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# THE INFLUENCE OF SERVICESCAPE DESIGN ON PERCEIVED SERVICE QUALITY: THE MODERATING ROLE OF SELF-BRAND CONGRUENCE

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**THESIS APPROVAL**

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# DECLERATION

I, the undersigned, declare that this thesis has been composed solely by myself and that it has not been submitted, in whole or in part, in any previous application for a degree. Except where states otherwise by reference or acknowledgment, the work presented is entirely my own.

Candidate Name: Amal A. Khairaldeen

Signature: Amal

Date: Feb. 22nd, 2020

# DEDICATION

To mom and dad, for loving me unconditionally, and instilling in me the values of honesty and hard work.

To my siblings, rest of the family, and friends, for all your continued support and encouragement.

To my teachers across years, for instilling in me the love of curiosity and learning.

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*"And whatever of blessings and good things you have, it is from Allah." (Quran 16:53)*

Ibn Abbas narrated several qualities emphasized by the Prophet Mohammad (peace be upon) that serve their holders in this world and the next. Three of those are: a grateful heart (that is thankful to Allah), a remembering tongue (that mentions Allah often), and an enduring body (to persevere through the trials). As such, it is only right that I start by thanking Allah for blessings of life, health and knowledge. Allah's invitation to enlightenment and discovery has guided me through my life and motivated me to pursue higher levels of learning. This thesis comes in that context.

First, my gratitude goes to my loving and devout parents, my supportive siblings (Fida', Mariam, Saeed and Mahmoud) and the rest of the family. It is through their prayers, abundant love, and consistent motivation that this thesis and my master program journey bears fruit.

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Third, my gratitude goes to my colleagues and friends Luna, Dana, Hala, Hamzeh and Amer and all my friends, who have shared this journey with me. Thank you for the memories, every conversation and every single minute shared. Throughout the highs and

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Last but not least, much gratitude goes to all those who helped me finish this study logistically or otherwise. Thank you for helping in arranging transportation, completing the data collection process, transcribing the data, etc. Furthermore, thanks to the departments and individuals at the Arab American University who helped facilitate the various stages in completing this thesis.

Thank you all.

# ABSTRACT

The services sector of the economy, in general, does have a considerable importance all over the world, it is proved that companies need to develop a better understanding of this sector, its modern concepts and strategies to face fierce competence of attracting more customers. Whenever service-based businesses increase, the variety of servicescape designs rises. These environments are important contributors to the consumer's creation of an attitude towards the business, decision-making process, and behavioral responses towards a business. Depending on deep analysis of literature review, a model was built to investigate servicescape design effect on perceived service quality considering the potential moderating role of self-brand congruence.

The study hypotheses were tested by using multiple regression based on a sample of 570 respondents. The data were collected through face-to-face interviews filling a paper-based questionnaire. Studying findings suggests that the servicescape dimensions (ambient conditions, spatial layout, functionality, and social interaction) have a significant positive relationship with perceived service quality provided by telecommunication mobile service carriers in their centers. The findings did not provide support for a positive relationship among the signs, symbols, and–artifact dimension of servicescape design and perceived service quality. Furthermore, the study results did not prove that self-brand congruence has a moderating role between servicescape design dimensions and perceived service quality. In fact, the results support the idea that self-brand congruence is a significant predictor of perceived service quality.

Academically, this study contributes to the understanding of how environmental and personal factors influence consumers and the importance of addressing both. This study investigates under researched constructs and relationships in literature, particularly, in West Bank. The findings of this study encourage researchers to dive into the complexity of how

both environment and non-environmental (personal, psychological, etc.) factors influence customer's behavior. Managerially, this study alerts managers to the need for systematic and deep attention to servicescape design affecting customers' perception of quality. Furthermore, it removes the shallow stereotypes of customers' perception of service. The study describes how psychological processes (self-brand congruence) and perceptions of service quality have the same importance. It seems that the limits of customer's experience design should be not only restricted to the physical spaces of service delivery, but also to other non-physical spaces where customers develop attitudes to the company and its product offerings.

*Keywords*: Servicescape design, perceived service quality, self-brand congruence, telecommunications industry, Palestine (West bank and Gaza Strip).

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# CHAPTER ONE

# INTRODUCTION

## 1.1 Research Background

The global economy is witnessing a rapid growth in service sector as the global GDP contribution of services had increased from 55% to 70% during 1977-2007 (Al Falah, 2013). This trend can be seen in many world countries through which service economy is remarkably growing.

Palestine is one of those countries whose economy mainly relies on service activities. The Palestinian service sector has faced many constraints hindering its growth and development; until the mid 90s, certain service sectors such as: Research and development, finance, and telecommunications never existed or were very few. In the past 20 years, after Oslo Accords in 1993, both private and public sectors have made a joint effort in order to restructure the service sector (Morrar et al, 2016); this has brought an expanded contribution by the service sector, for example, GDP and employment, in 2017, the service sector achieved 73.3% of GDP and 63 % of total employment (Salah, 2017). As the years pass by, service sector is playing a key role in Palestinian economy reflecting a potential competitive advantage at both national and international levels.

The service sector activity has been in domestic trade, tourism, real estate, engineering design, health, social work, computer services, financial services, transport, communications, electricity, gas and water supply increasing companies number, value added, and intermediate consumption which were higher in service sector than in manufacturing one. Approximately, 66.9% of Palestinian employees were employed in service sector in 2010, which almost contributed to 66% of value added emphasizing the fact that Palestinian economy does rely on service activities. (Morrar et al, 2016)

Service sector activities, unlike other sectors in economy, in Palestine are characterized by their ability to emerge and develop in unstable and complex environments. Encouraging development in manufacturing sector requires a massive investment in buying raw material, new technologies taking into account a proper mechanism of how to exceed many sophisticated and strict Israeli laws imposed on exportation. However, the growth of service sector in Palestine basically depends on an availability of increasing demand on services and human capital. According to the Palestinian Central Bureau of Statistics (PCBS), around 40 thousand students annually graduate from Palestinian higher education institutions. In spite of skilled manpower, the labor market also includes a large number of untrained workers who can be trained and directed towards developing the service sector.

Information and Communications Technology (ICT) field has shown the most visible signs of development (Dweikat, 2010). Investing in workforce education and drawing on the experience of other neighbouring countries which have done so are two factors which greatly enhanced the sector's prompt growth. Moreover, Palestinian universities have realized the potential and invested in ICT units and specialized professional approaches. In addition, Palestinian consumers, through the interconnected internet and social media technologies, are learning through a discovery process motivating efforts to create useful aided service environments digitally.

One of the most active branches of service sector is telecommunication. Palestinian telecommunications entity has been outstandingly developed over the past two decades so that it could play a key role in developing and promoting Palestine’s infrastructure, quality of life, essence of education, and innovative culture. Telecommunication is a pioneer foundation of many Palestinian startups which nearly contributes to 4.9 % of the total Palestinian GDP. (Rami, 2009).

There are two major mobile network-operating companies in Palestine: Jawwal and Ooredoo. Jawwal is the first mobile network operator in Palestine that was established in West Bank and Gaza Strip in 1999. Today, Jawwal always provides more than 3 Million subscribers with telecommunication service in both West Bank and Gaza Strip; Jawwal aims at overcoming all difficulties and obstacles by providing efficient, effective and stable cellular communication service to its all subscribers .The second mobile network operator is Ooredoo (formerly Wataniya Mobile) which was established in 2009, and it is a member of international Ooredoo group. Ooredoo today provides more than 1.3 Million subscribers with services in both West Bank and Gaza Strip. Both companies' goal is to meet their subscribers' needs by providing them with the best services and programs differentiated with the latest technology, this is a must according to their vision, values and mission, taking into consideration all the right procedures of satisfying their subscribers' demand for quality in the best possible way.

## 1.2 Problem Statement

When a number of Palestinian service businesses increase, the competition level becomes fiercer to a point where common strategies are eventually useless. Therefore, companies seek for effective alternatives to be pioneers in their domain and attract customers. That being the case, the quality of a provided product is a vital distinctive feature, which companies do need in order to compete in any dynamic service sector so that customers can obtain the desired service upon request.

A lot of researches have shed light on service quality; some identified five dimensions of affecting the service quality known as: tangibles, responsibility, reliability, empathy and assurance (Parasuraman et al., 1985), while another one identified other factors affecting the perception of service quality such as price, packaging, branding and reputation (Mmutle, 2017). The physical environment or what is called a servicescape (the place where the service

is provided) was noted and emphasized by many researchers such as Kotler (1973), Mary Jo Bitner in (1992), and Juhari (2012); they considered different service spatial patterns concentrating on their influence on customer perceptions of quality and his targeted responses or attracting the implied consent (satisfaction, loyalty, etc.). In spite of the fact that this interrelationship among the servicescape, perceived service quality and the external factors (self-brand congruence) has its own influence, it has never been carefully considered before as it should be in previous studies. Having realized this, the researcher identified the moderating role of self-brand congruence in the impact of servicescape design on perceived service quality in Palestinian telecom industry.

Based on what is mentioned before, the researcher puts forward the main questions as follows:

- How is a servicescape conceptualized? What are the proper / relevant dimensions of a servicescape?
- How do the various dimensions of a servicescape influence the consumer's perception of service quality?
- Does self-brand congruence play an intervening moderating role in the influence of a servicescape's dimensions on perceptions of service quality?

## 1.3 Study Hypotheses

In order to answer the research questions, the researcher - after having reviewed literature about the theoretical tested model for constructing indices of refining scales produced by the factor analyses conducted, multiple regression was used to investigate the hypothesized relationships described in the theoretical model and expressed in the hypotheses statements- developed the proposed hypotheses of servicescape effect on perceived service quality and the moderating role of self-brand congruence, and examined the relationships among variables. This led to construct and frame research results and conclusions.

***The hypothesis related to servicescape effect on perceived service quality:***

**$H_{1a}$:** The ambient condition on servicescape positively influence the perceived service quality.

**$H_{1b}$:** The spatial layout and functionality on servicescape positively influence perceived service quality.

**$H_{1c}$:** The signs, symbols, and artifacts on servicescape positively influence perceived service quality.

**$H_{1d}$:** The social interaction on servicescape positively influence perceived service quality.

***The hypothesis related to the moderating role of self-brand congruence:***

**$H_{2a}$:** Self-brand congruence moderate the relationship between ambient conditions and perceived service quality.

**$H_{2b}$:** Self-brand congruence moderate the relationship between spatial layout and functionality and perceived service quality.

**$H_{2c}$** Self-brand congruence moderate the relationship between signs, symbols, and artifacts and perceived service quality.

**$H_{2d}$:** Self-brand congruence moderate the relationship between social interaction and perceived service quality.

## 1.4 Purpose of Study

Servicescape is a group of main determinants showing the way a consumer thinks, feels and behaves towards a business (Bitner, 1992; Baker et al., 2002). When customers demand a service or walk into a retail store, the first thing that draws their attention is the service environment which has to meet their desires and preferences towards a specific service according to their visual and mental perception; they can possibly determine and know the nature of the service level they receive afterwards; eventually, the quality is always the flavor of the created and sustainable perceptions (Hooper et al., 2013). Nevertheless, it is

important to note that determinants work side by side within the service environment so that they can have all the positive influence on customers as planned; this influence is managed and processed through understanding the interacting complicated and psychological operations of the customer's subconscious mind (Mari and Poggesi, 2011). For example, it has been evidenced that today's consumers place strong emphasis on the compatibility of typical product offerings and brand-name as a genuine to express their own self-portrait and personality. (O'Cass and Grace, 2008)

The main purpose of this research is to study how the various servicescape design elements have a considerable impact on the consumer's perception of service quality. Inasmuch as the common belief says that this relationship never comes without a fundamental reason, this study does investigate the potentially moderating role of self-brand congruence influencing the very combination between servicescape design elements and the consumers' perception of service quality. This purpose can be achieved by answering the previous research questions.

## 1.5 Significance of Study

This study does contribute to improve a service sector. The Palestinian economy depend on service sector taking into account the weight of retail services and services trade, which are undeniable in any growing economy. According to the published data by Palestinian Central Bureau of Statistics (PCBS), an apparent increase is found in the service sector contribution to the Palestinian economy; the service sector made up to 57% of the real GDP in 2012, while it made up to 73.7 of real GDP in 2017, which means that there is a notable increase in the quantity of service-based businesses causing an intensive competition among all peers, so this study provide a management team in any business with a better framework of practice and valuable information to create a better quality offering, boost all business, and prevent customers from turning to other smart operators.

Depending on theoretical point of view, this study discusses important and constructive relationships, which combine marketing and quality management literatures providing an empirical support for self-brand congruence, a functional criterion, alongside the servicescape affecting the service quality in a service sector. Undoubtedly, this humble study has an extremely importance since its results are to pave the way for further studies on other potential aspects that may affect the service quality.

## 1.6 Research Methodology

This study has adopted quantitative method when determining problem statement, shaping hypothesis, drawing conclusions and recommendations, and collecting and analyzing data allowing critically to evaluate its overall validity and reliability. The sample of the study represents subscribers of the mobile carrier, who are beneficiaries of their mobile carrier service. Data were collected from cities of West Bank.

## 1.7 Research Structure

This thesis is divided into five chapters: The **first** chapter is introduction providing background, problem statement, main hypotheses, purpose, significance, methodology, and structure of the research. The **second** is literature review having three sections: Section (A) defines the meaning of both service quality and service quality dimensions, section (B) consists of servicescape definitions and dimensions, and section (C) focuses on self-brand congruence definition, conceptual framework describing the relationship between the independent, subordinate, and moderate variables of the study, The **third** is methodology used to achieve the purpose of the study, design, sample, population, data collection, data analysis and tool applied. The **fourth** is the empirical part focusing on analyzing data collected. The **fifth** is all recommendations, suggestions, and references.

# CHAPTER TWO

# LITERATURE REVIEW

This chapter reviews previous studies which are relevant to this study shedding light on the proposed interconnections. The first part of the chapter explains quality pertaining to services and its relevant models. The second part presents the concept of servicescape and its various dimensions. The third part provides an understanding of self-brand congruence and its relevance to this study. The fourth part concludes the proposed theoretical framework for this study.

## 2.1 Quality of Service.

The customer is considered to be one of the key factors of assessing company success. Therefore, customers' full satisfaction is the highest priority of any intelligent management facing challenges in a competitive market. Companies always work hard to have a strong relationship with their customer providing them with what they need and expect; accordingly, most of service companies concentrate a lot on the services quality as it becomes a pressing need for achieving customer satisfaction. Moreover, service companies focus more on sustaining quality improvement because of services unique characteristics and this complicated challenge needs more efforts to do so. Since firms that provide intangible services to their customers are not selling features, but relationships, services have a high degree of intangibility that the suitability of the service cannot be judged before it is experienced. Furthermore, variability in the service outcomes is inseparable from the service provider and location; services are unpreserved and can't be stored for later use (Kotler and Keller, 2018).

### 2.1.1 Conceptualization of Service Quality

The service quality is not a new topic which has received a considerable attention in scientific researches for the past 35 years (Martinez and Martinez 2010). Depending on the understanding of the term ‘quality’ presented by the researcher and its perspective, which is precisely interpreted in an appropriate manner. The early researches on ‘quality’ showed that the goods - oriented manufacturing has a direct effect on service quality in conformity with specification of conceptualization; it was emphasized that quality assesses how closely goods or services are consistent with optimal standards; indicating measurable characteristics that quality standards may relate to time, materials, performance, reliability, or appearance to improve product features or reduce its deficiencies, there was a primary focus on applying quality concepts and tools. (Monks, 1987)

Quality definition has moved to customer-based orientation as a base of controlling manufacture-oriented goods which are matched to standards. Shortly after this, it has changed from producer-based orientation emphasizing service specifications, to customer-based orientation emphasizing service utility and suitability. For the time being, the definition does emphasize how to meet customer’s needs.

When revising the literature of service quality, it is found that most of them define it as a thorough assessment of a product or service depending on customers’ prior expectations. (Bitner and Hubbert, 1994).

