Misr, with a new competitor launched by Telecom Egypt by the public sector ‘We’, increasing the degree of
competition inside the industry. Deduced by the data given reported by the
Ministry of Telecommunication, Information, and Technology, Vodafone Egypt
overtakes the majority of the telecommunication market share, standing as the
biggest service provider by a rate of 42%, equivalent to 40 million users;
followed by Orange, possessing the second place, and Etisalat Misr in the third
place. Due to the launch of ‘We’ and being subsidized by the Government, to
polarize consumers to their service providers from the main three service
providers. Vodafone shall be formulating strategies and plans to retain their
current customers through meeting customers’ expectations and needs.
The present research is

Attempting to answer the following questions:

**Q1:** What do Overall Service Quality (OS), Perceived value (PV), Customer
Satisfaction (CS) and Customer Relation (CR) mean? And what is their
significance in the service sector in Egypt?

**Q2:** Is there a significant relationship between the Overall Service Quality and
Perceived Value in the service sector in Egypt?

**Q3:** Is there a significant relationship between the Overall Service Quality and
Customer Satisfaction in the service sector in Egypt?

**Q4:** Is there a significant relationship between Perceived Value, Customer
Satisfaction and Customer Retention in the service sector in Egypt?

**Q5:** What the nature of the relationship between the research variables?

**Literature Review**

Having considered the above introduction the following represent the salient
results and findings of previous researchers and contributions of researchers and
scholars.
2.1 Overall Service quality:

Service Quality is the key determinant in the success of any service business. Measuring Service Quality has proven to be an exceptionally difficult challenge because of the intangibility and heterogeneity of services. Quality of service cannot be compared against a preset external standard because it could provider (Bitran and Lojo, 1993).

literally vary from moment to moment, and is subject to wild swings in the perceptions of the same service consumption experience by the consumer and the Quality is as important in a service environment as it is for manufactured goods. (Zeithaml et al. 1996) have shown that the quality of service provided is an important determinant in the consumers’ decisions to choose their service provider. Due to the intangible and non-standardized nature of services, consumers are likely to be much more anxious in choosing service providers than producers of manufactured goods. Hence, the more certain they are about quality provided by an organization the more likely they are to develop loyalty to that service provider (Rust and Oliver, 1994). Involvement by the top management and a corporate culture that emphasizes a high quality of service are important to achieving a leadership position in the service industry (Bhat, 2005). The quality of manufactured goods has been variously defined as conformance to specifications (Gilmore, 1974), conformance to requirements (Crosby, 1979) and excellence (Tuchman, 1980). But these definitions have proven to be inadequate due to the unique characteristics of services described previously.

According to Parasuraman et al. (1988), service quality can be defined as an overall judgment similar to attitude towards the service and generally accepted as an antecedent of overall customer satisfaction (Zeithaml and Bitner, 1996). Parasuraman et al. (1988) have defined service quality as the ability of the
organization to meet or exceed customer expectations. It is the difference between customer expectations of service and perceived service (Zeithmal et al., 1990). Perceived service quality results from comparison by customers of expectations with their perceptions of service delivered by the suppliers (Zeithaml et al., 1990). If expectations are greater than performance, then perceived quality is less than satisfactory and hence customer dissatisfaction occurs (Parasuraman et al., 1985).

It is difficult to develop absolute standards of excellence and performance in the service business. Gronroos (1984) and Parasuraman et al. (1985) have attempted to solve this problem by comparing the consumer perception of quality to their expectations prior to engaging in the service experience. High quality of services would then mean meeting or preferably exceeding the consumers’ apriority expectations.

LeBlanc (1992) has identified corporate image, competitiveness, courtesy, responsiveness, accessibility, and competence as the factors that affect service quality perceptions, in that order. The most successful approach to measure service quality by far is based on the gap model developed by Parasuraman et al. (1988). The gap model holds that consumer’s quality perception depends on whether or not an organization is able to satisfy consumer expectation prior to the service experience. Parasuraman et al. (1988) conducted focus group research in the service industry to determine what factors affect consumer expectations and perceptions of service quality. They reduced their initial list of ten factors to the following five (SERVQUAL):

- **Tangibles**: The quality of physical assets, such as building and equipment of the service provider.
- **Reliability**: The ability of the service provider to deliver what they promised.
• Responsiveness: Promptness and willingness to help the customer.

• Assurance: The ability of the service provider to project an image of trustworthiness and expertise.

• Empathy: Sensitivity to customer needs and the ability to see things from a customer point of view.

These five dimensions are generic and can be considered as drives or overall service quality. Moreover, Overall Service Quality refers to consumer overall perception of the gap between expectations and actual service performance (Parasuraman et al., 1985). Modifications to SERVQUAL have been proposed in order to adopt it to specific service quality context (Dabholkar et al., 2000).

In the service industry, strong emphasize is placed on the significant importance service quality perceptions and association between service quality and consumer satisfaction (Cronin and Taylor, 1992; Taylor and Baker, 1994). It is therefore presumed that some researchers concluded that service quality is an important indicator of customer satisfaction. Caruana (2002) found service quality as an important input to customer satisfaction and it is the key to measure user satisfaction.

Overall Service Quality refers to consumer overall perception of the gap between expectations and actual service performance (Parasuraman et al., 1985) one solution is to combine expectation and perception into a single measure called overall service quality (Babkus&Boller, 1992).direct measures of overall service quality serve as better predictor of behavioral intention than a value of service quality computed from measured dimension.
2.2 Customer retention:

Customer retention is defined by different studies in different ways like (Gerpot, et al., 2001) they stated that customer retention “is the continuity of the business relations between the customer and company”. (Ranaweera and Prabhu, 2003) define customer retention as the future tendency of a consumer to keep up with the service provider. Based upon these references, customer retention can be defined as the attitude or sentiments of the consumer that they want to continue and build long-term relationship with the service provider. Good or service. (Buttle, 2004) Customer Retention is representing a percentage of the active customers throughout a financial year, in terms of the business between the consumer and the firm.

Building long-term relationship with customer is considered a vital requirement for the economic survival, success, and prosperity of most service organization today (Berry, 1995; Heskett et al., 1994). (Day, 1994) The improvement of the Customer retention is based on the identification and satisfaction of the customer’s needs and requirements. (Clark, 1997) Today, the dynamic increase of the competitive environment, the firm needs to survive with strategic advantage through the use of customer retention as potentially one powerful instrument that companies can employ. It is vitally important to comprehend the influences that affect customer retention and its role played in formulating strategies and plans.

Customer Retention is more comprehensive than giving the customer what they expect; it is about exceeding their expectation, which leads to the customer’s loyalty for a firm. In accordance, the expectations of the customers are several, and to be met, each requirement has to be considered, through knowing well what a customer needs, allowing the long-term relationship
between the customer and the firm, such as: Post sales services, which are the important drivers to build long-term relationship between the customer and the firm, this leads to the increase of the customer retention and improves the service of the customer. (Saeed, et al 2003). Moreover, the increase of market share, revenues, and profits can be achieved by the increase and maintain of customer retention and attraction of potential customer (Rust, et al 1995).

Service Quality is the most important factor in establishing long-term customer relationships and thus customer retention. (Melam et al., 2015). Service Quality played an important role in retaining customer. Service quality has positive and significant relationship with customer retention. Moreover, overall service quality has a positive and significant relation with the customer retention.

(Patterson and Spreng, 1997) found that Customer’s Perceived value is positive and direct antecedent of customer satisfaction. Additionally, (McDougall and Lévesque, 2000) found that perceived service quality and value were the most significant drivers of customer satisfaction across four service sectors.