Perhaps some of the most mentioned work in studying service quality was done by some researchers who defined service quality as an organization ability of meeting or exceeding customer expectations (Parasuraman et al., 1985), while others tried to provide a bit more clarity in defining service quality that is a variance between customer’s expectations and the actual service value. (Zeithaml et al., 1990); they put much emphasis on service quality resulting from comparing the actual service performance received by a customer with

what he or she expects. If service performance meets or exceeds the customer's expectations, then there has to be a positive motivation of customer's satisfaction. Whereas, if the service performance is less than the customer's expectations, then there is a notion that a customer is dissatisfied, which is a negative status companies actively avoid to face (Parasuraman et al. 1985). The notion of comparison was also mentioned in another study through which service quality was mentioned as the variation between customers' expectations of service performance before its occurrence and their perceptions of the service received (Asubonteng et al., 1996). Similarly, Gefen indicated that it is consumer's personal comparison between quality of the service, which is desired to receive, and what is actually received (Gefen, 2002). Some definitions did not emphasize the idea of comparison, for example, Johnston explained service quality as customers' impressions toward service offered by an organization in terms of excellence or inferiority (Johnston, 1995). These perceptions, impressions or expectations mentioned throughout the definitions are assumed to be influenced by a customer's experience with the product and its category.

It can be somehow said that service quality is a type of attitude reflecting the efficiency, effectiveness and flexibility of company services when compared with other companies according to potential customers. Table 1, below, provides a summary for some of the most main conceptualizations of service quality in literature mentioned above.

*Table 1*: *Definitions of Service Quality*

| Author | Definition |
|---|---|
| Parasurman,et al 1985 | It is when companies meet or exceed customer expectations. |
| Zeithaml et al., 1990 | It is the difference between expectation of the service and actual service. |
| Johnston, 1995 | It is the customer impression of excellence or inferiority toward service. |
| Asubonteng, et al, 1996 | It is the variation between customers' expectations of service performance before encountering the service delivery and their perceptions of the service received. |
| Gefan, 2002 | It is the customer self-comparison between quality of the service that they want to receive and what they actually received. |

Source: Author's survey of literature on service quality.

When reviewing Parasuraman's remarkable literature on service quality in 1985, it cannot be also denied that some of his other peers' themes still remains a fundamental basis of modern literature. This importance emerges from: Firstly, service quality is still a difficult construct for consumer and service providers to evaluate because of its intangible quality; secondly, most of modern literature addressing service quality still depends on the idea that perceived service quality comes from a comparison between consumer's expectations and actual service performance; and thirdly, the quality of service is not only evaluated by the result of service itself. Indeed, there are other important factors added to the above ones, such as a service delivery process, its environment and other psychological factors.

This study adopts a conceptualization of service quality built on the work of Parasuraman; service quality definition depends on customer's overall judgment and attitude towards a service which accordingly affects his satisfaction (Zeithaml and Bitner, 1996). This judgment depends on his evaluation of organization capability of meeting or exceeding his expectations. To a service consumer, perceived service quality is a result of a comparison between what he expects and what he obtains from a service provider. (Zeithaml et al., 1990).

If customer’s expectations exceed service performance, then perceived quality is less than satisfactory and customer dissatisfaction occurs accordingly (Parasuraman et al., 1985; Lewis and Mitchell, 1990).

### 2.1.2 Service Quality Theoretical and Measurement Models

David Garvin, late professor at Harvard University (1952-2017), identified five perspectives of quality. First, the transaction view of quality is synonymous with inherent excellence: it appears when the quality can’t be defined indicating incomparable standards and high achievements. This point of view is often applied to a performance of visual arts where experience gained through constant interaction and integration of service employees, managers or other customers playing a role in introducing service quality to customers. Second, the product-based approach views quality as an accurate and measurable variable explaining that the differences in quality was due to different elements a product or service consists of; for objectivity sake, this perspective failed to interpret differences in customers' preferences or even entire market segments. Third, a customer-based approach which stated that quality depends on final user's perceptions and feelings addressing the quality as the ultimate satisfaction. Fourth, the manufacture-based approach or operation-driven approach that primarily concentrated on manufacturing practices, engineering methodologies and supply operational processes used to produce a product or services to meet the specification. Fifth, a value-based approach views quality in terms of value and price. By considering the trade-off between perception and price, quality comes to be defined as “affordable” (Garvin, 1984).

Today's literature involves various aspects of the above perspectives when investigating service quality and associated theoretical frameworks and perspectives. Moreover, more emphasis on users' subjective evaluations of expectations and perceptions of performance can be noted. Service quality is determined by the customer’s perceptions which

are a result of his comparison between what he expects and what is the actual value which the customer perceived by utilizing the service or product. This is the best elaboration in the ‘Gap Analysis Model’ described in the next section.

#### 2.1.2.1 Model of Service Quality: Gap Analysis Model

The Gap Analysis Model is a well-known model of service quality. It is the product of the work of Parsu Parasuraman, Leonard Berry and Valerie Zeithaml in 1985. This model presents an integrated view of a consumer-company relationship. The main idea of the model focused on proposing that service quality depends on five gaps size and direction found in a service delivery process. These gaps are shown in figure 1.

Looking at the figure 1, it is noted that the first four gaps illustrate the ways of delivering a service from its provider to consumer, while the fifth gap is connected to the customer considering the reality of service quality. All of the gaps are interconnected and eventually concentrated in Gap 5, reflecting the conceptualization of perceived service quality as emphasized in previous literature. Addressing the ‘gaps’ mentioned in this model is vital for identifying controversial areas and handling them with convenient interventions.

When reviewing this model, it is indicated that the most relevant aspect of this study is its ability to describe the correlations of the study components. Clearly, the level of customer's latent expectations of how he feels towards the evaluated brand (self-brand congruence). Furthermore, the quality perception of the service received is proposed to be influenced by the service delivery process and the environment it occurs in.

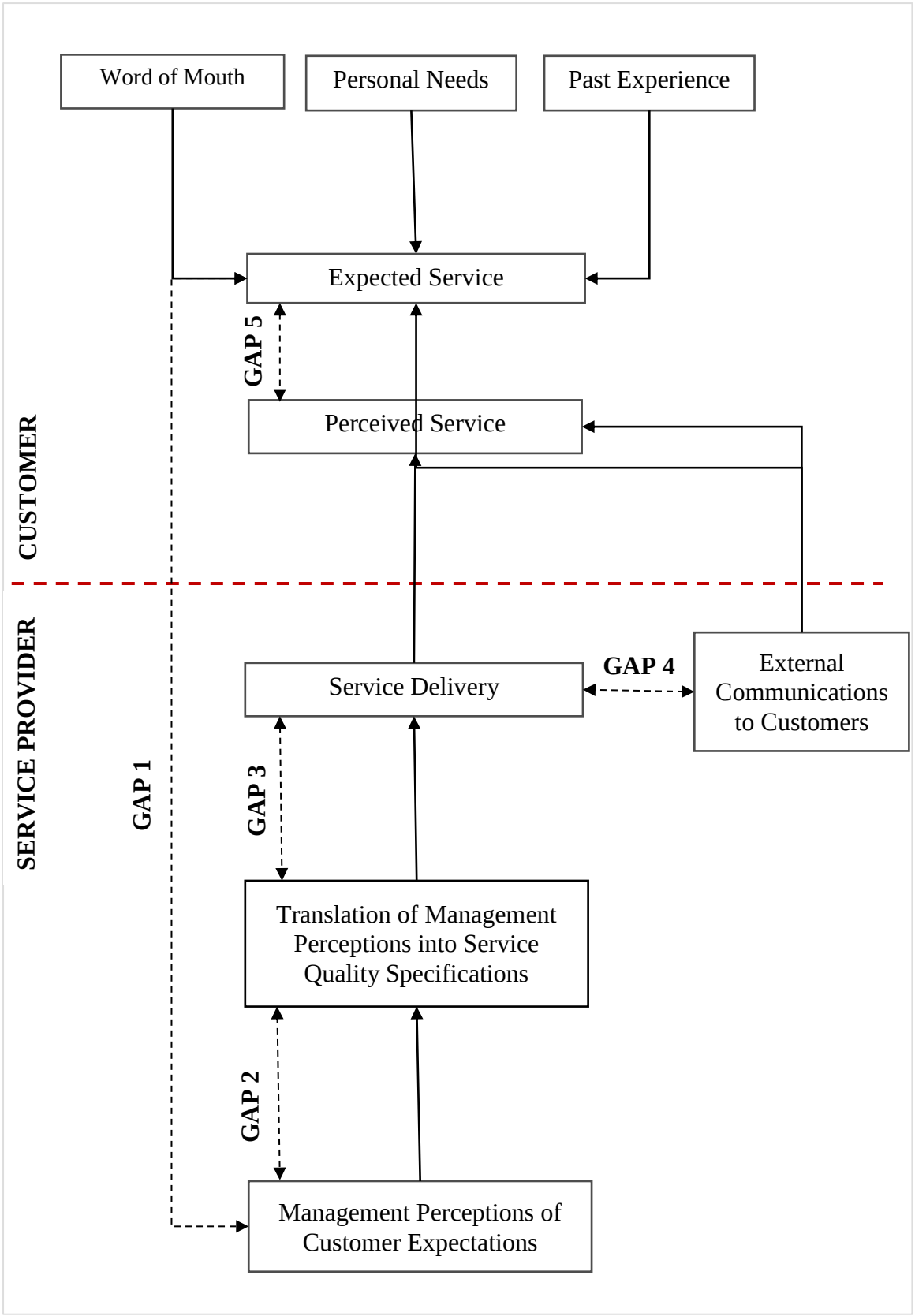


*Figure 1*: The service gap model.
Source (Parasuraman et al., 1985)

#### 2.1.2.2 Dimensions of Service Quality

A researcher called Grönroos, for the past three decades, has thoroughly sought to determine service quality main dimensions to find out most important standards customers use when evaluating it; most of his research on service quality describes it as a multi-dimensional construct. Moreover, for each new research, he came out with new dimensions or eliminated previous ones related to quality of service since it fluctuated across service industry; for example, his 1984's research "A Service Quality Model and Its Marketing Implications" defined three dimensions of service quality which were technical quality, functional quality, and corporate image. However, Haywood-Farmer 1988's research “Service Quality Attributes” defined four dimensions of service quality: Physical facilities, processes and procedures, people behavior and conviviality, and professional judgment. In the same field, Dabholkar and other researchers carried out a study in 1996 entitled "Retail Service Quality Scale (RSQS) Source" through which they mentioned five different dimensions of service quality: Physical aspects, reliability, personal interaction, problem solving, and policy; while Brady and Cronin, in 2001, clarified four dimensions: Personal interaction quality, physical service environment quality, and outcome quality.

The fifth gap in the Gap Model, presented in figure 1, motivated Parasuraman and his colleagues to create a tool of measuring customer gap, named Servqual. As opposed to physical goods, services have unique characteristics making service quality level assessment much harder for a firm. Physical goods can be easily inspected, on the other hand, a service has features that could never be done so, such as intangibility and variability (heterogeneity). Developing this model provided service firms and retailers with an organized approach for assessing a set of factors affecting consumers’ perception of the firm’s overall service quality. This tool contributed to the success of the exploratory study they had conducted in 1985,

where focus groups revealed 10 key categories of criteria that customers used to determine service quality. These categories are shown in Table 2 below.

| Dimension name | Definition |
|---|---|
| **Responsiveness** | The willingness or readiness of employees to provide service, it involves timeliness of service |
| **Reliability** | Consistency of performance and dependability |
| **Competence** | Possession of the required skills and knowledge to perform the service. |
| **Tangibles** | The physical evidence of the service |
| **Courtesy** | Politeness, respect, consideration and friendliness of contact personal, |
| **Communication** | Keeping customers informed in language they can understand and listening to them |
| **Access** | Approachability and ease of contact |
| **Security** | The freedom from danger, risk or doubt |
| **Credibility** | Trustworthiness, believability and honesty. |
| **Understanding** | Making the effort to understand the customer needs |

*Table 2*: *Determinants (Dimensions) of Service Quality*

Source: Determinants of service quality (Parasuraman et al., 1985)

However, Parasuraman and his colleagues knew well that an empirical investigation was necessary to examine these dimensions overlapping for finding out more clear, pure and distinct dimensions. After having carried out a lot of researches, they finally announced Servqual tool in 1988. It is a multidimensional research tool designed for measuring service quality through obtaining respondents' anticipation and interpretation of the five dimensions of service quality. The tool consists of equal combinations of items which are: 22 expectation items and 22 perceptions items, these combinations are arranged into five dimensions which are thought to be in line with the customer's mental map of service quality dimensions, namely: Tangibility, reliability, responsiveness, assurance and empathy. If performance doesn’t meet or exceeds expectations, then perceived service quality is less than satisfactory, which means customer's dissatisfaction (Parasuraman et al., 1985; Lewis and Mitchell, 1990). The notion of measuring the variation between the perceptions and expectations by Servqual gap scores proved to be very useful for evaluating the service quality level. Parasuraman and

his colleagues claim that Servqual can be adjusted applying few modifications in order to be adapted by service firms. They further argue that information of service quality gaps can help managers diagnose where performance improvement can be best targeted. Along with assessing the highest expectations, the largest negative difference facilitates the prioritization of performance improvements.

Despite the fact that Servqual is widespread in literature, critics are always there; because customers often have difficulty identifying and distinguishing expectations from perceived performance levels (Yarimoglu, 2014). Cronin and Taylor carried out an empirical research on banking, pest control, dry cleaning, and fast food sectors in 1992; they developed what is called "Servperf" which is a performance-only model (performance side of Servqual) for measuring service quality. In 2001, Brady and his colleagues showed that Servperf was the best model among all service quality ones, therefore, they replicated and expanded it generalizing their results in different sectors such as spectator sports, entertainment, health care, long-distance carriers, and fast food. In addition, Stafford and his colleagues assessed the suitability and stability of service quality models in 1998, and emphasized that service quality can be measured using both expectations and perceptions (Servqual) or perceptions alone (Servperf). Servqual proposed 44 statements (expectations and performance related), while Servperf only 22 (performance related).

Table 3 provides the conceptual definitions of the five dimensions which constitute the basis for Servqual and Servperf. These dimensions are further shown in the following sections.

*Table 3*: *Service quality Dimensions*

| Dimension name | Definition |
|---|---|
| **Tangibles** | The degree to which physical facilities, equipment, and appearance of personnel are adequate. |
| **Reliability** | the degree to which a promised service is performed dependably and accurately |
| **Responsiveness** | the degree to which service providers are willing to help customers and provide prompt service |
| **Assurance** | the extent to which service providers are knowledgeable, courteous, and able to inspire trust and confidence |
| **Empathy** | the degree to which the customers are offered caring and individualized attention |

Source: Determinants of service quality (Parasuraman et al., 1988)

*2.1.2.2.1 Tangibles*

This dimension include physical facilities, material, equipment and personal appearance. In 2001, Fitzsimmons & Fitzsimmons said that tangibles are physical surroundings seen as a hard evidence of care and attention to the details. Service provider has to care about employee's appearance, uniform, and equipment to let consumers have a good impression of the company they deal with.

*2.1.2.2.2 Reliability*

This dimension refers to the ability of presenting services in a correct and reliable way (what was promised) to customers depending on the employee's good knowledge, accurate performance, error-free, and on time. Reliability is defined "the ability to perform the promised service with credibility and accuracy, it is seen as the most significant factor in service quality dimension". (Parasuraman et al., 1988)

*2.1.2.2.3 Responsiveness*

This dimension refers to helping customers, presenting an immediate service, and resolving any potential problem promptly. Responsiveness is described as "the speed and timeliness of service delivery"; this includes the speed of productivity and the ability to serve customers with a minimum waiting time (Johnston, 1997). This dimension focused a lot on

customers and the way of how to deal with them; employees should pay more attention to customers serving them on the spot, answering their questions, and solving their problems and complaints in time.

2.1.2.2.4 *Assurance*

This dimensions refers to employees' knowledge, delicate manner and full ability of gaining customer's confidence by keeping their words, which means to instil confidence effectively. It is defined as a dimension emphasizing some features employees ought to have: strong competence, respect and courteousness, and full ability when serving customers in order to build an effective communication impressing customers more positively. (Fitzsimmons & Fitzsimmons, 2011)

*2.1.2.2.5 Empathy*

This dimension refers to the degree of firm's care and attention provided to its customers through building good communications to realize how to meet its customers' needs providing prompt service. It is "the provision of caring, individualized attention to customers". Empathy need a lot of employee's effort to meet customers' needs and make them feel more comfortable. (Chase et al. 2001)

Although all of the above mentioned dimensions are reflected in one way or another in service delivery process and surrounding environment, only tangibility can be viewed as the most prominent element of service quality connected to the concept of servicescape which is the next construct explored in literature review and tested in this study as a proposed predictor of service quality.

## 2.2 Evolution of the Servicescape

Customer's perceptions and behavior are strongly affected by service environment where the service is created. Service environment is considered to be a key driver of service value (Walter et al., 2010). When services are consumed, they can be catchy; this elevates the importance of the surroundings in which they happen. The next sections present a group of various conceptualizations regarding the environment in which services happen, and end with a thorough analysis of servicescape.