(Eggert and Ulaga, 2002). Perceived value is often mixed with customer satisfaction in literature but both are different. The main difference is that perceived value can occur at any stage of purchase including repurchase but satisfaction in post purchase behavior (Woodruff, 1997). Perceived value is antecedent of customer satisfaction (Eggert and Ulaga, 2002) (Kuo, Wub, and Deng, 2009) and satisfaction is antecedent of repurchase intention (Eggert and Ulaga, 2002) (Kuo, Wub, and Deng, 2009). The perceived value has positive relationship with behavioral intentions (Seweny and Soutar, 2001) (Gill, Byslma, and Ouschan, 2007) (Kuo, Wub, and Deng, 2009).
There are continuous research done by (Rust and Oliver, 1994), (Bojanic, 1996) and (Woodruff, 1997) on relationship between satisfaction and perceived value. Their studies proved that customers are satisfied based on overall evaluation of perceived value. (Türkyilmaz and Özkan, 2007) supported their views and proved that Customer Satisfaction is mostly affected by Perceived Value. In the same way, (Lee et al., 2000) examined the multiple dimensions of Perceived Value and investigated how value affects satisfaction and recommendations to others. The results indicated that all of the dimensions of Perceived Value (functional, overall, and emotional value) had a significant effect on satisfaction (Petric, 2004) states with certainty that Perceived Value is significant factor related with Customer Satisfaction and repurchase intention. (Zeithaml 1988 p.14) defined Perceived Value as “the consumer’s overall assessment of the utility of a product based on perceptions of what is received and what is given”. (Cronin, Brady, & Hult, 2000) found that Perceived Value is the most significant factor for repurchase intention. Perceived value is often overlapped with Customer Satisfaction in previous studies, but both are different perspectives. Difference of opinion exists among researchers. Perceived Value is often used as an alternative expression of Customer Satisfaction but (Woodruff, 1997) describes that Perceived Value can take place at any stage of purchase, including repurchase. (Oliver, 1981) believed that satisfaction should be considered as post.

2.3 Competitive Advantage:

According to (Day & Wensley, 1988) competitive advantage means what can be presented in the market distinctly based on providing customers with value distinct from competitors. Or it is the ability to reduce costs relatively and
the consequent increase in the company's share of the market as well as the profitability of performance. It is also the ability to produce in one or more ways that competitors can't reach. According to (Itani, 2002) the relative or absolute advantage is linked to the abundance of natural resources and factor endowment but the competitive advantage is the creation of management, technology, and innovation.

Managing competitive advantage as a process: It has been mentioned previously that there is no general agreement on the concept of competitive advantage. However, it can be said that creating a distinct value for customers and relatively low cost can reflect the content of this feature and to maintain a competitive maturity cycle, the organization needs to manage the process of competitive advantage. In this regard, it may be necessary not to ignore several things including the following:

A: Competitive advantage is not fixed and it is something owned or not owned by the company. B: the competitive advantage is not limited to a company.

C: the avoidance of displacement and crowding out the market can only be achieved through the sustainable competitive advantage, no matter how the industry of which the organization belongs, burdens not borne by organizations operating in other industries or even in the same industry in other countries.

D: competitive maturity is a cyclical process that needs to or can be managed continuously. The fifth thing: if the competitive maturity entrance is not an introduction or a new way of thinking in the field of management and marketing, but there are two fundamental changes in the business environment and they are cases limitation or attitudes of competition and its products as well. The sixth thing: it had been mentioned that competitive advantage is the results of management efforts, innovation and development (as a result it is not like the
comparative advantage that is in the origin one of factor endowment). The seventh thing: the competitive advantage is a means to the end.

Taking into consideration the foregoing, Day & Wensley, (1988) confirm that the dream of an organization is to achieve sustainable competitive advantage. Figure (1) shows a proposed model of competitive advantage as a process according to Day & Wensley, (1988) and in light of this figure, it could be of greater importance to refer that:

**Figure (1) Model of competitive advantage process (elements of competitive advantage)**

![Figure 1: Model of competitive advantage process](image)


(Pitt, et al 2000 )suggest suitable revenue that achieves this equation under the name of customer lifetime value that leads at the end to customers ’ right of ownership or the customers as a right of ownership for the organization. This can be explained as follows:
1- Traditionally, accounting systems consider customers as a source of income, so companies began to consider customers as assets or fixed investments where decisions are based on customers as they rely on investments.

2- Customer lifetime value is the net present value of profits that the company seeks to achieve on the average of the new customer transactions during a certain number of years. An example of this can be presented on the assumption that a company sells 1,000 new orders per order for each customer in the first year at a price of $150 per order and that the cost equals 50% of the net income as shown in Table (1). Customer life time value and net present value (value in us dollar).

<table>
<thead>
<tr>
<th>Statement</th>
<th>1st year</th>
<th>2nd year</th>
<th>3rd year</th>
<th>4th year</th>
<th>5th year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer number</td>
<td>1000</td>
<td>400</td>
<td>190</td>
<td>80</td>
<td>50</td>
</tr>
<tr>
<td>The percent or probability of the customer's survival or continuity with the company</td>
<td>40%</td>
<td>45%</td>
<td>50%</td>
<td>50%</td>
<td>60%</td>
</tr>
<tr>
<td>Average of annual sales per customer</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>Total Income Cost</td>
<td>150000</td>
<td>60000</td>
<td>27000</td>
<td>13500</td>
<td>7425</td>
</tr>
<tr>
<td>Cost-benefit ratio</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Total cost profit</td>
<td>75000</td>
<td>30000</td>
<td>13500</td>
<td>6750</td>
<td>3713</td>
</tr>
<tr>
<td>Total profit</td>
<td>75000</td>
<td>30000</td>
<td>13500</td>
<td>6750</td>
<td>3713</td>
</tr>
<tr>
<td>Average (percent) of discount (20%)</td>
<td>1.00</td>
<td>1.2</td>
<td>1.44</td>
<td>1.73</td>
<td>2.07</td>
</tr>
<tr>
<td>Net present value (the profit)</td>
<td>75000</td>
<td>25000</td>
<td>9375</td>
<td>3906</td>
<td>1790</td>
</tr>
<tr>
<td>Collected net present value</td>
<td>75000</td>
<td>100000</td>
<td>109375</td>
<td>113281</td>
<td>115072</td>
</tr>
<tr>
<td>Customer lifetime value</td>
<td>750</td>
<td>100</td>
<td>109.38</td>
<td>113.28</td>
<td>115.7</td>
</tr>
</tbody>
</table>

Source: (Itani, 2002).
The previous example was based on the assumption that the customer's survival or continuation rate in dealing with the company is 40% until the end of the first year and this rate begins to increase gradually until the end of five years. Therefore, 400 customers maintained or continued to deal with the company from the beginning of the second year, 180 customers with the beginning of the third year and so on. If building an appropriate marketing strategy is necessary, the previous example helps to answer how to increase or raise the customer lifetime value? The decision maker can change the price, cost, discount rate, number of years the customer deals with the company, and so on. In general, the customer's lifetime value can be raised through three methods:

(A) increase the period of his dealings with the company, or the number of years in which he maintains his dealings with the company (by reducing the possibility of his conversion to another company or prolonging his dealing with the company). (B) Increase sales by encouraging customer to purchase or increase the company's share of customer purchases or the number of times he purchased the products of the company compared with other companies. (C) Reduce cost- reduce customer service cost.

2.4 Mediating Role of Perceived Value:

Perceived Value is an essential motivator for consumer behavior. However, researchers have met with diversity and difficulty in their attempts to Customer Value. Nonetheless, researchers have agreed upon some areas of consensus, which include utility and the trade-off between utility and sacrifice (He and Mukherjee, 2007). Perceived Value denotes the net perceived utility of a
product/service or relationship with a company, and so it is a function of and trade-off between sacrifice and utility.

As defined by (Zeithaml, 1988), “Perceived Value is the overall assessment of the utility of a product/service as measured by received benefits deducted by perception of sacrifice.” Perceived Value as a concept is defined by (Monroe, 1990) as: “representing a trade-off between the qualities of benefits they perceive in the product relative to the sacrifice they perceive by paying the price”. As most consumption activities are driven by the fulfillment of a need and want, perceived value is measured in terms of the extent to which fulfillment (of those wants and needs) has been successful and efficient?

Perceived Value is one of the most important factors to achieve competitive advantage in business (Parasuraman, 1997)( Zeithaml ,1988), noted that the utility theory suggests that value is relative from one person to another; some consumers find value in low prices; others perceive value when the ratio between quality and price is balanced. However, the perception of service quality implies some aspects of perceived utility and benefits, and it is therefore likely to augment the perception of value.

Studies in different contexts have documented the positive effect of perceived quality on perceived value (Moliner et al., 2007). In the service sectors, service qualities have also been found to be positively related to service value (Bolton and Drew, 1991). Prior research by

(Wang et al., 2004) in the service sector, has found that perceived value is positively predicted by both specific aspects of service quality and overall service quality. It was also found that overall service quality (plus some specific service quality aspects; i.e. tangibles, empathy, and quality) are positively
related to perceived value. (Melam., 2015) state that it has been established that overall service quality is again an antecedent of perceived value. Quality of services and overall quality impression of the customers that receive the services that will meet with their expectations, might be affected by the intention to repurchase (Zhang et al., 2016).

Quality of service differentiates between the expectations of customers who received and perceived the value from a particular place (Kuo, Wu, and Deng, 2009). Perceived value associates with received and perceived value by consumers. Many researches have shown that service quality may affect consumer’s perceived value (Dye, Groth, and Dye, 2007; Hapsari, Clemes, and Dean, 2016; Kuo et al., 2009). Therefore, good service increases the desire of the customer towards the revisit intention to the service/product since it refers to the possibility of certain feelings that build a subjective perception that affects the final decision (Whange et al., 2016) that will lead to the customer retention. Overall service quality is essential driver to customer retention (Melam., 2015). Moreover, it has been established that overall service quality is again an antecedent of perceived value.

2.5 Mediating Role of Customer Satisfaction:

Customer satisfaction is the core of philosophical marketing strategy of any organization, and it plays a crucial role in an organizational success, (Oliver, 2000). (Faizan et al, 2011) were of the opinion that satisfaction is a critical scale of how well a customer’s requirements are met. Customer satisfaction is defined as an overall evaluation of a firm’s products -or service. (Anderson et al., 1997). As based on marketing literature, satisfaction has been established as a major antecedent of customer retention. Satisfaction is defined in different
studies in different ways. Satisfaction can meet customer’s expectations. If the supply of a firm were according to expectations of customers, they would be satisfied (Gerpott et al, 2001).

Satisfaction is an overall customer attitude or behavior towards the difference between what customers can expect and what they receive, regarding the fulfillment of some desire, need, or goal (Hansemark, 2004; Kotler, 2000: Hoyer, and Maclnnis, 2001). (Kotler, 2000) defined satisfaction as: “a person’s feelings of pleasure or disappointment resulting from comparing a product’s perceived performance (or outcome) in relation to his or her expectations” (Mohsam et al, 2011) further observed that the issue of customer satisfaction cannot be easily dismissed because the happier the customers, the easier they disseminate information about the product. There are many factors that affect customers’ satisfaction. According to (Hokanson, 1995), these factors include friendly employees, courteous employees, knowledgeable employees’ competitive pricing, service quality, good value, and quick service.

In the service industry, strong evidence is placed on the significant importance of service quality perceptions and association between service quality and consumer satisfaction (Cronin and Taylor, 1992; Taylor and Baker, 1994). It is therefore presumed that some researchers concluded that service quality is an important indicator of customer satisfaction. (Caruana, 2002) found service quality as an important input to customer satisfaction and it is the key to measure user satisfaction. (Sureshchandar et al, 2002) identified that service quality and customer satisfactions were highly related. (Spreng and Mackoy, 1996) found that service quality leads to customer satisfaction.

Tangibility, Reliability, Responsiveness, Assurance, and Empathy are used to measure the gap between customers’ expected service level and perceived
service level by performing the gap analysis (Parasuraman et al., 1985). All the five dimensions of service quality influenced customer satisfaction substantially and improving the service quality elements is widely considered as the main ancestor which could effectively bring significant contributions on customer satisfaction. In this connection it might be of great importance to highlight this dimensions as follows:

**Reliability:** is defined as the ability to perform the required service to customers indispensably and accurately as promised to be delivered (Zeithaml et al., 1990). Dealing whatever the problems in services met by customers, performing the required services right from the first time, services being rendered at the specified time and maintaining zero-defect records are the model of the reliability in terms of service quality which will be significantly inspiring the level of consumers’ satisfaction (Parasuraman et al., 1988).

**Assurance:** is defined as the knowledge and good manners or courtesy of employees providing services (Van Iwaarden et al., 2003). Further, it is also defined as the ability of employees with the help of the knowledge possessed to inspire trust and confidence among the consumers will strongly hit the level of customer satisfaction (Parasuraman et al., 1988).

**Tangibility:** (Van Iwaarden et al., 2003) defined as the tangible facilities, equipment, and appearance of employees that make up management team. Further, it is also defined as the ease in visibility of resources necessary for providing the service to customers, well-groomed employees, and ease in accessing written materials will be favorable consequence on the level of customer satisfaction (Parasuraman et al., 1985).

**Empathy:** is defined as the ability to take care of customer’s attention individually in providing service to customers (Van Iwaarden et al., 2003).
Moreover, it is researched that understanding consumers’ expectations better than competitors in the provision of the required customer service at any time without any inconvenience will crucially affect the level of customer satisfaction (Parasuraman et al., 1988)

**Responsiveness:** (Zeithaml et al., 1990) defined as the interests shown in providing demanded services to customers when needed on time. In addition, it is explored that willingness or readiness of employees to provide the required customer service without any inconvenience at any time will significantly influence the level of customer satisfaction (Parasuraman et al., 1988).

(Khan, 2012) claims that satisfied customer are inclined to have positive relationship with the organization. Nevertheless, it is therefore necessary for organizations to make sure that all activities lead to the satisfaction of their customers. This will generate a channel for customers to create a possibility of integrating their loyalty to the organization, continued purchasing and repurchasing of the organization’s products. Consequently, consumers will be loyal to an organization if the services rendered are satisfiable to the consumers.

(Fazian et al., 2011) satisfaction is a critical scale of how well a customer’s needs and demands are met while customer loyalty is a measure of how likely a customer is to repeat the purchase and engage in relationship activities. They were of the opinion that customer satisfaction has a positive significant relationship with customer loyalty and that will lead to customer retention.

In addition, the importance of customer satisfaction in today’s dynamic corporate environment is obvious as it greatly influences customer repurchase intention whereas dissatisfaction has been seen as a primary factor for
customers’ intention to switch (Faizan et al., 2011). Business organizations must create and maintain favorable relationships with their customers. 

(Gerpott, et al., 2001), states that the continuity of the business relations between the customer and organization depends on the relationship between the two parties. If an organization wants to sustain its business, it must create a bond with the customer through the satisfaction of customer’s requirements. Retention and attraction of new customers are used as drivers for increase in market share and revenues (Rust et al, 1995). The retention of customers is essential for organizations as they must know who to satisfy and how to effectively satisfy their customers (Saeed et al, 2003).

Building long-term relationship with consumer is regarded as an essential prerequisite for the economic survival and success of most service firms today (Berry, 1995; Heskett et al., 1994). (Day, 1994) argued that satisfaction of customer’s requirements will lead to improve customer retention. (Clark, 1997): “Customer retention is potentially one of the most powerful weapons that companies can employ in their fight to gain a strategic advantage and survive in today’s ever-increasing competitive environment. It is vitally important to understand the factors that impact on customer retention and the role that it can play in formulating strategies and plans”. Customer satisfaction mediates between the relationship of service quality and customer retention (Melam et al., 2015).

It is necessary also to distinguish between two types of customers: outsiders are consumers and internal customers are the employees, as each type controls the determination of a particular kind of competitive advantages of the company. The first type affects the satisfaction of the external competitive
advantage, but the second type affects the satisfaction of the internal competitive advantage. That's where the focus of this research is on the first type, the key question here is how does customer orientation achieve a competitive advantage? The answer to this question can be summarized in Figure (2):

Figure (2) Customer orientation and competitive advantage

![Diagram of customer orientation and competitive advantage]


3. Research design and Methodology:
The present research is descriptive in nature as it aims to explore the relationships between service quality, perceived value, customer satisfaction,
and customer retention empirically in the telecommunication sector in Egypt as examined / example in the case of Vodafone Company in Egypt to achieve this objectives the research has been design as follows :

3.1 Research Sample:

The non-probability, convenient sampling technique has been adopted in this research. Which results in identifying the members in the population (represented by the customers of Vodafone Company in governorate of Cairo). Vodafone Company has been selected from the telecommunication sector in Egypt, since it represents the majority of the telecommunication market, standing as the biggest service provider by a rate of 42%, equivalent to 40 million users.