### 2.2.1 Environmental Psychology

Early research of an environment impact on human behavior was addressed by environmental psychology, a field of professional psychology studying the relationship between human behavior and environmental conditions in which it occurs (Mehrabian & Russell, 1974). The term "behavior" can be addressed as observable and unobservable (thoughts and emotions) human actions, on the other hand, the environmental conditions refer to the physical environment surrounding human beings. Perhaps the earliest ideas in this field came from a psychologist called Kurt Lewin, who believed that behavior (B), its function (F), is largely determined by the characteristics of the person (P) and the environment (E), thus, that B = f (P, E). (Lewin, 1936).

Based on Lewin's concept, Mehrabian and Russell developed Stimulus-Organism-Response model (M-R model) in 1974, which suggests that individuals emotionally respond to various environmental situations. This environmental psychology model has emerged in marketing literature. It suggests that in a service environment, a customer's emotional response could lead to an 'approach – avoidance' behavior to a service environment, which includes "environment emotional evaluations, service experience evaluations, long-term patronage decisions, attitudes toward others in an environment, spending behavior, shopping

time and environment exploration" (Herrington, 1996). Approach behavior refers to the degree to which an individual can act freely or being willing to move such as tendency to buy (Baker et al., 1992). On the contrary, avoidance behavior can be seen as a desire to leave the environment (Tombs & McColl-Kennedy, 2003).

However, there are some theoretical views in environmental (ecological) psychology, there has been no serious theoretical base in this field of research so far, because of the complexity of covering all areas and aspects of the interaction between the environment and behavior. As a result, environmental psychologists have abandoned them and defined their own research targeting smaller areas, each of which has its own models and literature. These narrower fields of environmental psychology develop their own theory and applied aspects. Without going into details, they include the impact of congestion, the human behavior in certain spaces, the influence of architecture on behavior, the study of the environment (environmental cognition), environmental stress, work conditions (work environment) and atmospherics (Khanau, 2015). Atmospherics, further explored in the next section, is the aspect of environmental psychology that raised marketers' attention to the customer's retail and service environments.

### 2.2.2 Atmospherics

Philip Kotler was the first researcher studying a physical environment impact on human behavior, indicating that tangible products are not the only important part of the overall consumption bundle, but "the total product" is the most important when choosing a purchase. He mentioned many things under the phrase of total products such as service, warranty, advertising, packaging, and the most important item is the place where the service was purchased or consumed (Kotler, 1973). He is not only the first person who presented the expression "atmospheric", but he also defined the expression "conscious design of spaces that would have a specific impact on buyers" (Kotler, 1973).

Firm atmosphere plays a decisive role influencing customers' decisions who want to buy the firm offered products or services. It is perceived by human senses of sight, smell, sound and touch. The term is used to consider these means which can be applied to describe the atmosphere of a firm. (Kotler, 1973)

### 2.2.3 Servicescape

Marketing has remarkably moved from product-centric to customer-centric for the past four decades. Traditionally, companies consider product efficiency to be a top priority focusing on issues like processing, collecting, loading, and distributing products, which can be all measured or quantified and put into a production plan, rather than focusing more on customer relationship management. From the academic point of view, the product perspective is referred to "goods-dominant (G-D) logic", which means that the service is viewed in terms of a type of good (intangible) implying that goods production and distribution practices should be modified to address the differences between tangible and intangible goods (services). However, this traditional approach has disappeared for the last few decades, and new "service-dominant (S-D) logic" is gaining popularity instead. This view considers services (the process of using resources for other parties' benefit) to be the ultimate target of any economic exchange; and suggests the need for a modified service-oriented framework for marketing.

According to the perspective mentioned before, value is created with the customer and it is recognized when a good or service is used, customer's perception about the value of use is crucial, rather than embedded in goods or services (Vargo and Lusch, 2008). Thus, customer experience management has become an important factor in developing and maintaining customer's satisfaction and loyalty. (Klaus & Maklan, 2012)

Identifying experience time, Gupta & Vajic indicated that it occurs when a customer has a sensation or acquired knowledge through various dimensions interaction of a service

provider context, which is created in multiple touch points. (Meyer & Schwager, 2007). There are clues letting service experiences emerge from the touch points between the customers and service provider (Berry et al., 2006). Companies need to include, execute, and manage these clues to give customers ideas and feelings they want (Chakravorti, 2011). Adopting customer experiences requires managing many clues carefully; one of these important clues is a physical environment in which the experience is created as a result of a direct communication between the customers and service provider, which is often considered to be one of the strongest drivers of service value (Walter et al., 2010). This is logical when talking about the environment hosting the service being delivered, where it shifts marketing conversation from waiting (associated with traditional product-dominant marketing logic) to servicescape (associated with new service-dominant marketing logic).

It is stated that the servicescape affects the customer's experience. It does not matter whether experience is normal (e.g. riding a bus), majestic (e.g. long adventure) or personally meaningful (e.g. child birth in a hospital). Nevertheless, the servicescape does influence the flow of the customers' expectations and their emotional relationship with the business providing that experience. As a result, many companies rely on servicescape to deliver customer experiences. (Zeithaml et al. 2009)

#### 2.2.3.1 Conceptualizing Servicescape

Many articles provide different definitions referring to servicescape. For example, servicescape is described as "physical environment" (Baker, 1987); as "marketing environment" (Turley & Milliman, 2000); and as "store environment" (Roy & Tai, 2003).

These various definitions have been adopted in literature for long time. However, this research concentrates on the Bitner's definition of the servicescape in 1992, which refers to a design of physical environment arousing a customer's internal response like approaching or

avoiding. Table 4 shows an overview of the most popular definitions mentioned in literature explaining the concept of servicescape.

*Table 4*: *Definitions of Servicescape.*

| Author | Definitions of Servicescape |
|---|---|
| **Martineau (1958)** | The image concept of the store will affect the customer selection decision |
| **Kotler (1973)** | the conscious design of the space in order to create certain emotions on the customer |
| **Bitner (1992)** | the combination of two English words, service and landscape |
| **Lia et al., (2009)** | The physical environment in a service which leading to the display of approach or avoidance behaviors. |
| **Zeithaml et al. (2009)** | The place where the company provide the service and communicate with customer. |
| **Juhari et al., (2012)** | physical environment of an organization that encompasses several different elements |
| **Kloosterman, M. E. (2017)** | is the environment in which the service is assembled and in which the seller and customer interact |
| **Lee and Kim (2014)** | Perceived service quality will be affected by servicescape attractiveness, design, cleanliness and comfort |

Source: Author's survey of literature on servicescape.

After these different definitions of servicescape, it can be concluded that servicescape is the place where the actual interaction between a customer and a firm happens. Servicescape can strongly affect customer emotions and response toward a firm.

#### 2.2.3.1 Servicescape Dimensions

Bitner's servicescape model, in 1992, is one of the most widespread types used for service environment and its affect (Tombs et al., 2003). Bitner categorizes three dimensions of the physical environment affecting the overall perception of the customer's environment (perceived quality), internal response (satisfaction), and external response (approaching or avoidance). Figure 2 explains how various environmental factors affect the internal response and external behavior of customers. Suggesting that customers may perceive different environmental factors, and accordingly, they may response cognitively, emotionally or physiologically. Internal responses influence customers' behavior and can be interpreted by

stimulus-organism-response model of Mehrabian & Russell (Bitner, 1992). Those dimensions are: (1) ambient conditions, (2) spatial layout and functionality, and (3) signs, symbols and artifacts.

After Bitner's research published on servicescape, many researchers pursued the path and added the fourth important dimension of servicescape, the social dimension (Rosenbaum & Massiah, 2011; Siddiqui & Tripathi, 2011). These four dimensions of servicescape are more explained as follows:

**Ambient condition**: The basic environment characteristics are as temperature, lighting, noise, music, and smell. These conditions affect the five senses making customers respond to the surrounding environment linking senses and the factors with their effects. It is indicated that sense of sight is affected by colors, shapes, and lightening. Sense of hearing is affected by music and noise. Sense of smell is affected by air quality, scent, and perfume. Sense of touch is affected by neatness, temperature, and comfortable furniture. Finally, sense of taste is affected by hospitality like sweets or drinks. All of them emotionally attain customers' comfort, satisfaction and loyalty when meeting their need and desire causing them to stay longer in the servicescape. (Grayson & McNeill, 2009)

**Spatial layout and functionality**: The equipment and furnishing arrangement within the space; their size, shape, position and spatial mutual relations refers to spatial layout, all of these things must be properly and coherently arranged (well physical design) to facilitate employees' work, save the time of accomplishing work, and to let employees perfectly serve customers; this enhances customers' cognition and visits (Liu & Jang, 2009). Functionality refers to the items capability (equipment, furniture and machines) to enhance performance and to achieve goals. A good example of this, Hoffman indicated that any potential machine problem, as disruption of computer system or any other equipment, may confuse customers and cause servicescape failure.(Hoffman et al., 2003)

**Signs, symbols, and artifacts**: They refer to indoor and outdoor signs, furniture, artistic works, etc., used to reflect company's image, rules, behavior, and direction handling any prospected confusion. These factors have a great impact on shaping customers' first impression (Bitner, 1992). The company as a concept can be a label or sign identifying its name or directing some regulations such as: (smoking is not allowed), (please, keep the place clean), and (keep left, entrance next right); all of these are explicit signs explaining company's regulations and behavior.

However, the customer can also recognize the place, directions and regulations through implicit signs; it is indicated that quality of materials used, artwork, presence of certificates, pictures on walls, floor coverage, and other personal objects being in the environment. They can convey a symbolic meaning and create an overall aesthetic effect (Simpeh et al., 2011); for example, customers in restaurants realize that white table fabric and soft lighting implyingly reflex an outstanding service with a high price, whereas another service having plastic furnishings and bright lighting is absolutely the opposite".

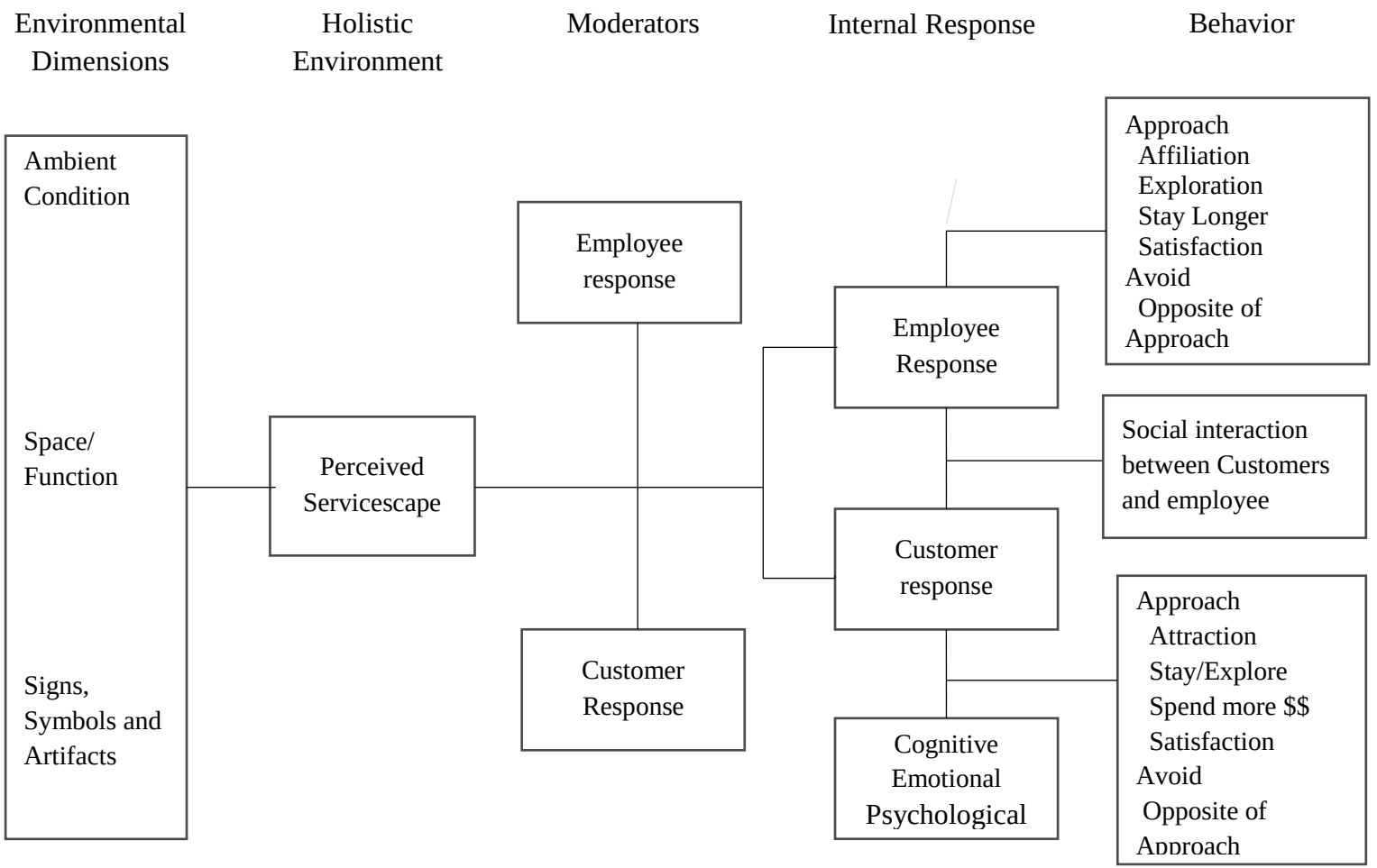


*Figure 2*: Servicescape: The impact of Physical Surroundings on Customer and Employees
Source: Bitner (1992)

**Social dimension***:* It is noted that customer's approaching or avoiding decision towards a specific service not only depends on the three dimension which were previously defined, but it also depends on employee-customer interaction (Baker et al., 1994). It is found that direct communication between customers and employees significantly affects customers' awareness, behavior, and perceptions of service quality considering their aspirations and expectations; therefore, companies should invest more to develop its employees' skills when dealing with customers (Hennig-Thurau et al., 2002). This clarifies the employee role being a means of affecting customer's satisfaction and reaction towards services provided in social servicescape dimension, where a customer shows satisfaction with the service through the participation of his positive response to the service, which in turn shows long-term customer's loyalty (McGinnis et al., 2008).

Customers' behavior clearly appears through their comments on social media, like positive comments and chats, showing the extent of their association with the firm; this can positively affect other customers. Social density can affect customer's decision of approaching or avoiding a specific service in different ways, depending on the nature of the service a customer looks for; if a customer needs a specific service, the density negatively affects both service quality and customer's decision, therefore, companies take into consideration this need. In some cases, customers look for tis social density in servicescape when they need enjoyable or interesting services (Tombs & McColl-Kennedy, 2003). Therefore, companies consider the difference in the nature of the service sought by the customers. Finally, the displayed emotions in servicescape dimensions have a full control on the service they offer; employees cannot properly control customers' displayed emotions unless they motivate customers' emotional responses through other peers: this is called emotional contagion. It is noted that customers are sensitive to the emotional signs of other customers or employees ones, these emotions are influenced by the way of greeting, smiling, eye contact, and the tone

of voice affecting the perceived service quality either positively or negatively. (Rosenbaum & Massiah, 2011)

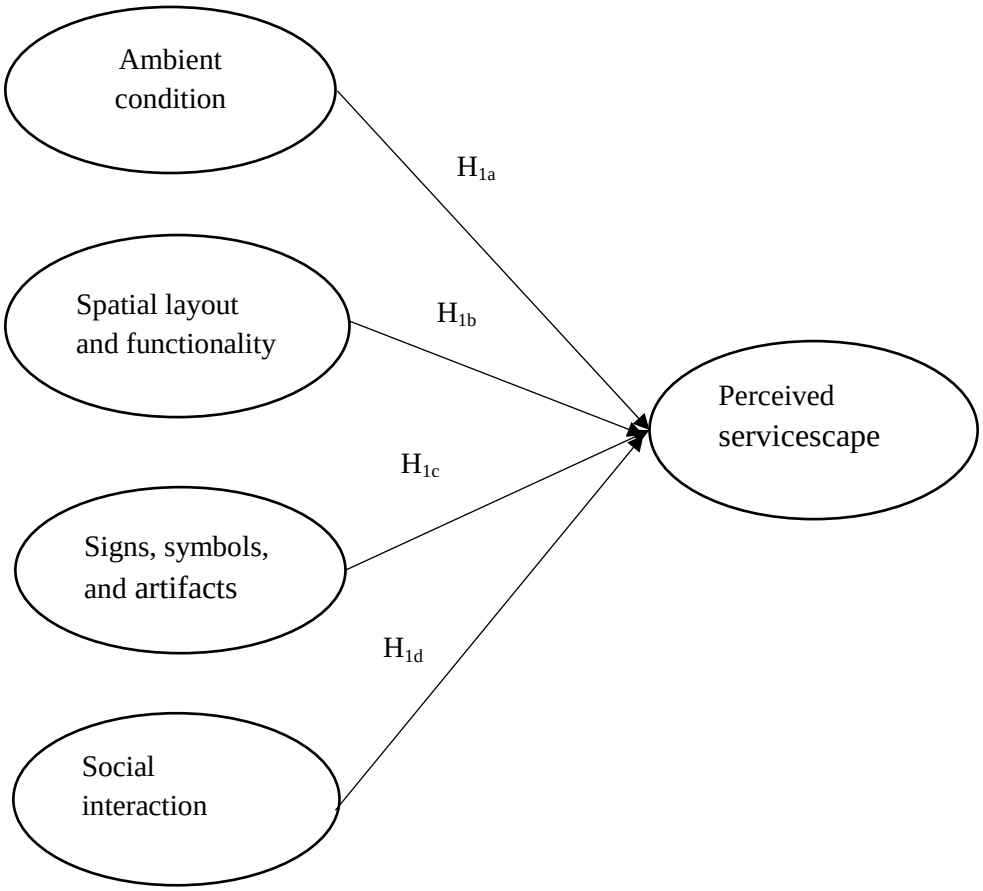


*Figure 3*: The four dimension of servicescape
Source: researcher.