A Sample size was selected \( n = 364 \) from the customers of the population. It is estimated that the percentage of phenomena existence in the population; a convince sampling was adopted for assuming confidence level of 95% with corresponding acceptance error level 5% at the significance level 5%. And the following statistical formula was used to determine the sample size:

\[
\frac{2\sigma^2pq}{n} \]

\( n = \frac{z^2pq}{d^2} \), Since that:

n: Sample Size

Z: The standard value corresponding to the confidence level 95%, which is 1.96.

P: The percentage of the phenomenon existence in the research population. It is assumed as 50%, suppose this ratio gives the larger sample size.
q: \((1-P) = 50\%\)

D The acceptance error level, which is estimated as 5% 

By applying in the previous formula the appropriate sample is:

\[
 n = \frac{1.96^2(0.5)(0.5)}{(0.05)^2} = 364
\]

3.2 Research Variables and measurements:

The research variable can be outlined as follows:

For testing the hypothesis of the research; the interrelationships between the following variables were examines the:

A: independent variable: "Overall Service Quality (OSQ)"

B: meditator variables: "Customer Satisfaction (CS)"

C: "Perceived Value (PV)"

D: dependent variable: "Customer Retention (CR)"

In terms measuring the research variables a questionnaire list has been contacted as based on the literature pervious research. In this respect it might be useful to refer that:

A: Service quality was measured by SERVQUAL model (Parasuraman et al., 1988). In this proposed model of service quality measurement, gap analysis is used to find the difference between customers ‘expected service performance and actual service performance.

B: The current research is not to examine the complete list of antecedents to perceived value but to adapt the concept of perceived value into the overall service quality-customer retention framework. In marketing research, perceived value is commonly measured as a single overall value construct (Bolton and
Drew., 1991) or by using a multi-term scale to measure perceived value as a one-dimensional construct that has price perceptions.

C: Customer satisfaction were measured by six items scale were adapted from (Olsen and Johnson, 2003).

D: The researcher weighted the responses of the sample according to the Likert scale ordinal quintile as follows:

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

The researches distribute the range (5-1=4) into five levels, every level=4/5=0.8, then the weighted mean degree of agreement ranges as follow:

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1.79</td>
<td>1.80- 2.60- 3.40-4.19</td>
<td>4.20-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.59</td>
<td>3.39</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

E: for data entry and analysis SPSS & AMOS statistical programs has been used:

In the following we apply these statistical analyses on the variables' study

3.3 Research Hypothesis

H1: There is positive impact of Overall Service Quality on customer satisfaction.

H2: There is positive impact of Overall Service Quality on Perceived Value.

H3: There is positive impact of Overall Service Quality on customer retention.

H4: Perceived Value has a positive impact on customer satisfaction.
**H5:** Customer Satisfaction mediates the relationship between Overall Service Quality and Customer Retention.

**H6:** Perceived Value mediates the relationship between Overall Service Quality and Customer Retention.

The expected /proposed relationship between the present research variables can be illustrated according to the following figure (3).

![Diagram showing relationship between Overall Service Quality (OSQ), Customer Satisfaction (CS), Perceived Value (PV), and Customer Retention (CR).]

Source: Prepared by the researcher

In this respect the present study is aiming at answering the following question

What the nature of the relationship between the research variables?

3. **Research finding**

The research finding can be outlined as follows:

**First: Reliability Analysis:**

We measure the reliability through the scale Cronbach’s Alpha, the value of Alfa ranges between zero and one, if there is no stability in the data, the value of this parameter equal to zero, and on the contrary, if there is complete stability in
the data, the value of this parameter equal to the one, and if this measure has equal or increased from 0.60, then it is possible to rely on the results of the study.

Table (1): The reliability measures on the dimensions of the questionnaire

<table>
<thead>
<tr>
<th>Dimensions</th>
<th># of questions</th>
<th>Alfa Reliability Coefficient</th>
<th>Honesty Coefficient (*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSQ: Overall Service Quality</td>
<td>3</td>
<td>0.656</td>
<td>0.810</td>
</tr>
<tr>
<td>PV: Perceived Value</td>
<td>3</td>
<td>0.721</td>
<td>0.849</td>
</tr>
<tr>
<td>CS: Customer Satisfaction</td>
<td>6</td>
<td>0.754</td>
<td>0.868</td>
</tr>
<tr>
<td>CR: Customer Retention</td>
<td>4</td>
<td>0.726</td>
<td>0.852</td>
</tr>
</tbody>
</table>

(*) Honesty coefficient is the square root of reliability coefficient

From the table, it is clear that the value of Alfa is (0.656, 0.721, 0.754, 0.756) concerning the dimensions of the questionnaire respectively, which reflected on honesty coefficient and its value was (0.810, 0.849, 0.868, 0.852) respectively. This is mean that questionnaire is reliable, and we can depend on the results obtained from this questionnaire.

**Second: Internal consistency:**

Internal consistency means the consistency of each of the survey terms with the group to which that term belongs. The researcher calculated the internal consistency by calculating the correlation coefficient between each of the survey terms and the general mean of the group to which that phrase belongs. The following is the internal consistency of the questionnaire dimensions:

1-Overall Service Quality: The following table shows the correlation between the terms of “Overall Service Quality” and the general mean of the group:
Table (*): The correlation coefficient between the terms of (Overall Service Quality) and the mean of the group

<table>
<thead>
<tr>
<th>Variables</th>
<th>Label</th>
<th>OSQ: Overall Service Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1_1</td>
<td>Vodafone company offers you overall services (Paying the bills – Internet – and Money transfer)</td>
<td>.868**</td>
</tr>
<tr>
<td>X1_2</td>
<td>Vodafone company offers excellent services in every aspect.</td>
<td>.897**</td>
</tr>
<tr>
<td>X1_3</td>
<td>I am happy with the value for money I am paying for the service.</td>
<td>.936**</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

The table shows that the correlation coefficients ranged (0.868 to 0.936) and that they are significant at the level of (α = 0.01) concerning terms of the dimension “Overall Service Quality”, which means that the dimension measures what we want to measure.

2- Perceived Value: The following table shows the correlation between the terms of “Perceived Value” and the general mean of the group:

Table (†): The correlation coefficient between the terms of (Perceived Value) and the mean of the group.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Label</th>
<th>PV: Perceived Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>X2_1</td>
<td>Services provided by Vodafone company have a great value for money paid.</td>
<td>.916**</td>
</tr>
<tr>
<td></td>
<td>Comparing to competitors in the same field,</td>
<td></td>
</tr>
<tr>
<td>X2_2</td>
<td>Vodafone company is a company of value to its clients.</td>
<td>.920**</td>
</tr>
<tr>
<td>X2_3</td>
<td>I get the value and benefit of the money paid.</td>
<td>.938**</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
The table shows that the correlation coefficients ranged (0.916 to 0.938) and that they are significant at the level of ($\alpha = 0.01$) concerning terms of the dimension “Perceived Value”, which means that the dimension measures what we want to measure.’

3- Customer Satisfaction: The following table shows the correlation between the terms of “Customer Satisfaction” and the general mean of the group:

Table (5): The correlation coefficient between the terms of (Perceived Value) and general the mean of the group

<table>
<thead>
<tr>
<th>Variable</th>
<th>Label</th>
<th>CS Customer Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>X3_1</td>
<td>1-Kindness of Vodafone company staff makes you continue trusting it and dealing with it.</td>
<td>.822**</td>
</tr>
<tr>
<td>X3_2</td>
<td>2-clarity of Vodafone company procedures has made you to remain with it.</td>
<td>.808**</td>
</tr>
<tr>
<td>X3_3</td>
<td>3-Adequate and timely information gives you to confidence to continue using the services offered by Vodafone company.</td>
<td>.831**</td>
</tr>
<tr>
<td>X3_4</td>
<td>4-Complaints are handled well and on time thus made you to continue using the services from Vodafone company.</td>
<td>.871**</td>
</tr>
<tr>
<td>X3_5</td>
<td>5-Vodafone company offers better services than its competitors and that made you continue to deal with the company.</td>
<td>.889**</td>
</tr>
<tr>
<td>X3_6</td>
<td>6-Vodafone company offers better prices than its competitors make you continue to use the Vodafone company’ services.</td>
<td>.874**</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
The table shows that the correlation coefficients ranged (0.808 to 0.889) and that they are significant at the level of (α = 0.01) concerning terms of the dimension “Perceived Value”, which means that the dimension measures what we want to measure.

4-Customer Retention: The following table shows the correlation between the terms of “Customer Retention” and the general mean of the group:

Table (6): The correlation coefficient between the terms of (Customer Retention) and general the mean of the group

<table>
<thead>
<tr>
<th>Variables</th>
<th>Label</th>
<th>CR: Customer Retention</th>
</tr>
</thead>
<tbody>
<tr>
<td>X4_1</td>
<td>Vodafone company offers personalized services to meet customer needs.</td>
<td>0.891**</td>
</tr>
<tr>
<td>X4_2</td>
<td>Vodafone company’s employees are intimate with customers.</td>
<td>0.903**</td>
</tr>
<tr>
<td>X4_3</td>
<td>The services process provide by Vodafone company is secured.</td>
<td>0.919**</td>
</tr>
<tr>
<td>X4_4</td>
<td>Vodafone company according to your overall evaluation.</td>
<td>0.895**</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

The table shows that the correlation coefficients ranged (0.891 to 0.919) and that they are significant at the level of (α = 0.01) concerning terms of the dimension “Customer Retention”, which means that the dimension measures what we want to measure.

Third: Descriptive Analysis:

We apply descriptive analysis to describe the variables of the questionnaire in terms of central tendency and dispersion, applying this to the sections of the study, the results are as following:
1- **Overall Service Quality**: To determine the importance of "Overall Service Quality" from the perspective of the sample, descriptive statistics were conducted (mean, relative mean, Standard deviation, coefficient of variation), and the results as follow:

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Relative mean %</th>
<th>Std. Deviation</th>
<th>C.V(*)</th>
<th>Agreement</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall service quality</td>
<td>3.48</td>
<td>69.7</td>
<td>0.97</td>
<td>27.8</td>
<td>Agree</td>
<td></td>
</tr>
<tr>
<td>1-Vodafone company offers you overall services (Paying the bills – Internet – and Money transfer)</td>
<td>4.22</td>
<td>84.4</td>
<td>0.87</td>
<td>20.7</td>
<td>Strongly agree</td>
<td>1</td>
</tr>
<tr>
<td>2-Vodafone company offers excellent services in every aspect.</td>
<td>3.56</td>
<td>71.2</td>
<td>0.90</td>
<td>25.2</td>
<td>Agree</td>
<td>2</td>
</tr>
<tr>
<td>3-I am happy with the value for money I am paying for the service.</td>
<td>2.66</td>
<td>53.2</td>
<td>1.42</td>
<td>53.5</td>
<td>Neutral</td>
<td>3</td>
</tr>
</tbody>
</table>

(*) C.V (Coefficient of variation) = Standard deviation / mean * 100.

From the table we conclude that "OSQ" (in general) is good from the perspective of the sample since the mean of responses is 3.48 which means that the degree of agreement is “Agree”, and the coefficient of variation is 27.8% which means that the degree of agreement is 72.2% which indicates that there is an agreement between the respondents.
Concerning the phrases, the degree of agreement is “Strongly agree” concerning "Vodafone company offers you overall services (Paying the bills – Internet – and Money transfer)", since the mean is 4.22 and "Agree" concerning "Vodafone company offers excellent services in every aspect" Since the mean is 3.56, while it is "Neutral" concerning "I am happy with the value for money I am paying for the service" since the mean is 2.66 which means that the services that Vodafone offers is good but it is expensive from the perspective of the sample. Meanwhile, figure shows the importance of "Overall Service Quality".

Figure (4): mean of sample responses concerning "Overall Service Quality"

2- Perceived Value: To determine the importance of "Perceived Value" from the perspective of the sample, we conduct descriptive statistics (mean, relative mean, Standard deviation, coefficient of variation), and the results are displayed in
Table (8): The descriptive statistics concerning "perceived value"

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Relative mean %</th>
<th>Std. Deviation</th>
<th>C.V(*)</th>
<th>Agreement Order</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perceived value</strong></td>
<td>3.23</td>
<td>64.6</td>
<td>1.04</td>
<td>32.1</td>
<td>Neutral</td>
</tr>
<tr>
<td>1-Services provided by Vodafone company have a great value for money paid.</td>
<td>3.10</td>
<td>62.0</td>
<td>1.05</td>
<td>33.7</td>
<td>Neutral</td>
</tr>
<tr>
<td>2-comparing to competitors in the same field, Vodafone company is a company of value to its clients.</td>
<td>3.58</td>
<td>71.6</td>
<td>1.07</td>
<td>29.8</td>
<td>Agree</td>
</tr>
<tr>
<td>3-I get the value and benefit of the money paid.</td>
<td>3.01</td>
<td>60.2</td>
<td>1.25</td>
<td>41.5</td>
<td>Neutral</td>
</tr>
</tbody>
</table>

(*) C.V (Coefficient of variation) = Standard deviation / mean * 100.

Based on the above table the researcher can argue that "PV" (in general) is moderate from the perspective of the sample since the mean of responses is 3.23 which means that the degree of agreement is "Neutral", and the coefficient of variation is 32.1% which means that the degree of agreement is 67.9% which indicates that there is an agreement between the respondents.

Concerning the phrases, the degree of agreement is "Agree" concerning "comparing to competitors in the same field, Vodafone company is a company of value to its clients ", since the mean is 3.58 and the level is "Neutral" concerning "Services provided by Vodafone company have a great value for money paid", "

- 33 -
I get the value and benefit of the money paid" Since the means are 3.1, 3.01 respectively (figure 4 shows the importance of "Perceived Value").

Figure (5): mean of sample responses concerning "Perceived Value"

3-Customer Satisfaction: To determine the importance of "Customer Satisfaction" from the perspective of the sample, we conduct descriptive statistics (mean, relative mean, Standard deviation, coefficient of variation), and the results as follow:
Table (4): The descriptive statistics concerning "Customer Satisfaction"

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Relative mean%</th>
<th>Std. Deviation</th>
<th>C.V(*)</th>
<th>Agreement</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer satisfaction</td>
<td>3.78</td>
<td>75.5</td>
<td>0.85</td>
<td>22.4</td>
<td>Agree</td>
<td></td>
</tr>
<tr>
<td>1-Kindness of Vodafone company staff makes you continue trusting it and dealing with it.</td>
<td>4.29</td>
<td>85.8</td>
<td>0.91</td>
<td>21.1</td>
<td>Strongly agree</td>
<td>1</td>
</tr>
<tr>
<td>2-clarity of Vodafone company procedures has made you to remain with it.</td>
<td>3.96</td>
<td>79.2</td>
<td>0.86</td>
<td>21.6</td>
<td>Agree</td>
<td>2</td>
</tr>
<tr>
<td>3-Adequate and timely information gives you to confidence to continue using the services offered by Vodafone company.</td>
<td>3.89</td>
<td>77.8</td>
<td>0.97</td>
<td>24.9</td>
<td>Agree</td>
<td>3</td>
</tr>
<tr>
<td>4-Complaints are handled well and on time thus made you to continue using the services from Vodafone company.</td>
<td>3.57</td>
<td>71.4</td>
<td>1.16</td>
<td>32.5</td>
<td>Agree</td>
<td>5</td>
</tr>
<tr>
<td>5-Vodafone company offers better services than its competitors and that made you continue to deal with the company.</td>
<td>3.62</td>
<td>72.4</td>
<td>1.00</td>
<td>27.6</td>
<td>Agree</td>
<td>4</td>
</tr>
<tr>
<td>6-Vodafone company offers better prices than its competitors make you continue to use the Vodafone company’ services.</td>
<td>3.32</td>
<td>66.4</td>
<td>1.08</td>
<td>32.6</td>
<td>Neutral</td>
<td>6</td>
</tr>
</tbody>
</table>

(*) C.V (Coefficient of variation) = Standard deviation / mean * 100.
From the table we conclude that "CS" (in general) is good from the perspective of the sample since the mean of responses is 3.78 which means that the degree of agreement is “Agree”, and the coefficient of variation is 22.4% which means that the degree of agreement is 77.6% which indicates that there is an agreement between the respondents.