Table 5 summarizes the most prominent work in the servicescape literature, mentioning the authors, the dimensions of servicescape emphasized, and some of the important attributes pertaining to those dimensions suggested for measurement and investigation. In this study, these four emphasized dimensions have been extracted from literature, which is based on extensive comparison of articles, highlighting the importance of a dimension accepted according to researchers' consensus.

*Table 5. Prior research in servicescape dimensions*

| Author | Servicescape dimensions | Attributes |
|---|---|---|
| Bitner (1992) | 1. Ambient conditions<br>2. Space/Function<br>3. Signs, Symbols and Artifacts | 1.Temperature, air quality, noise, music, and smell<br>2. Layout, equipment, and furnishings<br>3. Signage, personal artifacts, and style of décor |
| Wakefield and Blodgett (1994) | 1. Spatial layout & functionality<br>2. Aesthetics | 1.Stadium seats, ticket windows/gates, hallways/walkways, entrances/exits, food service areas, and rest-rooms (men's)<br>2. External environment, exterior construction, interior construction, score-boards, and facility cleanliness |
| Wakefield and Blodgett (1996) | 1. Layout accessibility<br>2. Facility aesthetics<br>3. Seating comfort<br>4. Electric equipment / displays<br>5. Cleanliness | 1. Layout of exit and entry, furnishing, and equipment layout<br>2. Architectural design, color, and interior design<br>3. Physical seat and space of seat<br>4. Signs, symbols, and artifacts for leisure experience<br>5. Facility cleanliness |
| Wakefield and Blodgett (1999) | 1. Building design and décor<br>2. Equipment<br>3. Ambience | 1. Outside appearance, interior design, layout, and seats<br>2. Electric equipment<br>3. Cleanliness, temperature, and neatness of employees' appearance |
| Hennig-Thurau et al (2002) | 1. Ambient conditions<br>2. Space/Function<br>3. Signs, Symbols and Artifacts<br>4. social dimension | 1. Temperature, air quality, noise, music, and smell<br>2. Layout, equipment, and furnishings<br>3. Signage, personal artifacts, and style of décor<br>4. Employee skills to interact with customers. |
| Lucas (2003) | 1. Layout navigation<br>2. Cleanliness<br>3. Seating comfort<br>4. Interior décor<br>5. Ambience | 1. Architecture, interior design, and spatial layout<br>2. Clean slot floor<br>3. Padding, backrests, fabric/heat-dissipating seat, and uncrowded seat<br>4. Lighting, color, and floor décor<br>5. Internal climate, music, and visual graphic |
| Newman (2007) | 1. Space<br>2. Way-findings | 1. Spatial density<br>2. Legibility of internal design such as central passageways and meeting places |
| Ryu and Jang (2008) | 1. Facility aesthetics<br>2. Lighting<br>3. Ambience<br>4. Layout<br>5. Dining equipment | 1. Architectural design, color, and interior design<br>2. Type of lighting and illumination<br>3. Music, temperature, and scent<br>4. Object (e.g., machinery, equipment, and furnishings) layout<br>5. High-quality flatware, china, glassware, and linen |
| Edwards and Gustafsson (2008) | 1. Internal variables<br>2. Layout and design. | 1. Music, noise, and odor<br>2. Table layout and seating |
| Kim and Moon (2009) | 1. Ambient condition<br>2. Facility aesthetics<br>3. Layout<br>4. Electric equipment<br>5. Seating comfort | 1. Lighting level, temperature, aroma, and background music<br>2. Architecture, interior, décor, color, and overall attractiveness<br>3. Tables, service areas, and passageways<br>4. Audio/video equipment<br>5. Comfortable seat and uncrowded seat |
| Lee and Kim (2014) | 1. Attractiveness<br>2. Cleanliness<br>3. Layout<br>4. Comfort | 1. Finishes, colors, and facilities<br>2. Clean facilities, entrances, corridors, and restrooms<br>3. Easy access to designated places<br>4. Comfortable air, temperature, and brightness |

Source: Literature review

## 2.3 Self-Brand Congruence

Self-brand congruence is a perspective of brand personality known as "a set of human characteristics associated with brand" (Aaker, 1997). This Idea arose from the belief of animism (Glimore, 1919) justifying the humanization of things. As stated in the concept, brands can exceed individual design levels and function as peers in brand consumer relationships. Marketers are fully aware of the meaning of establishing "clear and distinct brand characteristics" (Maehle & Shnoer, 2010), in order to increase the demand on the brand and to make it unique. This will also attract sympathetic customers to the features of this character. A new model called self-brand congruence (Levy, 1959; Sirgy et al, 1997; Sirgy & Su, 2000) is the result of the similarity linking customer personality with brand one(Parker, 2009). The research on the congruence connecting customer's self-image with brand image attempts to describe customer brand selection in order to gain brand preference and loyalty (Birdwell 1968; Bellenger et al., 1976; Dolich, 1969; Hughes & Guerrero 1971; Munson 1973; Stern, Bush, and Hair 1977). Consumer –Brand identification (CBI) has been recognized as an essential pioneer of consumer-brand connection; in general, customers show a positive attitude towards brands which are more likely to reflect their concepts and to express and enhance their identity. Therefore, consumer-retailer identification (CRI) provides powerful perceptions allowing retailers to increase their emotional connections with their customers to enhance true realization. Servicescape can be similar to a brand's identity. Particularly, initializing the impact of self-brand congruence about anything stimulates the servicescape. Since brands absorbing consumers' self-concepts which may be more concerned, consumer-retailer identification (CRI) provides retailers with powerful perceptions of attracting customers' emotional responses reinforcing their whole realization. Servicescape, like one's brand identity, can provide extensions or notifications. Thus, it activates the effect of its own brand consolidation on all responses created by servicescape.

Consumers always choose brands with personality or images that are closer to their own personality. It is found that customers buy not only for the product utility, but for what it also means and provides (Levy, 1959). It is indicated that the psychological comparison involving the interaction between the product-user image and consumer's self-concept creates a subjective experience called self-brand congruence. (Sirgy et al., 1997)

A direct relationship is found among service quality, servicescape and self-brand congruence; self-brand congruence is defined when the consumer identifies the brand with traits related to its personal characteristics; he chooses the appropriate brand, he never cares about the costs or benefits; and he is interested in the extent to which they match their personal characteristics, their impact on the quality, and performance of the service (Jamal & Al-Marri, 2007).

Moreover, it is explained that self- brand congruence and service quality are essential components for a customer's acceptance and loyalty to repurchase a product or brand (Ekinci et al., 2008). In addition, it is indicated that consumers prefer to shop in store (servicescape) in which their internal environment matches with their self-brand congruence (Yim et al., 2007). Furthermore, it is experimentally indicated that consumer perceptions of self-brand congruence are strongly affected by dimensions of servicescape, as the atmosphere. (Chebat et al, 2009)

Finally, when customers decide to choose and use a certain service, they always look forward to having a service that meets their needs and matches their personality creating a self-image congruence on brand preferences depending on his experience of the service (Widijiono & Japarianto, 2015), this is because self-image congruence of brand does not rely on one situation; therefore, so it cannot be measured as a static cognitive state (Graeff, 1997).

There is no clear evidence that all consumers respond to the social servicescape in the same way or whether there are moderators and mediators of the proposed relationships.

Therefore, this research examines if self-brand congruence has a moderating effect on the relationship between servicescape design and the perception of service quality.

## 2.4 Study Conceptual Model

According to the Bitner's framework of servicescape in 1992, customers respond to the environment which can be categorized as cognitive, emotional or physiological response. Perceptions of the servicescape might lead to certain beliefs or emotions influencing individuals' behavior. This idea is supported by the stimulus-organism-response (S-O-R) paradigm relating features of the environment (S) to approach-avoidance behavior (R) in the environment.

In this study, it is proposed that servicescape design influences the perceptions of service quality, an essential element in building customers' positive experiences whom are attracted and retained. Furthermore, it is believed that each customer comes into the servicescape with his own personal expectations and experiences about the brand, which may influence how he perceives the service quality. Hence, it is proposed that self-brand congruence moderates the relationship between servicescape design and the perceived quality of services. These constructive relationships are shown in figure 4 below.

### 2.4.2 Study Conceptual Model

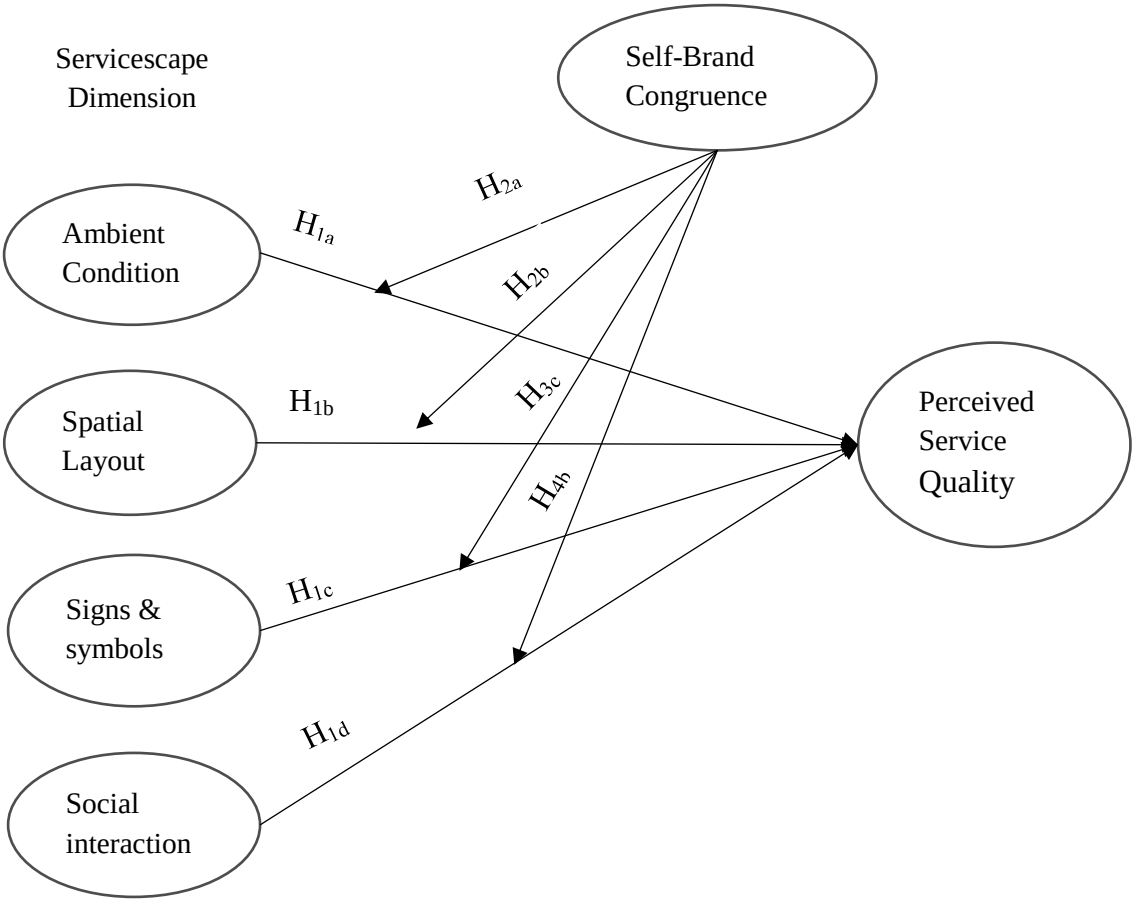


*Figure 4:* Study Conceptual Model
Source: researcher.

# CHAPTER THREE

# METHODOLY

Research design involves what methods and procedures of obtaining the necessary information the researcher followed. It is her plan of setting directions and details of collecting reliable and valid evidence to answer proposed study questions. This chapter demonstrates the research methods, research design, target, sampling and data collection, measurement tools, and analyses applied.

## 3.1 Research Design

This chapter aims at realizing the effect of servicescape design on the perceptions of quality in a service setting and investigating the moderating role of self-brand congruence in this issue. Figure 5 clarifies the study conceptual model that was developed after revising the literature of servicescape design, service quality and self-brand congruence.

In order to test the relationships proposed in the conceptual model (see figure 4), this study adopts a quantitative approach. The quantitative research method is commonly used when examining customers' attitudes and opinions. It is indicated that the quantitative research is a method of gathering numerical data to explain a phenomenon based on mathematical process (Creswell, 1994). It is explained in later sections, factor and regression analyses are two statistical techniques utilized to investigate hypotheses using the mathematical data collected.

Adopting quantitative approach, unlike the hundreds of coding categories of a qualitative approach, is helpful since numbers can be more understandable and interpretable. Moreover, quantitative studies are often designed using measures for which validity and reliability are already established (Taylor, 2005).

## 3.2 Obtaining Research Data

### 3.2.1 Target Population

The number of Palestinians in both West Bank and Gaza Strip is to reach 5,101,152 in 2020, as it is estimated by the Palestinian Central Bureau of Statistics (PCBS). Around 3,053,183 out of the total are in West Bank and the rest are in Gaza Strip (PCBS, 2017). In addition, PCBS estimates that the proportion of individuals (18 years and above) who own a mobile phone or a smart one is 92% in West Bank and 82% in Gaza Strip, which is divided into 83% for females and 94% for males. These individuals, above 18 years, who can conduct transactions and benefit from the services offered at mobile carrier stores; they are a customer base of the Palestinian mobile telecom (Ooredoo and Jawwal); respondents relevant to this study. Because of Israeli restrictions imposed on movement and access to Gaza and other data collection complexities, this study only targets West Bank mobile carrier customers, who are above 18 years old, conducting transactions and taking advantage of the services provided at mobile carrier centers.

### 3.2.2 Sampling Technique and Sample Size

Generally, the sample is taken from the studied population, it is a part of the population studied to capture generalizations about the entire population. When the sample is appropriate, it has the same characteristics of the population (Zikmund, 2003), and the results are usually used to draw conclusions about the population.

The sampling technique selected for this study is a two-stage judgmental and non-probability sampling technique. This approach demands the researcher's professional judgment and experience to select the best sample representing the target population. In this study, the researcher implemented a two-stage judgmental and nonprobability sampling technique. In the first stage, the researcher selected five cities for data collection and

geographic coverage in West Bank (Ramallah, Nablus, Jenin, Hebron and Bethlehem). In the second stage, respondents were chosen at service center locations of mobile carriers to represent the best target populations.

The sample size was determined based on Krejcie and Morgan's formula for calculating sample size when the population is finite. Considering that the target population is estimated at around 3,053,183 individuals, confidence interval is 95% and margin of error is 5%, the formula produces a sample size of 384 responses needed. However, to obtain more power for the study results, as similar studies did before, 600 individuals filled questionnaire; this was the very goal for data-collecting process.

### 3.2.3 Data Collection

#### 3.2.3.1 Primary Data and Secondary Data

In this study, both primary and secondary data have been collected. Secondary data (qualitative) were gathered throughout literature review of scientific and trade journals, books, and master theses, which have similar topics, in order to understand the context of the topics and to build the conceptual model. Primary data (quantitative) were collected to develop the proposed hypotheses, to employ the applied model, and to yield generalized conclusion.

The primary data were collected through a paper-based questionnaire distributed by the researcher to customers of Palestinian mobile telecommunication service providers (Ooredoo and Jawwal) in Ramallah, Nablus, Jenin, Hebron and Bethlehem. At the time of distribution and collection, the researcher was present addressing respondents' questions. The data collection took place in summer of 2019, the researcher took one month to distribute and collect 600 questionnaires.

#### 3.2.3.2 Data Preparation

Before embarking on data analysis, data were examined to evaluate responses to issues pertaining to missing data, outliers, and influential points.

##### 3.2.3.2.1 Missing Values

Although the researcher made every effort to motivate respondents to complete all questionnaire parts to avoid missing data issues, only 16 cases included more than 40% missed responses to items related to the important constructs (i.e. servicescape, quality and self-congruence). These cases constituted less than 10% of the total collected, which appeared to be missing completely at random (no systematic data process exists). Following the criteria, these 16 cases were eliminated from the analysis.

##### 3.2.3.2.2 Outliers and Influential Points

Outliers and influential points could be harmful to any study results. An outlier is an observation that considerably deviates from other observations raising the doubt of being created by a different mechanism or process. An influential point is an observation, an outlier, whose deletion from the dataset would noticeably change the conducted calculations result (Burt et al., 2009). The outlier and influential point's analyses were conducted on the summary index calculated for each of the focal study constructs used in the conceptual study as theoretically inspired.

In this study, outliers and Influential points were examined according to Hair's recommendations. In regard to the outliers, univariate, bivariate, and multivariate analytical methods were used to examine observations as to their status as outliers. First, univariate outliers were evaluated by standardizing variate data and identifying outlying cases with values ±2.5 or beyond. Second, bivariate outliers were evaluated by investigating the residuals of the regression between the hypothesized dependent variable and predictor

variables. At a 95% confidence interval ( alpha level .05), any case exceeding the ± 1.96 cutoff point for standardized, studentized residual, and studentized deleted residuals is indicative of outer/influential point issue. Third, multivariate outlier evaluation was done utilizing the Mahalanobis D2 measure. Furthermore, the diagnostics used to identify influential cases included examining residuals, hat values, Mahalanobis distance, Cook's distance and Covratio.

The researcher revised all the results in order to identify which cases were problematic across various diagnostic methods. There were 19 cases identified and eliminated from the analysis due to their substantial influence and differences from the remaining observations; this enhances results generalizability. Eventually, 571 cases entered into the statistical analysis of the study. The details on the process and cutoff criteria used in detecting and handling the outliers are shown in Appendix A.

## 3.3 Research Tool

The research tool used in this study was a questionnaire; it was divided into four parts. The first part asked respondents about self-brand congruence, the second about the various servicescape dimensions, the third about their perception of service quality, and the fourth, which included some key control variables, about various questions aiding in building their demographic profile.

### 3.3.1 Self-Brand Congruence

When consumers say "I want this specific product or service"; it is a mirror of who I am, it is fit to my life style or it is fitting my personality, this is a sign of self-brand congruence. Self-brand congruence occurs when a consumer decides to consume a brand with an image / characteristic matching his personality (Fennis & Pruyn, 2007). The first part in this tool survey was customized to the moderating variable to check the degree of

compatibility between the brand and consumer; the self-Brand congruence is by asking eight questions: (O'Cass, 2008, α=0.79). This part was measured on a 7-point Likert-type scale (1=Strongly Disagree; 2=Disagree; 3=Somewhat Disagree; 4=Neither Agree nor Disagree; 5=Somewhat Agree; 6=Agree; 7=Strongly Agree).

*Table 6*: *Self-Brand congruence Items*

| **Labels** | **Items** |
|---|---|
| SBC 1 | I feel that the brand is similar to my personality. |
| SBC 2 | I feel a personal relationship with this brand |
| SBC 3 | This brand reflects who I am. |
| SBC 4 | I feel that the brand suits my lifestyle. |
| SBC 5 | This brand suits me. |
| SBC 6 | I can use this brand to tell others who I am |
| SBC 7 | If this brand is human, I think we will be friends |
| SBC 8 | There is a great similarity between me and this brand |

Source: O'Cass, (2008)

### 3.3.2 Servicescape Design

In 1981, Booms and Bitner developed a servicescape model to emphasize the impact of the physical environment in which service processes occur for consumers. It is the place where the actual interaction between customers and the firm happens; this interaction can help or prevent a company from achieving its goal. The second part was allocated to collect data about servicescape, and it divided into four sections taken the four dimension of servicescape, the first section in this part was used to measure the ambient conditions. Ambient conditions (AMB) refer to the basic characteristics of the service environment, such as temperature, lighting, noise, music, and surrounding. These conditions affect the five senses making customers respond to the surrounding environment (Hul et.al, 1997); this section consist of nine items used to measure these characteristics (temperature, lighting, noise, music, and smell), it was measured on a 7-point Likert-type scale (1=Strongly

Disagree; 2=Disagree; 3=Somewhat Disagree; 4=Neither Agree nor Disagree; 5=Somewhat Agree; 6=Agree; 7=Strongly Agree) based on existing literature review (Cicenaite et.al, 2012; α=0.802; Chang, 2016, α=0.7). The below table represents the items used for this section:

*Table 7*: *Ambient conditions Items*

| **Labels** | **Items** |
|---|---|
| AMB 1 | I find the facilities for visitors to the Servicescape clean. |
| AMB 2 | The interior of the Servicescape is elegant. |
| AMB 3 | I find the smell of the servicescape refreshing when I enter it. |
| AMB 4 | The colors used inside the servicescape make me feel comfortable |
| AMB 5 | Suitable music is used in the servicescape. |
| AMB 6 | The sound level (noise) inside the servicescape is acceptable to me. |
| AMB 7 | The lighting used inside the servicescape is suitable. |
| AMB 8 | The temperature inside the servicescape is suitable. |
| AMB 9 | The Details of the servicescape's internal environment encourage me to visit the exhibition again. |

Source: Cicenaite et.al, (2012), Chang, (2016)

The second section in this part was spatial layout and functionality (SPA). Zeithaml defined these two parts as follows: spatial layout is the equipment and furnishing arrangement within its space, size, shape, position and spatial relationships among them, while functionality refers to the items capability (equipment, furniture and machines) of facilitating performance and achieving goals. Straightforwardly, it means the well physical design and equipment capability of facilitating and achieving goals. And to measure the impact of this section, a 7-point Likert-type scale was developed to measure the eleven items based on the available literature as (Wakefield et.al, 1996, α=0.90; Joshua, 2016, α=0.8; Bae, 2015, α=0.731). The below table represents the eleven items used for this section:

*Table 8*: *spatial layout and functionality Items*

| Labels | Items |
|---|---|
| SPA 1 | The engineering design inside the servicescape is good. |
| SPA 2 | The interior space of the servicescape is sufficient. |
| SPA 3 | The seating areas of the servicescape visitors are appropriately distributed. |
| SPA 4 | The seats in the servicescape are comfortable. |
| SPA 5 | The space between staff offices is good to give me privacy. |
| SPA 6 | Office equipment (printer, paper, etc.) close to the employee, which speeds up his work. |
| SPA 7 | Employee inside the servicescape do not complain about the computerized system they use. |
| SPA 8 | The role regulating machine is used when entering the servicescape. |
| SPA 9 | I find that the distribution of spaces within the exhibition is practical |
| SPA 10 | I find that the distribution of spaces within the exhibition is suitable for service performance. |
| SPA 11 | I have no trouble in finding the right destination when I enter the show. |

Source: Wakefield et.al, (1996), Joshua, (2016), Bae, (2015)

The third section is attached to the third dimension: Signs, symbols and artifacts. (SIG) is indoor and outdoor signs, furniture, artistically works which are used in servicescape to communicate rules, behavior, organizational image to reduce consumers' pressure or stress (Bitner, 1992). In addition, they are used to measure the effect of this dimension on service quality nine items being assigned to study this relationship (Joshua, 2016, $\alpha$=0.7; Maciejewska et al., 2012, $\alpha$=0.881). Table 9 shows the nine items which are also measured with a 7-point Likert scale.

*Table 9*: *Signs, symbols and artifacts Items*

| Labels | Items |
|---|---|
| SIG 1 | Signals (place of entry, exit, sitting, etc.) give clear instructions on how to move. |
| SIG 2 | Number of signals within the servicescape enough. |
| SIG 3 | Signs are used to indicate company values (such as smoking or please keep the place clean in the servicescape). |
| SIG 4 | Signs used inside the servicescape are visually attractive. |
| SIG 5 | I find the name of the company clearly written inside the servicescape. |
| SIG 6 | I find the logo of the company clearly written inside the servicescape (example: enjoy the internet / every day is new) |
| SIG 7 | I find the brand of the company clearly integrated into the interior servicescape design. |
| SIG 8 | Adequate promotional material is available for the services provided by the company within the servicescape. |
| SIG 9 | The company's mission clearly appears in the wall stickers. |

Source: Joshua, (2016), Maciejewska et al., (2012)

Finally, the fourth section of servicescape illustrates social interaction (SOC); it is all about the direct interaction between customer and employees inside the servicescape and how this interaction does affect the service quality (Surprenant et al., 1987). This dimension focuses on employee's role and behavior while delivering the service. Customers are always sensitive to emotional signs of other customers or employees, these emotions are influenced by the way of greeting, smiling, eye contact, and employees' voice tone which affect them and the perceived service. For this purpose, eleven items, shown in below table, were used to study this dimension depending on the existing literature (Aron et al., 2008, α=0.9; Balakrishnan, 2017, α=0.844). These items were measured on a 7-point Likert-type scale (1=Strongly Disagree; 2=Disagree; 3=Somewhat Disagree; 4=Neither Agree nor Disagree; 5=Somewhat Agree; 6=Agree; 7=Strongly Agree).

*Table 10*: *Social interaction Items*

| **Labels** | **Items** |
|---|---|
| SOC 1 | The servicescape staff are nice. |
| SOC 2 | The servicescape staff are Collaborators |
| SOC 3 | The servicescape staff are well trained to meet my needs. |
| SOC 4 | Servicescape staff have sufficient experience in dealing with disgruntled customers. |
| SOC 5 | The servicescape staff is familiar with all the details of the service available to the servicescape visitor. |
| SOC 6 | The employee always meets me with a smile. |
| SOC 7 | The employee always maintains a clear voice of service delivery. |
| SOC 8 | The employee maintains his calm and tightness even when ordering more than one service. |
| SOC 9 | Employee uses non-verbal communication (body language) well. |
| SOC 10 | Direct communication with the employee positively affects the quality of service provided by the company. |
| SOC 11 | The good professional conduct of the exhibition staff makes me speak positively about the company. |

Source: Aron et al., (2008), Balakrishnan, (2017).

### 3.3.3 Service Quality

The third part was used to measure service quality in Palestinian telecommunication in general. SQ is the measurement of the overall performance of a service. The company's ability of meeting or exceeding customer expectations (Parasuraman et al, 1985). This part is based on Servqual model measuring the perceived service quality; it consists of 15 questions related to the five service quality dimensions (tangibility, reliability, responsiveness, assurance, and empathy) (Daniel et.al, 2010, α=0.7, Pakurár et al, 2019, α=0.9). Items were measured on a 7-point Likert-type scale (1=Strongly Disagree; 2=Disagree; 3=Somewhat Disagree; 4=Neither Agree nor Disagree; 5=Somewhat Agree; 6=Agree; 7=Strongly Agree).

*Table 11*: *Service Quality Items*

| Labels | Items |
|---|---|
| SQ 1 | The company I deal with always offers service on time. |
| SQ 2 | When faced with a problem, the company shows a sincere desire to solve it. |
| SQ 3 | The service is always provided correctly from the first time. |
| SQ 4 | The employee in the company provides the service immediately. |
| SQ 5 | The staff are always willing to help me. |
| SQ 6 | The company keeps us informed about the time of service. |
| SQ 7 | I feel safe when dealing with this company. |
| SQ 8 | The staff at this company were to stay in business with me. |
| SQ 9 | Staff have the knowledge to answer all my questions. |
| SQ 10 | The company shows individual attention when providing service. |
| SQ 11 | The staff are able to understand my own needs. |
| SQ 12 | The company's business hours are suitable for all participants. |
| SQ 13 | The physical facilities of the company visually attractive. |
| SQ 14 | The company staff is elegant theorist. |
| SQ 15 | The company has modern equipment. |

Source: Daniel et.al, (2010), Pakurár et al, (2019).

### 3.3.4 Demographic Data

The last part was used to collect demographic data and control variables. Questions pertained were asked about place of residence, age, educational attainment, gender, occupation, program type, nature of participation, and the company the customer deals with (Ooredoo or Jawwal). All these questions were important taking into consideration other similar studies revised in literature review.

### 3.3.5 Tool Translation

The language of the study population is Arabic. Thus, the compiled research tool items used in this study were translated from English to Arabic using Brislin's back translation method; three people were involved in the process: a professor in marketing, a professor in translation, and a master student who is proficient in both Arabic and English. The process began with making a draft translation of the questionnaire from English to Arabic. Next, the Arabic version was translated back into English. The original English version was not shown to the back translator. The third individual compared the original English version with its counterpart which was an English-translated version; any discrepancies in meaning were communicated to the language experts and remedied through several revisions. The final version of the Arabic questionnaire is in appendix B.

### 3.3.6 Pre-test, Assessment of Reliability and Validity

In order to obtain trustworthy and accurate information to examine the proposed study model, it has to be taken into account reliability and validity of the construct scales. Validity refers to the extent to which a tool measures what it is assumed to measure (Malhotra & Birks, 2007). The more measurement errors, the less reliable the test; reliability is the degree of not having measurement errors in the test. (Carter & Porter, 2000).

Although most of the scales used in this research already have an established history in literature, the researcher exhaustively investigated reliability and validity of research constructs to obtain proper results. This was done in three stages:

First, once the questionnaire translated version was completed, a copy of the English and Arabic items were sent to several professors, at major Palestinian universities teaching in marketing and quality areas, examining the content validity of used scale items; their feedback on readability, clarity, and comprehensiveness of the items was reflected in the questionnaire.

Second, a pretest was conducted to test the questionnaire among few respondents, (n=50). The main goal of the pretest was to eliminate potential reliability or validity issues. The questionnaire was tested in terms of question content, wording, sequence, instructions, questions difficulty, form and layout. The pretest sample was chosen with characteristics resembling that of the target population with a similar level of familiar topics investigated, as per Malhotra & Birks' recommendations in 2007. When investigating reliability of pretest data, Cronbach's alpha was used as measure of reliability. This tool, developed by Lee Cronbach in 1951, is expressed with a numerical value between (0) and (1); if the score of alpha is more than the suggested cutoff (0.7), the scale is internally consistent having a certain level of reliability. As the following table shows, all of the Cronbach's alpha results of scales used in the pretest were reliable varying from (.821) to (.965); (Appendix C, pretest analysis). All suggested areas of improvement - upon respondents' feedback, the pretest, and various analyses conducted on the items- were taken into account when preparing the final questionnaire to be used in the study.

Third, further attempt of assuring reliability and validity of scales, used in this study, was done during the study phase. The results of the exploratory factor analysis were examined for final items structure, signs of reliability, and validity by looking at the factor loadings, their strength and differences across factors. Moreover, Cronbach's alpha was used once more to measure reliability.

## 3.4 Data Analysis: Main Study

The Statistical Package for Social Science (SPSS 25.0) was used to analyze the collected data. Two main statistical techniques were used in the study, factor analysis and multiple regression.

### 3.4.1 Refining Scales: Factor Analysis

Factor Analysis is an analytical tool used to minimize the number of variables to fewer factors, to identify each factor as a specific theoretical factor, and to analyze the factors that come together (DeCoster, 1998). Because of culture, servicescape dimensions might differently behave in many cultural contexts; because of this, the researcher used the factor analysis in order to verify servicescape dimensions making sure that there is no cross correlation between the items (Pallant, 2005); and to make the final data clear and they never adversely affect the analytical technique particularly used in the regression analysis, which is sensitive to the issue of multicollinearity. To determine that the data set is suitable, the researcher used the oblique rotation method to examine results of correlation matrix (to check correlations among variables); Kaiser-Meyer-Olki (KMO), to measure the sampling adequacy, eigenvalues result to check the variance, described by specific factors, among the total variance and loadings inspecting variable contributions of the factor (Sean et al., 2013), which proves that the used tool measures servicescape effect on perceived service quality.