Concerning the phrases, the degree of agreement is “Strongly agree” concerning "Kindness of Vodafone company staff makes you continue trusting it and dealing with it ", since the mean is 4.29 and the level is "Agree" concerning "clarity of Vodafone company procedures has made you to remain with it", "Adequate and timely information gives you to confidence to continue using the services offered by Vodafone company", "Vodafone company offers better services than its competitors and that made you to continue to deal with the company", "Complaints are handled well and on time thus made you to continue using the services from Vodafone company", since the means are 3.96, 3.89, 3.62, 3.57 respectively, while it is "Neutral" concerning " Vodafone company offers better prices than its competitors make you continue to use the Vodafone company’ services" since the mean is 3.2 however , Figure( 6 )display the importance of "Customer Satisfaction": as based on the result perceived:
Figure (6): mean of sample responses concerning "Customer Satisfaction"

### 4- Customer Retention:

To determine the importance of "Customer Retention" from the perspective of the sample, descriptive statistics were conducted (mean, relative mean, Standard deviation, coefficient of variation), and the results as displayed in Table (1 •): The descriptive statistics concerning "Customer Retention"

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Relative mean%</th>
<th>Std. Deviation</th>
<th>C.V(*)</th>
<th>Agreement</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer retention</td>
<td>3.92</td>
<td>78.4</td>
<td>0.92</td>
<td>23.5</td>
<td>Agree</td>
<td></td>
</tr>
<tr>
<td>1-Vodafone company offers personalized services to meet customer needs.</td>
<td>3.72</td>
<td>74.4</td>
<td>0.99</td>
<td>26.7</td>
<td>Agree</td>
<td>4</td>
</tr>
<tr>
<td>2-Vodafone company’s employees are intimate with customers.</td>
<td>4.07</td>
<td>81.4</td>
<td>0.90</td>
<td>22.0</td>
<td>Agree</td>
<td>1</td>
</tr>
<tr>
<td>3-The services process provide by Vodafone company is secured.</td>
<td>3.93</td>
<td>78.6</td>
<td>1.06</td>
<td>27.1</td>
<td>Agree</td>
<td>3</td>
</tr>
<tr>
<td>4-You have the intention to continue dealing with Vodafone company according to your overall evaluation.</td>
<td>3.95</td>
<td>79.0</td>
<td>1.13</td>
<td>28.6</td>
<td>Agree</td>
<td>2</td>
</tr>
</tbody>
</table>

(*) C.V (Coefficient of variation) = Standard deviation / mean * 100.

From the table we conclude that "CR" (in general) is good from the perspective of the sample since the mean of responses is 3.92 which means that the degree of agreement is “Agree”, and the coefficient of variation is 23.5% which means
that the degree of agreement is 76.5% which indicates that there is an agreement between the respondents. (7) illustrated the calculated mean of sample responses concerning customer retention

![Figure (7): mean of sample responses concerning "Customer Retention"

Fourth: Testing the hypothesis.

To test the hypothesis simple regression has been used and the following result has been realized:

**Testing the 1st hypothesis**

H1: There is positive significant impact of overall service quality (Tangibility, Reliability, Responsiveness, Assurance, and Empathy) on customer satisfaction. Based on the data analysis table (11) displays the relationship between overall service quality on customer satisfaction
The above table provides evidence to suggest that:

- There is a significant positive relationship between “Customer Satisfaction” and “Overall Service Quality” where the value of the correlation coefficient \( r = 0.806, P-value< 0.01 \), which means that “Overall Service Quality” has a positive impact on “Customer Satisfaction”.

- After estimating the parameters of the regression model we can formulate the regression equation as the following:

\[
CS = 1.318 + 0.706*OSQ + \epsilon \quad \text{Where Customer Satisfaction, Overall Service Quality, } \epsilon: \text{ random error}
\]

- The model is significant since \( F= 706.1, P-value<0.001 \) which means that there is a significant effect of the Overall Service Quality on Customer Satisfaction.

- It is clear from the T test for independent variable that \( T=26.6, P-Value<0.01 \), which confirms that the independent variable is significant at 0.01 level. The value of \( \beta =0.706 \), which indicates the strength or degree of influence, means that when "Overall Service Quality" improves
by (1 degree), it will follow by increasing the rate of Customer Satisfaction by (0.706 degree).

- The value of \( R^2 = 0.65 \) which means that (65%) from the changes at "Customer Satisfaction" explained by "Overall Service Quality", which indicate that it is a Strong explanatory power.

Based on this result the previous hypothesis has been proved

**Testing the 2nd hypothesis**

H2: There is positive significant impact of overall service quality on perceived value.

To test this hypothesis is using the same technique, (simple regression analyses) table

(12) Displays the relationship between overall service quality and perceived value as follows:

<table>
<thead>
<tr>
<th>Dependent Variable: PV Perceived Value</th>
<th>Independent Variable: OSQ Overall Service Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>F test</td>
<td>T test</td>
</tr>
<tr>
<td>P-</td>
<td>F</td>
</tr>
<tr>
<td>R</td>
<td>R^2</td>
</tr>
<tr>
<td>0.941</td>
<td>0.885</td>
</tr>
</tbody>
</table>

Based on the above table it is evident that:

- There is a significant positive relationship between “PV Perceived Value” and “OSQ Overall Service Quality” where the value of the correlation coefficient
\( r = 0.941, P\text{-value}<0.01 \), which means that "OSQ Overall Service Quality" has a positive impact on "PV Perceived Value".

- After estimating the parameters of the regression model the formulation of the regression equation as the following:

\[
PV = -0.282 + 1.009 \cdot OSQ + \varepsilon \]

Where Perceived Value, Overall Service Quality, \( \varepsilon \): random error

As far as the researcher is concerned it has been seen relevant to test the significant of the model and the independent variables as well as the explanatory power of model. The result that has been realized in this respect is as follows:

- Testing the significant of the model (F test)

The model is significant since \( F = 2952.6, P\text{-value}<0.001 \) which means that there is a significant effect of the Overall Service Quality on Perceived Value.

- It is clear from the T test for independent variable that \( T = 54.3, P\text{-Value}<0.01 \), which confirms that the independent variable is significant at 0.01 level. The value of \( \beta = 1.009 \), which indicates the strength or degree of influence, means that when "Overall Service Quality" improves by (1 degree), it will follow by increasing the rate of Perceived Value by (1.009 degree).

- The value of \( R^2 = 0.885 \) which means that (88.5%) from the changes at "Perceived Value" explained by "Overall Service Quality", which indicate that it is a Strong explanatory power. Based on this result the second hypothesis has been proved.
Testing the 3rd hypothesis

H3: There is positive significant impact of overall service quality on customer retention.