### 3.4.2 Testing Hypotheses: Multiple Regression

Regression analysis is a statistical process used to test the hypothesis and to examine the relationship between the dependent and independent variables. It is used in this study to predict the behavior of servicescape dimensions (dependent variable) on perceived service quality (independent variable) being with the moderator variable self-brand congruence. To evaluate the model of this study, the researcher examined the result of F-Test, $R^2$, and adjusted $R^2$and t-tests.

## 3.5 Conclusion

This chapter identified the methodological approach chosen for this study. On one hand, the researcher carefully identified the research used tool, sampling technique and data collection process. On the other hand, various techniques used to assess reliability and validity, and to test study hypotheses.

# CHAPTER FOUR

# DATA ANALYSIS & RESULTS

This chapter presents the study findings which were completed in two stages; the first one included scale refinement while the other one included testing the proposed hypotheses. This chapter displays the characteristics of the sample used, extends basic descriptive data on the used scales, presents statistical analyses to achieve the purpose of each stage of the study, and considers the statistical testing of reflecting the proposed hypotheses and discussing findings.

## 4.1 Sample Characteristics

The analysis of the study was applied using responses from 570 customers who regularly visit Palestinian mobile companies' service centers. Table 12 provides a summary of the major demographical information pertaining to the sample of respondents in this study. These numbers were compared to the percentage distribution of persons (10 years and above) who own a mobile phone and are selected on the basis of background characteristics, available on the Palestinian Central Bureau of Statistics website (PCBS, 2014). It is confirmed that the comparison of this study sample correctly reflects that targeted population, 20-40 year old individuals, have the highest percentage of owning a mobile phone; males more than females, and that the spread of having mobile phones in urban areas exceed that in rural and refugee camps areas. Furthermore, sample characteristics were shared with three service center managers (belonging to the two main Palestinian mobile telecommunication companies) who provided feedback indicating that the sample characteristics were quite identical to customers' expectations visiting service centers.

*Table 12: Characteristics of sample (n=570)*

| Demographics | Answers | Frequency | Percentage (%) |
|---|---|---|---|
| Place of residence | City | 346 | 60.7% |
| | Village | 190 | 33.3% |
| | Camp | 34 | 6.0% |
| Total | | 570 | 100% |
| Governorate | Ramallah | 127 | 22.3% |
| | Nablus | 110 | 19.3% |
| | Jenin | 101 | 17.7% |
| | Hebron | 119 | 20.9% |
| | Bethlehem | 92 | 16.1% |
| | Others | 21 | 3.7% |
| Total | | 570 | 100% |
| Age | Less than 20 | 62 | 10.9% |
| | 21- 30 | 336 | 58.9% |
| | 31-40 | 119 | 20.9% |
| | 41-50 | 35 | 6.1% |
| | 51-60 | 13 | 2.3% |
| | 61 and more | 5 | 0.9% |
| Total | | 570 | 100% |
| Gender | Male | 362 | 63.5% |
| | Female | 208 | 36.5% |
| Total | | 570 | 100% |
| education degree | Secondary | 53 | 9.2% |
| | Tawjihi | 135 | 23.7% |
| | Diploma | 71 | 12.5% |
| | Bachelor's Degree | 262 | 46.0% |
| | Postgraduate studies | 49 | 8.6% |
| Total | | 570 | 100% |
| occupation | I do not work | 42 | 7.4% |
| | Student | 102 | 17.9% |
| | Private sector | 278 | 48.8% |
| | Government sector | 124 | 21.8% |
| | Housewife | 14 | 2.5% |
| | Non-profit organization | 10 | 1.8% |
| Total | | 570 | 100% |
| program type | Prepaid | 304 | 53.3% |
| | Postpaid | 266 | 46.7% |
| Total | | 570 | 100% |
| Nature of participation | Individuals | 383 | 67.2% |
| | Government institution | 98 | 17.2% |
| | Private institution | 85 | 14.9% |
| | Non-profit organization | 4 | 0.7% |
| Total | | 570 | 100% |

Source: SPSS outcome.

## 4.2 Initial Descriptive Statistics

The descriptive analysis is a very important analytical technique to describe the collected numerical data and ease their explanation afterwards. The central tendency of responses are investigated through mean results and the spread of a set of observations through the standard deviation results. In regard to the latter, the larger the standard deviation the more dispersed are the observations. A low score means that the responses are concentrated, hence, the respondents have a similar opinion about a statement (Hair et al., 2009). It is important to note that in the questionnaire items were measured on a 7-point Likert-type agreement scale (1=Strongly Disagree; 2=Disagree; 3=Somewhat Disagree; 4=Neither Agree nor Disagree; 5=Somewhat Agree; 6=Agree; and 7=Strongly Agree).

### 4.2.1 Servicescape Design Dimensions

The mean and standard deviation results for servicescape dimensions are shown in (Table 13) for each item within the proposed dimensions. On one hand, a quick survey on the results indicates that across the various dimensions, the following items obtained the highest levels of agreement: [AMB1] I find the facilities for visitors to the servicescape clean (*M=6.29, SD=.81*), [SPA1] The engineering design inside the servicescape is good (*M=5.75, SD=1.053*), [SIG5] I find the name of the company clearly written inside the servicescape. (*M=5.98, SD=0.97*), [SOC2] the servicescape staff are cooperative (*M=5.98, SD=1.05*). These are servicescape dimension items that are clearly visible to the customer.

Telecommunication companies' efforts in these areas have apparently reaped all benefits since they occupy space in customer's thinking of the servicescape. On the other hand, the results indicate that across the various dimensions, the following items obtained the lowest levels of agreement: [AMB5] Suitable music is used in the servicescape (*M=4.35, SD=1.76*), [SPA5] The space among staff offices is good to give me privacy (*M=5.11,*

*SD=1.60*), [SIG8] Adequate promotional material is available for the services provided by the company within the servicescape (*M=5.50, SD=1.19*), [SOC9] Employee uses non-verbal communication (body language) well (*M=5.48, SD=1.28*). Not only have these aspects of servicescape design been noticed by customers, but make the researcher believe that companies have some room for performance in these areas.

Standard deviation measures the spread of a set of observations. Focusing on statistic, the respondents had different opinions (high score of the standard deviation). When it comes to the played music (AMB5), privacy and space (SPA5), signals (SIG1), and employees' non-verbal communication. On the other hand, the responses about the general impression of store cleanliness (AMB1), lighting (AMB7), company logo and branding (SIG5), and service providers support (SOC2) were concentrated (low score of the standard deviation).

Cronbach's alpha was used to measure scale reliability (See table 16). The Cronbach's alpha coefficient for the scales of the servicescape dimensions ranged from (.73) to (.90). Although the general rule of social science is considered to be acceptable when it is equal or higher than (.70), methodologists suggest that higher is better for more robust results (Hair et al., 2009). Looking at the Cronbach's alpha 'if deleted' analysis column, AMB5 and AMB6 showed most potential for improving the Cronbach alpha reliability coefficient and for ambient conditions, which had the lowest coefficient among the results (.73). In regard to spatial layout and functionality, (SPA8) had the potential to slightly improve the Cronbach's alpha if deleted.

*Table 13: Initial descriptive statistics of servicescape dimensions (n=570)*

| Label | Servicescape Dimensions | M | SD |
|---|---|---|---|
| ***Ambient condition*** | | | |
| AMB1 | I find the facilities for visitors to the Servicescape clean. | 6.29 | 0.806 |
| AMB2 | The interior of the Servicescape is elegant. | 6.21 | 0.842 |
| AMB3 | I find the smell of the servicescape refreshing when I enter it. | 5.8 | 1.059 |
| AMB4 | The colors used inside the servicescape make me feel comfortable. | 5.74 | 1.107 |
| AMB5 | Suitable music is used in the servicescape. | 4.35 | 1.757 |
| AMB6 | The sound level (noise) inside the servicescape is acceptable to me. | 5.12 | 1.463 |
| AMB7 | The lighting used inside the servicescape is suitable | 5.82 | 0.984 |
| AMB8 | The temperature inside the servicescape is suitable. | 5.87 | 1.129 |
| AMB9 | The Details of the servicescape's internal environment encourage me to visit the exhibition again. | 5.47 | 1.274 |
| ***Spatial Layout and Functionality*** | | | |
| SPA1 | The engineering design inside the servicescape is good. | 5.75 | 1.053 |
| SPA2 | The interior space of the servicescape is sufficient. | 5.50 | 1.298 |
| SPA3 | The seating areas of the servicescape visitors are appropriately distributed. | 5.34 | 1.402 |
| SPA4 | The seats in the servicescape are comfortable. | 5.53 | 1.283 |
| SPA5 | The space between staff offices is good to give me privacy. | 5.11 | 1.601 |
| SPA6 | Office equipment (printer, paper, etc.) close to the employee, which speeds up his work. | 5.60 | 1.325 |
| SPA7 | Employee inside the servicescape do not complain about the computerized system they use. | 5.46 | 1.260 |
| SPA8 | The role regulating machine is used when entering the servicescape. | 5.86 | 1.274 |
| SPA9 | I find that the distribution of spaces within the exhibition is practical | 5.51 | 1.202 |
| SPA10 | I find that the distribution of spaces within the exhibition is suitable for service performance | 5.55 | 1.113 |
| SPA11 | I have no trouble in finding the right destination when I enter the show. | 5.73 | 1.182 |
| ***Signs, Symbols and Artifacts*** | | | |
| SIG1 | Signals (place of entry, exit, sitting, etc.) give clear instructions on how to move. | 5.64 | 1.352 |
| SIG2 | Number of signals within the servicescape enough. | 5.63 | 1.161 |
| SIG3 | Signs are used to indicate company values (such as smoking or please keep the place clean in the servicescape). | 5.79 | 1.161 |
| SIG4 | Signs used inside the servicescape are visually attractive. | 5.59 | 1.144 |
| SIG5 | I find the name of the company clearly written inside the servicescape. | 5.98 | 0.971 |
| SIG6 | I find the logo of the company clearly written inside the servicescape (example: enjoy the internet / every day is new) | 5.89 | 1.042 |
| SIG7 | I find the brand of the company clearly integrated into the interior servicescape design. | 5.76 | 1.115 |
| SIG8 | Adequate promotional material is available for the | 5.50 | 1.191 |

| | | | |
|---|---|---|---|
| | services provided by the company within the servicescape | | |
| SIG9 | The company's mission clearly appears in the wall stickers. | 5.65 | 1.178 |
| ***Social Dimension*** | | | |
| SOC1 | The servicescape staff are nice. | 5.89 | 1.136 |
| SOC2 | The servicescape staff are cooperative. | 5.89 | 1.053 |
| SOC3 | The servicescape staff are well trained to meet my needs. | 5.79 | 1.144 |
| SOC4 | Servicescape staff have sufficient experience in dealing with disgruntled customers. | 5.70 | 1.175 |
| SOC5 | The servicescape staff is familiar with all the details of the service available to the servicescape visitor. | 5.69 | 1.183 |
| SOC6 | The employee always meets me with a smile. | 5.60 | 1.197 |
| SOC7 | The employee always maintains a clear voice of service delivery. | 5.74 | 1.092 |
| SOC8 | The employee maintains his calm and tightness even when ordering more than one service. | 5.78 | 1.083 |
| SOC9 | Employee uses non-verbal communication (body language) well. | 5.48 | 1.284 |
| SOC10 | Direct communication with the employee positively affects the quality of service provided by the company. | 5.83 | 1.168 |
| SOC11 | The good professional conduct of the exhibition staff makes me speak positively about the company | 5.88 | 1.157 |

*Note:* AMB = 'Ambient conditions' dimension of servicescape design; SPA='Spacial layout and functionality' dimension of servicescape design; SIG='Signs, symbols and artifacts' dimension of servicescape design; SOC='Social interaction' dimension of servicescape design.
Source: SPSS outcome.

### 4.2.2 Self Brand Congruence

Table (14) presents the descriptive statistics of self-brand congruence scale. It is indicated that overall the mean was slightly above four, slightly above neutral. [SBC5] This brand suits me (*M=4.88, SD=1.56*), was the item that got the highest level of unanimity emphasizing the importance of the customer identifying with the brand. Furthermore, [SBC8] there is a great similarity between me and this brand (*M=4.08, SD=1.80*) was the item that had the lowest level of unanimity in this scale; it is indicated that companies have a scope for improving this aspect.

Looking at the standard deviation of the items, it is noted that respondents had a higher level of variance in their opinions regarding self-brand congruence items than servicescape dimensions ones. This is because of the complicated and personal relationship

that customers built with brands, so each relationship is as unique as the customer's identity and personality.

The Cronbach's alpha coefficient for the scale of self-brand congruence was (.92), which is excellent. Item-total statistics did not indicate that the coefficient can be improved by deleting any item.

| Label | Self-Brand congruence | M | SD |
|---|---|---|---|
| SBC1 | I feel that the brand is similar to my personality. | 4.63 | 1.617 |
| SBC2 | I feel a personal relationship with this brand | 4.43 | 1.728 |
| SBC3 | This brand reflects who I am. | 4.16 | 1.741 |
| SBC4 | I feel that the brand suits my lifestyle. | 4.55 | 1.628 |
| SBC5 | This brand suits me. | 4.88 | 1.579 |
| SBC6 | I can use this brand to tell others who I am | 4.32 | 1.740 |
| SBC7 | If this brand is human, I think we will be friends | 4.51 | 1.820 |
| SBC8 | There is a great similarity between me and this brand | 4.08 | 1.796 |

*Table 14: Initial descriptive statistics of self-brand congruence (n=570)*

*Note:* SBC = Self-brand congruence
Source: SPSS outcome.

### 4.2.3 Service Quality

Table (15) represents some descriptive statistics of the perceived service quality. it is noted that the overall mean was slightly above five, slightly above agree. [SQ14] The company staff look attractive (*M=5.91, SD=1.129*), was the item that got the highest level of unanimity emphasizing the importance of the service provider's appearance to the customer. Furthermore, [SQ15] the company has modern equipment (*M=1.52, SD=0.75*) was the item that shockingly had the lowest level of unanimity in this scale. It was a shock because this questionnaire was gathered for customers of wireless telecommunication companies who are assumingly always looking to be modern and civilized. However, it seems that customers

either misunderstood the question, or have point of view of modernity differentiated from company's one when marketing its communications and servicescape. Looking at the standard deviation of the items in this scale, it is noted that respondents had a higher level of variance in their opinions regarding service quality than the servicescape, nevertheless, less than the self-brand congruence scale items.

The Cronbach's alpha coefficient for the scale of self-brand congruence was (.90) which is excellent. Item-total statistics did not indicate that the coefficient can be improved by deleting any item.

*Table 15: Descriptive statistics of Service Quality before Items deleted (n=570)*

| **Label.** | **Service Quality** | M | SD |
|---|---|---|---|
| SQ1 | The company I deal with always offers service on time. | 5.41 | 1.375 |
| SQ2 | When faced with a problem, the company shows a sincere desire to solve it. | 5.25 | 1.393 |
| SQ3 | The service is always provided correctly from the first time. | 5.18 | 1.446 |
| SQ4 | The employee in the company provides the service immediately | 5.43 | 1.187 |
| SQ5 | The staff are always willing to help me. | 5.64 | 1.128 |
| SQ6 | The company keeps us informed about the time of service. | 5.44 | 1.321 |
| SQ7 | I feel safe when dealing with this company. | 5.31 | 1.507 |
| SQ8 | The staff at this company were to stay in business with me. | 5.72 | 1.175 |
| SQ9 | Staff have the knowledge to answer all my questions. | 5.64 | 1.199 |
| SQ10 | The company shows individual attention when providing service. | 5.49 | 1.212 |
| SQ11 | The staff are able to understand my own needs. | 5.44 | 1.211 |
| SQ12 | The company's business hours are suitable for all participants. | 5.47 | 1.296 |
| SQ13 | The physical facilities of the company visually attractive. | 5.50 | 1.225 |
| SQ14 | The company staff look attractive. | 5.91 | 1.129 |
| SQ15 | The company has modern equipment. | 1.52 | 0.748 |

*Note:* SQ = Service Quality
Source: SPSS outcome

### 4.2.4 Summated Scales and Construct Correlations

Using the scale items described above, an average score was created for each scale to reflect a person's general attitude regarding each servicescape dimension, self-brand congruence and perceived service quality. These six average scores were inserted into a correlation analysis, the results are shown in table 16 below.

*Table 16* : *Initial descriptive statistics, average responses for constructs and their correlations (n=570)*

| | **Constructs** | **1** | **2** | **3** | **4** | **5** | **6** |
|---|---|---|---|---|---|---|---|
| 1 | AMB | -- | | | | | |
| 2 | SPA | 0.64 | -- | | | | |
| 3 | SIG | 0.61 | 0.67 | -- | | | |
| 4 | SOC | 0.50 | 0.55 | 0.55 | -- | | |
| 5 | SBC | 0.40 | 0.40 | 0.39 | 0.37 | -- | |
| 6 | SQ | 0.54 | 0.57 | 0.56 | 0.71 | 0.52 | -- |
| | M | 5.63 | 5.54 | 5.71 | 5.75 | 4.45 | 5.22 |
| | SD | .71 | .84 | .75 | .83 | 1.37 | .80 |
| | Range[a] | 1-7 | 1-7 | 1-7 | 1-7 | 1-7 | 1-7 |
| | N[b] | 9 | 11 | 9 | 11 | 8 | 15 |
| | $\alpha$[c] | .73 | .87 | .83 | .90 | .92 | .90 |

Source: SPSS outcome

The results of the Pearson correlation indicated that there is a significant positive association among the constructs suggested in the study model. The correlation values range from (.37) to (.71) indicating a moderate to strong correlations (Cohen, 1988).

At first glance, the above result should be pleasing any researcher, correlation between two variables indicates that changes in one variable are associated with changes in the other one. Therefore, it is noted, in this study, that these significant and relatively strong correlations as one step towards supporting the hypotheses. Nevertheless, it is important to remember the caution that correlation between two variables indicates that changes in one variable are associated with changes in the other one; this does not mean that the changes in

one variable actually cause the changes in the other one. The latter is at the heart of this study hypotheses tested.

The above mentioned results considered, another caution indicator, multiple regression, which is a statistical tool of testing the proposed hypotheses and Multicollinearity sensitive issues. When regression, Multicollinearity refers to independent variables that are correlated with other independent variables, where multiple predictors are not only correlated to the dependent variable, but also to each other. In other words, it results when factors are a bit redundant. This problem is increasingly noted because when testing for moderating effects, an interaction term is used combining variables already highly correlated with each other.

Multicollinearity primarily produces two major problems. First, the coefficient estimation may wildly swing based on which other independent variables are in the model; the coefficient becomes very sensitive to small changes in the model. Second, Multicollinearity reduces the accuracy of the coefficient estimation, which weakens the statistical power of the regression model.

Considering the necessity of addressing Multicollinearity in data set before conducting multiple regression analysis for robust results, the researcher decided to implement a factor analysis, based on survey suggested methods of dealing with potential Multicollinearity issue. After having factor analysis, the researcher potentially identifies which items may be cross-loading on more than a factor causing some Multicollinearity issues. Dealing with these items creates pure valid and reliable average response scores generating better multiple regression results.

## 4.3 Factor Analysis

Factor analysis is applied in this study to reduce the number of factors or components attempting first to confirm the suggested dimensions in servicescape design literature and to reduce multicollinearity complication. Therefore, the outcome of this factor analysis is to be used for another conducted analysis, namely multiple regression.

### 4.3.1 Assumptions and Factorability of Variables

Preparing the data set for analysis, it was already examined for missing data, potential outliers and influential cases, and results discussed in chapter 3.

From a statistical point of view, departures from normality, homoscedasticity, and linearity apply only to the extent that they diminish the observed correlations (Hair et al., 2009). Only normality is necessary if a statistical test is applied to the significant factors which are rarely used. In the case of this analysis, the '*Explore'* function in SPSS was used to generate residual plots and other test statistics to determine if noticeable departures from the statistical assumptions were necessary for factor analysis. No serious departures were noticed.

In addition to the assumptions mentioned above, it is necessary to assess the factorability of the correlation matrix. First, a visual examination of the correlations is conducted to identify those that are statistically significant. Inspecting the correlation matrix of study variables [all scales of constructs in the study are 63] reveals that all correlations are significant at the (.01) level, except for few cases pertaining to SQ15. This finding is acceptable for proceeding to an empirical examination of adequacy for factor analysis for both overall bases and each variable. Second, Bartlett test of sphericity is used to assess the overall correlation matrix significance. For this dataset, the Bartlett test was significant, $\chi^2$ (1953) = 15675.732, $p < .001$, indicating that the intercorrelation matrix did not come from a population in which the intercorrelation matrix is an identity matrix (no correlations). Thus,

variables are appropriate for factor analysis. Third, measure of sampling adequacy (MSA) values must exceed (.50) for both the overall test and each individual variable. This index ranges from (0) to (1), reaching (1) when each variable is perfectly predicted without an error by the other variables. Individual variables with an MSA of lower than (.50) should be omitted from the factor analysis one at time, with the smallest one being omitted each time. For this analysis, the KMO overall measure of sampling adequacy is (.940) which is marvelous (.90 or above). The MSA range for all variables is between (.701) and (.961). Collectively referred, all these measures indicate that the set of variables is appropriate for factor analysis and can proceed to the next stages.

### 4.3.2 Factors and Overall Fit

A Principal components analysis is used to extract the components to be retained for further analysis. This factor analysis is not literally an exploratory one. The researcher has determined beforehand, based on the literature, that there would be six factors in this factor analysis application. The researcher aims at confirming the results of an extensive literature review on servicescape design dimensions and other constructs viability, used in the proposed model. Nevertheless, for the sake of comprehensiveness and assurance, objective criteria (e.g. latent root criterion and the scree plot) were used as well, without identifying the extracted factors number. In the latter application, the eigenvalues suggested the presence of (13) factors (13 factors with eigenvalues above 1), yet the scree plot supported extracting (6) or (7) factors.

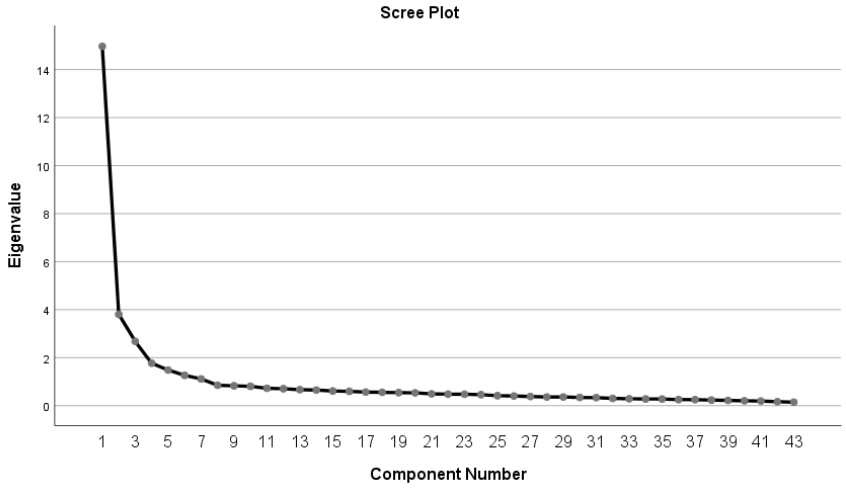


*Figure 5:* Scree Plot of Combined data
Source: SPSS outcome

The scree plot is utilized to identify factors appropriate number to be extracted before unique variance begins to dominate the common variance structure plot. The scree plot in this analysis is more inclined with literature review results and theoretical perspectives, as the sixth factor sits at the elbow of the scree plot (the point where unique variance starts to dominate common variance structure). In fact, out of the 13 factors suggested by the eigenvalue criteria, the first six factors account for almost 50% of the total variance, whereas the seven remaining factors account for only about 10% additional explanation of total variance. As such, this analysis proceeded with six factors.

Once the factor matrix of loadings has been calculated, the interpretation process proceeds by examining the un-rotated and rotated factor matrices for significant factor loadings and adequate communalities. If deficiencies are found, re-specification of the factors is considered. Once the factors are finalized, they can be described based on the significant factor loadings characterizing each factor.

Factor loadings, in either the un-rotated or rotated factor matrices, represent the degree of association (correlation) of each variable with each factor. This is the central output for factor analysis. The factor loadings, also called component loadings in component analysis, are the basis for imputing a label to the different factors. Using practical

significance as the criteria, factor loadings in the ± (.30) to (.40) ranges are minimally acceptable, greater than ± (.50) have practical significance and + (.70) are indicative of a well-defined structure. Using statistical significance as the criteria, loadings of (.30) are considered to be significant for 350 samples or more and as such was adopted for this study (Hair et al., 2009).

Communality is a useful index for assessing how much variance in a particular variable is accounted for by the factor solution. When a variable has a low communality, the factor model is not working well for that variable which has to be removed from the model. However, communalities must be interpreted in relation to the interpretability of the factors. When reviewing the communalities in this analysis, the researcher retained only communalities greater than (.50) as suggested. (Hair et al., 2009).

An optimal structure exists when all variables have high significant loadings only on a single factor. However, attaining that might not always be possible: (1) variables may not have significant loadings, (2) even with significant loadings, variables' communality is considered to be too low and (3) variables may cross-load (load highly on two or more factors) making them hard for analysis and interpretation. The researcher took advantage of Hair's group of remedies to choose from: (1) ignoring problem, (2) deleting variable(s), (3) changing rotation methods, and (4) increasing or decreasing the number of factors. In this application, the researcher experimented with a combination of the last 3, however, was most successful by concentrating on deleting variables.

Moreover, it is important to note that rotation may improve understanding of the relationship among variables. The researcher decided to employ direct oblimin rotation. The decision was made based on the careful investigation of the component correlation matrix, derived from using the direct oblimin (oblique) rotation method. More than half of the off-diagonal correlations were more than (.3) for all factors. Oblique rotation methods are best

suited for the goal of obtaining several, theoretical, and meaningful factors or constructs because few of them, in the real world, are uncorrelated. This study shed light on servicescape is a multidimensional latent construct, which literature review already informed us; in addition, other constructs in the study are related as well.

In this application of factor analysis, the researcher utilized the thresholds and criteria, mentioned above, in running series of components factor analyses with direct oblimin rotation to find an interpretable factor solution, which explains the highest percentage of total variance through theoretical constructs definitions.

The above process was completely done after overpassing several complexities; the researcher eventually applied a six-factor solution where (43) variables were reduced to six factors; they were 60.38% of the variance among the variables. As it is shown in table 17 below: Factors (1) included items of the social interaction dimension of servicescape design. Factor (2) included the items of the self-brand congruence scale. Factor (3) included items of the ambient conditions dimension of servicescape design. Factor (4) included items of the perceived service quality scale. Factor (5) included items of the spatial layout and functionality dimension of servicescape design. Finally, factor (6) included items of the signs, symbols and artifacts dimension of the servicescape design.

*Table 17*: *Rotated Component Matrix*

| | Component | | | | | | communalities |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | |
| The servicescape staff are Collaborators | .843 | | | | | | .727 |
| Servicescape staff have sufficient experience in dealing with disgruntled customers. | .832 | | | | | | .726 |
| The employee always meets me with a smile. | .792 | | | | | | .670 |
| The employee always maintains a clear voice of service delivery. | .773 | | | | | | .643 |
| The servicescape staff are nice. | .772 | | | | | | .659 |

| | | | | |
|---|---|---|---|---|
| The employee maintains his calm and tightness even when ordering more than one service. | .756 | | | .640 |
| The servicescape staff are well trained to meet my needs. | .720 | | | .657 |
| The servicescape staff is familiar with all the details of the service available to the servicescape visitor. | .623 | | | .535 |
| Direct communication with the employee positively affects the quality of service provided by the company. | .539 | | | .502 |
| This brand reflects who I am. | | .844 | | .706 |
| I feel that the brand suits my lifestyle. | | .819 | | .713 |
| I can use this brand to tell others who I am | | .804 | | .652 |
| I feel that the brand is similar to my personality. | | .803 | | .635 |
| There is a great similarity between me and this brand | | .793 | | .708 |
| I feel a personal relationship with this brand | | .781 | | .631 |
| This brand suits me. | | .752 | | .639 |
| If this brand is human, I think we will be friends | | .739 | | .637 |
| The interior of the Servicescape is elegant. | | | .741 | .634 |
| I find the smell of the servicescape refreshing when I enter it. | | | .737 | .603 |
| I find the facilities for visitors to the Servicescape clean. | | | .709 | .519 |
| The colors used inside the servicescape make me feel comfortable. | | | .663 | .573 |
| The temperature inside the servicescape is suitable. | | | .545 | .454 |
| The lighting used inside the servicescape is suitable. | | | .522 | .486 |
| The service is always provided correctly from the first time. | | | | .814 .654 |
| When faced with a problem, the company shows a sincere desire to solve it. | | | | .807 .685 |
| The company I deal with always offers service on time. | | | | .735 .581 |
| The employee in the company provides the service immediately. | | | | .654 .558 |
| The staff are able to understand my own needs. | | | | .615 .517 |
| The company keeps us informed about the time of service. | | | | .585 .516 |
| The company's business hours are suitable for all participants. | | | | .581 .468 |
| I feel safe when dealing with this company. | | | | .567 .565 |

| | | | | |
|---|---|---|---|---|
| The company shows individual attention when providing service. | .558 | | | .559 |
| The physical facilities of the company visually attractive. | .543 | | | .516 |
| The interior space of the servicescape is sufficient. | | -.744 | | .546 |
| The space between staff offices is good to give me privacy. | | -.743 | | .647 |
| I find that the distribution of spaces within the exhibition is practical | | -.689 | | .655 |
| I find that the distribution of spaces within the exhibition is suitable for service performance. | | -.677 | | .625 |
| Office equipment (printer, paper, etc.) close to the employee, which speeds up his work. | | -.663 | | .555 |
| The seats in the servicescape are comfortable. | | -.566 | | .489 |
| I find the name of the company clearly written inside the servicescape. | | | -.758 | .697 |
| I find the logo of the company clearly written inside the servicescape (example: enjoy the internet / every day is new) | | | -.698 | .625 |
| I find the brand of the company clearly integrated into the interior servicescape design. | | | -.545 | .564 |
| Signs used inside the servicescape are visually attractive. | | | -.514 | .516 |

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.
Source: SPSS outcome.

Factor structure refers to the intercorrelations among the variables being tested in the factor analysis. The table above illustrates a very clean factor structure in which convergent and discriminant validity are evident by the high loadings within factors, and no major cross-loadings among factors (i.e., a primary loading should be at least 0.200 larger than secondary loading).

### 4.3.3 Final Factor Analysis Solution and Average Response Indices

Once the final factor analysis had been determined, the researcher recalculated the average response index for each scale, applied in this study, using the variables that remained

at the final stage of factor analysis. The descriptive statistics for the remaining items can be found in appendix (D). Inserting the newly calculated average response indices into a correlation analysis, table (18) shows a modest reduction needed in the correlation among servicescape design dimensions and other constructs. This promises a more robust and meaningful regression analysis. Furthermore, it is noted that improvement has happened when looking at Cronbach alpha's coefficient for the ambience conditions scale.

Concluding pure average response measurements for each scale used in this study, another important outcome of this analysis is conforming servicescape dimensions as suggested in literature of servicescape design.

*Table 18*: *Descriptive Statistics & Correlation Matrix after Items deleted (N=570)*

| | **Constructs** | **1** | **2** | **3** | **4** | **5** | **6** |
|---|---|---|---|---|---|---|---|
| 1 | AMB | -- | | | | | |
| 2 | SPA | 0.54 | -- | | | | |
| 3 | SIG | 0.56 | 0.49 | -- | | | |
| 4 | SOC | 0.50 | 0.50 | 0.49 | -- | | |
| 5 | SBC | 0.33 | 0.40 | 0.33 | 0.36 | -- | |
| 6 | SQ | 0.48 | 0.51 | 0.45 | 0.63 | 0.53 | -- |
| | M | 5.95 | 5.46 | 5.80 | 5.76 | 4.46 | 5.38 |
| | SD | .69 | .94 | .81 | .85 | 1.7 | 1.32 |
| | Range[a] | 1-7 | 1-7 | 1-7 | 1-7 | 1-7 | 1-7 |
| | N[b] | 6 | 6 | 4 | 9 | 8 | 10 |
| | $\alpha^c$ | .82 | .84 | .80 | .93 | .93 | .90 |

*Note:* AMB = 'Ambient conditions' dimension of servicescape design; SPA='Spacial layout and functionality' dimension of servicescape design; SIG='Signs, symbols and artifacts' dimension of servicescape design; SOC='Social interaction' dimension of servicescape design; SBC = self-brand congruence; SQ=perceived service quality.
Construct correlations are below the diagonal. All construct correlations are significant at the .05 level, except the correlations marked with the '†' sign.
[a]Range refers to measurement scale range (minimum – maximum) . [b]N refers to number of items in construct scale. [c]Cronbach's alpha coefficient of internal consistency.