To test this hypothesis, is using the same technique, (simple regression analyses) table

(13) Display the relationship between overall service quality and customer retention as follows:

<table>
<thead>
<tr>
<th>Dependent Variable: CR Customer Retention</th>
<th>Independent Variable: OSQ overall Service Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>F test</td>
<td>T test</td>
</tr>
<tr>
<td>P-value</td>
<td>T value</td>
</tr>
<tr>
<td>R</td>
<td>R²</td>
</tr>
<tr>
<td>0.902</td>
<td>0.814</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on the above table it is evident that:

- There is a significant positive relationship between “Customer Retention” and “Overall Service Quality” where the value of the correlation coefficient \((r = 0.902, \ P-value< 0.01)\), which means that “Overall Service Quality” has a positive impact on “Customer Retention".
- After estimating the parameters of the regression model we can formulate the regression equation as the following:

\[
CR = 0.928 + 0.859*OSQ + \varepsilon \quad \text{Where Customer Retention, Overall Service Quality, } \varepsilon: \text{ random error}
\]
The model is significant since \( F = 1670.7, P-value < 0.001 \) which means that there is a significant effect of the Overall Service Quality on Customer Retention.

- It is clear from the T test for independent variable that \( T = 40.9, P-Value < 0.01 \), which confirms that the independent variable is significant at 0.01 level. The value of \( \beta = 0.859 \), which indicates the strength or degree of influence, means that when "Overall Service Quality" improves by (1 degree), it will follow by increasing the rate of Customer Retention by (0.859 degree).

- The value of \( R^2 = 0.814 \) which means that (81.4%) from the changes at "Customer Retention" explained by "Overall Service Quality", which indicate that it is a Strong explanatory power.

In light of such result the third hypothesis can be accepted

Testing the 4\(^{th}\) hypothesis

H4: perceived value has a positive impact on customer satisfaction

To test this hypothesis, is using the same technique, (simple regression analyses) table

(14) Display s the relationship between perceived value and customer satisfaction as follows:
Table (14): Simple regression analysis between “Perceived Value”, as independent variable and “Customer Satisfaction” as dependent variable:

<table>
<thead>
<tr>
<th>Dependent Variable: CS Customer Satisfaction</th>
<th>Independent Variable: PV Perceived Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>F test</td>
<td>T test</td>
</tr>
<tr>
<td>R</td>
<td>R²</td>
</tr>
<tr>
<td>0.813</td>
<td>0.661</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on the above table it is evident that:

– There is a significant positive relationship between “Customer Satisfaction” and “Perceived Value” where the value of the correlation coefficient \( r = 0.813, P-value< 0.01 \), which means that “Perceived Value” has a positive impact on “Customer Satisfaction”.

– After estimating the parameters of the regression model we can formulate the regression equation as the following:

\[
CS = 1.630 + 0.664*PV + \varepsilon
\]

Where Customer Satisfaction, Perceived Value, \( \varepsilon \): random error

- The model is significant since \( F= 774.0, P-value<0.001 \) which means that there is a significant effect of the Perceived Value on Customer Satisfaction.

- It is clear from the T test for independent variable that \( T=22.3, P-Value<0.01 \), which confirms that the independent variable is significant at 0.01 level. The value of \( \beta =0.664 \), which indicates the strength or degree of influence, means that when "Perceived Value" improves by (1 degree), it will follow by increasing the rate of Customer Satisfaction by (0.664 degree).
The value of \( R^2 = 0.661 \) which means that (66.1\%) from the changes at "Customer Satisfaction" explained by "Perceived Value", which indicate that it is a Strong explanatory power. In light of such result the 4\textsuperscript{th} hypothesis can be accepted

**Testing hypothesis 5\textsuperscript{th} & 6\textsuperscript{th}**

H5: Customer satisfaction mediates the relationship between overall service quality and customer retention

H6: Perceived value mediates the relationship between overall service quality and customer retention.

To test this hypothesis path analysis model has been used in order to analyze the interrelationships between the variables under study. The results can be illustrated as displayed in figure (8):

![Path Analysis Model](image)

**NB.** Values on the arrows represent the estimated effect calculated from the AMOS program

Figure (8): The suggested path analysis mode
Testing Goodness of fit of the study model

To test the goodness of fit of the suggested model (15) from the path analysis has been used as based on the data collected the result is as follows:

Table (\textsuperscript{5}): Goodness of fit indices provide evidence to suggest that

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
<th>Suggested Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIN/DF (Chi Square / df)</td>
<td>1.631</td>
<td>( \leq 3 )</td>
</tr>
<tr>
<td>GFI (Goodness of Fit Index)</td>
<td>0.993</td>
<td>( \geq 0.9 )</td>
</tr>
<tr>
<td>CFI (Comparative Fit Index)</td>
<td>0.999</td>
<td>( \geq 0.9 )</td>
</tr>
<tr>
<td>TLI (Tucker- Lewis Index)</td>
<td>0.998</td>
<td>( \geq 0.9 )</td>
</tr>
<tr>
<td>RMSEA Root Mean Square Error of Approximation</td>
<td>0.041</td>
<td>( \leq 0.08 )</td>
</tr>
</tbody>
</table>

As based on above table, it is clear the goodness of fit relevant to the proposed study model good fit with a sample data where:

CMIN/DF (Chi Square / df) = 1.631 < 3,
RMSEA = 0.041 < 0.08

All other indices (GFI, CFI and TLI) are acceptable since their values are > 0.9, so the model is good, it does fit the sample data.

In terms of the estimated regression weights for the model table (16) provide the output of the analysis.
Table (1) the estimated regression weight for the model

<table>
<thead>
<tr>
<th>Variables</th>
<th>Estimate</th>
<th>Standard Error</th>
<th>Critical Value</th>
<th>Sig.</th>
<th>R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-.282</td>
<td>.069</td>
<td>-4.090</td>
<td>***</td>
<td>0.88</td>
</tr>
<tr>
<td>PV &lt;-- OSQ</td>
<td>1.009</td>
<td>.019</td>
<td>52.902</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>1.427</td>
<td>.098</td>
<td>14.622</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>CS &lt;-- OSQ</td>
<td>.314</td>
<td>.076</td>
<td>4.121</td>
<td>***</td>
<td>0.66</td>
</tr>
<tr>
<td>CS &lt;-- PV</td>
<td>.388</td>
<td>.071</td>
<td>5.481</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>.891</td>
<td>.088</td>
<td>10.143</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>CR &lt;-- CS</td>
<td>.137</td>
<td>.037</td>
<td>3.728</td>
<td>***</td>
<td>0.85</td>
</tr>
<tr>
<td>CR &lt;-- PV</td>
<td>.513</td>
<td>.053</td>
<td>9.665</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>CR &lt;-- OSQ</td>
<td>.245</td>
<td>.056</td>
<td>4.355</td>
<td>***</td>
<td></td>
</tr>
</tbody>
</table>

*** Significant at 0.01 level.

Based on the above table there is a positive significant impact of OSQ "Overall Service Quality" as an independent variable on PV "Perceived Value" as a dependent variable, the equation is as follow:

\[
PV = -0.282 + 1.009 \times OSQ + e1
\]

(eqution 1)

\[
R \text{ square} = 0.88
\]

1- There is a positive significant impact of OSQ "Overall Service Quality" as an independent variable on PV "Perceived Value" as a dependent variable, the equation is as follow:

\[
PV = -0.282 + 1.009 \times OSQ + e1
\]

(eqution 1)

\[
R \text{ square} = 0.88
\]

2- Where PV "Perceived Value", OSQ "Overall Service Quality", e1 "error term" for equation 1

3- There is a positive significant impact of OSQ "Overall Service Quality" and PV "Perceived Value" as independent variable on CS "Customer satisfaction", as dependent variables, the equation is as follow:

\[
CS = 1.427 + 0.314 \times OSQ + 0.388 \times PV + e2
\]

(eqution 2)

\[
R \text{ square} = 0.66
\]

- There is a positive significant impact of, "Customer Satisfaction", "Perceived Value", and “Overall Service Quality" as independent variables on “Customer Retention” as dependent variable, the equation is as follow:

\[ CR = 0.891 + 0.137 \times CS + 0.513 \times PV + 0.245 \times OSQ + e3 \]  
(equation 3)

\[ R \text{ square} = 0.85 \]


**Testing the Significant of the Parameters of Estimated Model and the explanation power of it:**

A T test has been conducted where T-value ranged between ( -4.090, 52.902) with P-value (<0.01) for all the parameter, then we conclude the parameters are significant, since the Sig. (P-value) less than 0.01 for all variables in terms of the explanation power of the model it has been proved that the power is (88%, 66%, 85%) for the equations (1,2 ,3) respectively which means that there is high explanatory power.

**Direct & Indirect Effect**

In terms of the direct and indirect effect and the total effect over all service quality on customer retention the result is as follows:

Table (17) provides evidence to suggest that there are three sources of indirect effect.
Table (17): Direct, indirect & total effect for OSQ on CR

<table>
<thead>
<tr>
<th>CR Customer Retention</th>
<th>OSQ Overall Service Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Direct</td>
</tr>
<tr>
<td>CR Customer Retention</td>
<td>0.245</td>
</tr>
</tbody>
</table>

Sources of indirect Effect:

There are three sources of indirect effect as following:

A. source 1 refers to indirect effect as displayed in figure (9):

\[
\text{Indirect Effect} = 0.314 \times 0.137 = 0.043
\]

While table (18) illustrates the indirect effect through path analysis technique:
### Table (18): Indirect effect through the path OSQ $\rightarrow$ CS $\rightarrow$ CR

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>P-Value</th>
<th>Sig</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSQ $\rightarrow$ CS</td>
<td>0.314</td>
<td>4.121</td>
<td>***</td>
<td>0.043</td>
</tr>
<tr>
<td>CS $\rightarrow$ CR</td>
<td>0.137</td>
<td>3.728</td>
<td>***</td>
<td></td>
</tr>
</tbody>
</table>

*** Significant at 0.01 level

**B:** source 2 refers to the indirect effect of overall service quality where perceived value affect the customer retention as the following figure (10):

![Diagram](image)

Indirect Effect $= 1.009 \times 0.513 = 0.518$

In addition to the above, table (19) displays the indirect effect through the path analysis technique as follows:

### Table (19): Indirect effect through the path OSQ $\rightarrow$ PV $\rightarrow$ CR

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>P-Value</th>
<th>Sig</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSQ $\rightarrow$ CS</td>
<td>1.009</td>
<td>52.9</td>
<td>***</td>
<td>0.518</td>
</tr>
<tr>
<td>CS $\rightarrow$ CR</td>
<td>0.513</td>
<td>9.67</td>
<td>***</td>
<td></td>
</tr>
</tbody>
</table>

*** Significant at 0.01 level
C: source 3 refers to the indirect effect of overall service quality on perceived value where perceived value affect customer satisfaction and in- consequences customer satisfaction affect customer retention as illustrated in figure (11) and table (19)

Indirect Effect = 1.009 * 0.388 * 0.137 = 0.053

Table (* * *): Indirect effect through the path OSQ → PV → CS → CR

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>P-Value</th>
<th>Sig</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSQ → PV</td>
<td>1.009</td>
<td>52.9</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>1PV → CS</td>
<td>0.388</td>
<td>5.48</td>
<td>***</td>
<td>0.053</td>
</tr>
<tr>
<td>CS → CR</td>
<td>0.137</td>
<td>3.73</td>
<td>***</td>
<td></td>
</tr>
</tbody>
</table>

*** Significant at 0.01 level
C: the total effect as based on sources 1, 2, 3 Indirect Effect = 0.043 + 0.518 + 0.053 = 0.614

Testing H5: Customer satisfaction mediates the relationship between overall service quality and customer retention.

Based on the above its notice that "Customer Satisfaction" is meditation in source 1 & source 3, so its indirect effect = 0.043 + 0.053 = 0.096

Direct Effect = 0.245

Indirect effect < direct effect, Based on this result the 5th hypothesis has not been proved/reject

Testing H6: Perceived value mediates the relationship between overall service quality and customer retention

Based on the above its notice that “Perceived Value” is meditation in source 2 & source 3, so its indirect effect = 0.518 + 0.053 = 0.571

Direct Effect = 0.245

Indirect effect > direct effect, Based on this result the 6th hypothesis has been proved

The discussion and conclusion

Based on the objectives and methodology adopted the flinging of the present research refers to:

There is positive impact of overall service quality on customer satisfaction and perceived value as well. Customer satisfaction, is also positively affected by overall service quality.
Meanwhile perceived value impact positively the customer retention. at the same time, while customer satisfaction is mediating the relationship between overall service quality and customer retention it has been realized that perceived value mediates the relationship between both overall service quality of customer retention. With regard to customer satisfaction as a mediating factor the result that has been obtained provides evidence to reject the proposition/hypothesis that is customer satisfaction mediates the relationship between overall service quality and customer retention.

When comparing the realized finding on the current study with the previous research ones, it has been found out that:

1- There is positive impact of Overall Service Quality on customer satisfaction. This finding supported by (Shemwell, 1988) who explained that customer satisfaction can be created through high services quality, (Sureshchandar et al, 2002) who identified that service quality and customer satisfactions were highly related. (Spreng and Mackoy, 1996) which found that service quality leads to customer satisfaction.

2- There is positive impact of Overall Service Quality on Perceived Value. This finding is consistent with Caruana (2002) who found that overall service quality is an antecedent of perceived value, (Bolton and Drew, 1991). Who found that service qualities positively related to service value?

3- There is positive impact of Overall Service Quality on customer retention. This finding aligned with (. Melam Zangmo, Wasin Liampreecha, and Sujinda Chemsripong.( 2015) which concluded that service quality have positive and significant relationship with customer retention
4- Perceived Value has a positive impact on customer satisfaction. This finding is supported by (Eggert & Ulaga, 2002) which found that Perceived value is an antecedent of customer satisfaction, (Patterson and Spreng, 1997) which found that Customer’s Perceived value is positive and direct antecedent of customer satisfaction. Additionally, (McDougall and Lévesque, 2000) which found that perceived service quality and value were the most significant drivers of customer satisfaction across four service sectors.

5- Customer Satisfaction is not mediating the relationship between Overall Service Quality and Customer Retention. Contradicted with (. Melam Zangmo, Wasin Liampreecha, and Sujinda Chemsripong. ( 2015) who found that customer satisfaction mediates the relationship between overall service quality and customer retention. The arguments of this differentiation is the present research examines the overall service quality in a on single factor, and not examine the specific aspects of service quality separately.

5.1 Recommendation

It is of significant importance that service quality research makes the necessary effort to explore the effects of overall service quality in different service sectors and cultures. In the past, customer retention research has paid a little attention to the effect of overall service quality on customer retention. The current research contributes to the literature by exploring the effects of overall service quality and perceived value and customer satisfaction on customer retention, through a survey conducted on the customers of Vodafone Company. The following point can be addressed:
• The respondents are not satisfied with the value of money they are paying for the service, so a reduction of the cost of the service provided should be lowered.

• The perceived value does not reach to the desired level from perspective of the sample since its level is moderate, so that one can recommend to improve the perceived value especially through:
  - Fair equivalent of services provided and money paid.
  - Maximize the value and benefit of the money paid
  - Improve the prices comparing to competitors to make the customers continue to use the Vodafone company’s services"

• As the results show that there is a significant impact of "Overall Service Quality" on "Customer Satisfaction", so certain attentions to overall quality and continuous improvement should be considered through:
  - Collecting information about customer complaints and proposals by using different methods, such as complaint boxes and suggestions at the service centers, personal interviews, or an e-forum through the company's website and questionnaires,
  - Work on the study and analysis of the complaints and suggestions, and develop solutions.
  - Adoption of proposals through the creation of new services, for the continuous development and improvement of services.
  - Make benchmarking with successful communication companies all over the world.
Suggestions for future research

In terms of suggestion for future research the researcher can proposed the following:

The present research examines the overall service quality as a one single factor. and have not been measured the specific aspects of service quality separately . Therefore, it is recommended for future research s to expand their examination to include how different characteristics of service quality could affect customer retention in the service sector in Egypt. Moreover the present research was conducted in one service industry and replication is needed in other sectors .Additionally the e researcher suggest that future research examines The relationship between sustainable marketing both customer satisfaction and customer retention ,The impact of salesmanship and customer retention and The impact of internal marketing on manpower academic staff turnover in private universities.
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