## 4.4 Multiple Regression Analysis

Regression analysis is a powerful statistical method allowing to examine the relationship between two or more variables. The main purpose of a regression analysis is to examine the influence of one or more independent variables on a dependent one. In this study, multiple regression is the main tool used to statistically find evidence supporting proposed study hypotheses or lacking thereof. The dependent variable is a perceived service quality; the suggested independent variables include servicescape design four dimensions confirmed by the factor analysis, self-brand congruence, and interacting terms between self-brand congruence and the four servicescape design dimensions (the latter are used to test self-brand congruence moderating effect on the relationship between servicescape dimensions and perceived service quality).

### 4.4.1 Multiple Regression Assumptions

When using multiple regression, the researcher needs several assumptions to check if the data meet the analysis reliability and validity. Recognizing that outliers and influential points are which issues multiple regression analyses are sensitive to, the researcher examined and prepared data for analysis. The results of this process are in (appendix A). In this section, the researcher presents the results of data tested for the assumptions of linearity, homoscedasticity, independence of error terms, normality and Multicollinearity issues. Many of the analyses and plots mentioned in this section are available in (appendix E), produced by running initial regression, where perceived service quality was a dependent variable while servicescape design dimensions and self-brand congruence were independent ones.

The first assumption of multiple regression is that the relationship between the independent variables (IVs) and the dependent variable (DV) can be depicted by a straight linear. A simple way to check this is by producing scatterplots of the relationship between

each of IVs (servicescape dimensions and self-brand congruence) and the DV (perceived service quality). An analysis of standardized residuals, through looking at the plot of standardized residuals vs. standardized deleted residuals, does not exhibit any nonlinear pattern to the residuals, thus ensuring that the overall equation is linear. Furthermore, checking the partial regression plot for each independent variable in the regression, it is indicated that the relationships are reasonably well defined.

Another assumption is that the residuals are independent and uncorrelated. To test this assumption, Durbin-Watson statistic formula, produced by the regression analysis, is adopted. Durbin-Watson values can be anywhere between (0) and (4), however, the value that indicates meeting the assumption of independent error terms is a value close to (2). As a rule of thumb, if the Durbin-Watson value is less than (1) or over (3), then it is counted as being significantly different from (2), and thus the assumption has not been met. In this analysis, the data met the assumption of independent errors (Durbin-Watson value = 1.80).

Moreover, in regression analysis, another assumption is that the variance of the residuals is constant, called homoscedasticity; this assumption deals with the consistency of the residuals across values of the independent variable. In this analysis, examining the plot of standardized residuals vs. standardized predicted values showed no pattern of increasing or decreasing residuals. This finding indicates that the assumption of homoscedasticity has been met.

Another assumption of multiple regression requiring that the errors between observed and predicted values (i.e., the residuals of the regression) should be normally distributed. In this analysis, the normality of the error term of the variety is examined visually with the normal probability plots of the residual. The values fall along a diagonal with no substantial systematic departure; thus, residuals are considered to be representing a normal distribution.

The regression variety is found to meet the assumption of normality. The graphing of a histogram for the residuals depicting the same thing, the histogram has a bell-shaped curve.

Last but not least, the data were examined for signs of multicollinearity. Multiple linear regression assumes that there is no multicollinearity in the data. Multicollinearity occurs when the independent variables are too highly correlated with each other. In this analysis, to examine if the data meet the assumption of collinearity, the researcher looked at the tolerance and VIF (variance inflation factor) collinearity statistics and collinearity diagnostics. If the VIF value is greater than (10), or the tolerance is less than (0.1), a researcher altered to concerns over multicollinearity. In this analysis, tests were conducted to see if the data met the assumption of collinearity indicating that multicollinearity was not a concern, as it is shown in table 19, tolerance values ranged from (.63) to (.79), and VIF values ranged from (1.26) to (1.77).

When looking at the collinearity diagnostics and examining the condition index, three variables were found within the problematic range of (15-30): SPA (19.90), SIG (23.35) and SOC (25.16); and only one condition index above (30), self-brand congruence (31.74). Looking at the variance proportion coefficients for values above (.9), there is a coefficient related to the SIG condition index, and another coefficient related to the SBC condition index. According to Hair, when a condition index in the problematic range accounts for a substantial proportion of variance (.90 or above) for two or more coefficients, a collinearity problem is indicated. Although there was not enough evidence of multicollinearity, high condition indices on four independent variables were worrying enough, especially, that variable, self-brand congruence, with the highest condition index; self-brand congruence moderation effect is tested using interaction effects with other independent variables having a high condition index.

Therefore, the researcher selected mean centering to alleviate any suspicion of multicollinearity effects on the regression analysis. Mean centering is an act of subtracting a variable's mean from all observations on that variable in the dataset such that the variable's new mean is zero. The idea is that mean-center variables, prior to computing a product term, is to serve as a moderator because it reduces multicollinearity in regression model (Iacobucci et al., 2015).

*Table 19: Tolerance and Variance Inflation Factor*

Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. | Tolerance | VIF |
| 1 | (Constant) | .413 | .245 | | 1.686 | .092 | | |
| | SBC | .195 | .021 | .293 | 9.077 | .000 | .792 | 1.262 |
| | AMB | .125 | .050 | .095 | 2.490 | .013 | .564 | 1.772 |
| | SPA | .129 | .036 | .133 | 3.558 | .000 | .591 | 1.691 |
| | SIG | .047 | .042 | .042 | 1.132 | .258 | .597 | 1.676 |
| | SOC | .415 | .039 | .387 | 10.650 | .000 | .626 | 1.597 |

a. Dependent Variable: SQ

*Source: SPSS outcome*

*Table 20: Collinearity Diagnosticsa*

| Model | Dimension | Eigenvalue | Condition Index | Variance Proportions (Constant) | AMB | SPA | SIG | SOC | SBC |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 5.899 | 1.000 | .00 | .00 | .00 | .00 | .00 | .00 |
| | 2 | .060 | 9.875 | .01 | .00 | .00 | .01 | .01 | .94 |
| | 3 | .015 | 19.896 | .14 | .01 | .88 | .02 | .01 | .04 |
| | 4 | .011 | 23.347 | .09 | .03 | .02 | .07 | .98 | .01 |
| | 5 | .009 | 25.158 | .37 | .01 | .04 | .82 | .00 | .01 |
| | 6 | .006 | 31.739 | .38 | .95 | .06 | .10 | .00 | .00 |

a. Dependent Variable: SQ

*Source: SPSS outcome*

Before starting the analysis, centered variables were created for all the independent variables to be included in the model(s) to test the hypotheses of this study through multiple regression, control variables (cVISITS, cAGE, cEDU), dimensions of servicescape design (cAMB, cSPA, cSIG, cSOC), self-brand congruence (cSBC), and the interaction terms, which test the created moderation as a product of the centered variables (cSBC*cAMB, cSBC*cSPA, cSBC*cSIG , cSBC*cSOC).

### 4.4.2 Multiple Regression Model

A four-stage hierarchical multiple regression was conducted with perceived service quality (SQ) as a dependent variable. Education, age, and visits to service center were inserted into stage one of regression as control variables; these variables that the researcher found were relevant to customers' evaluation of service quality. They were included in the analysis to remove their effects from other more focal constructs' investigation. The servicescape design dimensions (cAMB, cSPA, cSIG and cSOC) were inserted into stage two. Self-brand congruence was inserted into third stage. Lastly, the interaction terms to investigate the moderation role of self-brand congruence were inserted into fourth stage of the regression.

*Table 21: Variables Entered/Removeda*

| Model | Variables Entered | Variables Removed | Method |
|---|---|---|---|
| 1 | cEDU, cAGE, cVISITS[b] | . | Enter |
| 2 | cSIG, cSOC, cSPA, cAMB[b] | . | Enter |
| 3 | cSBC[b] | . | Enter |
| 4 | cSBCxAMB, cSBCxSPA, cSBCxSOC, cSBCxSIG[b] | . | Enter |

a. Dependent Variable: SQ

b. All requested variables entered.

Source: SPSS outcome

### 4.4.3 Multiple Regression Analysis

The hierarchical multiple regression revealed that the control variables, at stage one, contributed significantly to the regression model, $F$ (3,566) = 10.405, $p < .001$) representing (5.2%) of the variation of perceived service quality. In stage two, introducing the service design dimensions explained an additional (42.7%) of variation in perceived service quality; this change in $R^2$ was significant, $F$ (4,562) = 114.985, $p < .001$. Adding self-brand congruence to the regression model explained an additional (6.5%) of the variation in perceived service quality and this change in $R^2$ was significant, $F$ (1,561) = 80.015, p < .001. Finally, the addition of interaction terms to the regression model explained an additional (5 %) of the variation in perceived service quality and this change in $R^2$ square was not significant, $F$ (4,557) = 1.441, $p > .05$ (.219). When all study variables were included in stage four of the regression model, they all represented 54.9% of the variance in perceived service quality.

#### 4.4.3.1 Control Variables

Evaluating the progression of the analysis until stage four, it is noted that only age (t=3.118, p < .05) remains as a significant predictor of perceived service quality; it does not support the other two control variables at this stage of the analysis. Apparently, researchers should pay attention to generation expectations and preferences pertaining to perception of service quality among different age groups.

#### 4.4.3.2 Servicescape Dimensions

The servicescape design dimensions explain unique 42.7% of variation in perceived service quality. Nevertheless, the final analysis shows support for ambient conditions (t=2.920, p < .05), spatial layout (t=3.479, p <.05) and social interaction (t=9.997, p <.05) as significant predictors of perceived service quality. However, all signs, symbols and artifacts

were not a significant predictor of perceived service quality (t=.526, p >.05 (.599)). These results support hypotheses $H_{1a}$, $H_{1b,}$ and $H_{1d}$; they fail to support $H_{1c.}$ Furthermore, looking at the standardized beta coefficients, it can be noticed that in terms of importance, social interaction comes first, then spatial layout and functionality, lastly ambient conditions. Perhaps this is an invitation for companies to invest more in their employee training, work environment and process mapping rather than merely change interior decoration from time to time.

#### 4.4.3.3 Moderating Role of Self-Brand Congruence

The first step in the moderation analysis is to decide whether a significant interaction is found between moderator variable (self-brand congruence) and the predictor variable (dimensions of servicescape design) by studying the interaction terms. In stage four of the hierarchical regression conducted in this study, the interaction terms between self-brand congruence and each of the various dimensions of servicescape design were included. (Sharma et al., 1981)

The results of these four interaction terms, in this analysis, have shown no support for a moderation effect for self-brand congruence, in three cases at least: (1) in the case of the relationship between ambient conditions and perceived service quality (t=.631, p >.05 (.529)); (2) in the case of the relationships among spatial layout, functionality, and perceived service quality(t=.949, p >.05 (.343)); and (3) in the case of the relationships between social interaction and perceived service quality(t=.656, p >.05 (.512)). Surprisingly, the interaction among self-brand congruence, signs, symbols, and artifacts has shown significant results (t=-2.391, p <.05 (.017)). The results of the hierarchical regression model were nonsignificant when specifying the final working model. When considering the latter result seriously, it would mean that signs, symbols, and artifacts moderate the relationship between self-brand

congruence and perceived service quality (weakens the relationship / negative interaction), this is illogical and never matches theoretical perspectives in literature.

The idea, self-brand congruence is not a moderator of the relationship between servicescape design dimensions and perceived service quality, is further supported by the motif that adding the interaction effects to the model explained only (.5 %) of the variation in perceived service quality; this change in $R^2$ square was not significant, $F(4,557) = 1.441$, $p > .05$ (.219).

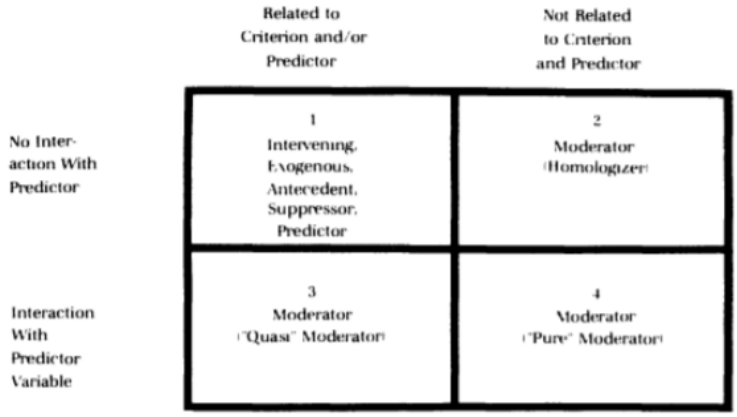


Figure 6: Typology of Moderation Variable Specifications

Source: Sharma et al. (1981)

Moderation analysis' second step is to decide whether the moderator variable is related to the outcome variable (perceived service quality). Studying the coefficient of the moderator when conducting the regression, it can be noted that it is significant at (0.05) level. The conclusion comes through utilizing Sharma's method; that self-brand congruence is a predictor variable / antecedent variable as per the classification of Sharma. Therefore, this analysis finds no support for hypotheses $H_{2a,}$ $H_{2b,}$ $H_{2c,}$ and $H_{2d}$. (Sharma et al., 1981)

*Table 22: Model Summary*

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change | |
| 1 | .229[a] | .052 | .047 | .88982 | .052 | 10.405 | 3 | 566 | .000 | |
| 2 | .692[b] | .479 | .472 | .66222 | .427 | 114.985 | 4 | 562 | .000 | |
| 3 | .737[c] | .544 | .537 | .62006 | .065 | 80.015 | 1 | 561 | .000 | |
| 4 | .741[d] | .549 | .539 | .61909 | .005 | 1.441 | 4 | 557 | .219 | 1.796 |

a. Predictors: (Constant), cEDU, cAGE, cVISITS

b. Predictors: (Constant), cEDU, cAGE, cVISITS, cSIG, cSOC, cSPA, cAMB

c. Predictors: (Constant), cEDU, cAGE, cVISITS, cSIG, cSOC, cSPA, cAMB, cSBC

d. Predictors: (Constant), cEDU, cAGE, cVISITS, cSIG, cSOC, cSPA, cAMB, cSBC, cSBCxAMB, cSBCxSPA, cSBCxSOC, cSBCxSIG

e. Dependent Variable: SQ

Source: SPSS outcome

*Table 23*: *ANOVA result*

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 24.716 | 3 | 8.239 | 10.405 | .000[b] |
| | Residual | 448.150 | 566 | .792 | | |
| | Total | 472.866 | 569 | | | |
| 2 | Regression | 226.413 | 7 | 32.345 | 73.757 | .000[c] |
| | Residual | 246.453 | 562 | .439 | | |
| | Total | 472.866 | 569 | | | |
| 3 | Regression | 257.176 | 8 | 32.147 | 83.613 | .000[d] |
| | Residual | 215.690 | 561 | .384 | | |
| | Total | 472.866 | 569 | | | |
| 4 | Regression | 259.385 | 12 | 21.615 | 56.398 | .000[e] |
| | Residual | 213.481 | 557 | .383 | | |
| | Total | 472.866 | 569 | | | |

a. Dependent Variable: SQ

b. Predictors: (Constant), cEDU, cAGE, cVISITS

c. Predictors: (Constant), cEDU, cAGE, cVISITS, cSIG, cSOC, cSPA, cAMB

d. Predictors: (Constant), cEDU, cAGE, cVISITS, cSIG, cSOC, cSPA, cAMB, cSBC

e. Predictors: (Constant), cEDU, cAGE, cVISITS, cSIG, cSOC, cSPA, cAMB, cSBC, cSBCxAMB, cSBCxSPA, cSBCxSOC, cSBCxSIG

Source: SPSS outcome

*Table 24: Coefficients results*

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Correlations | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Zero-order | Partial | Part | Tolerance | VIF |
| 1 | (Constant) | 5.392 | .037 | | 144.679 | .000 | | | | | |
| | cVISITS | .031 | .008 | .158 | 3.790 | .000 | .174 | .157 | .155 | .969 | 1.032 |
| | cAGE | .107 | .042 | .106 | 2.581 | .010 | .105 | .108 | .106 | .999 | 1.001 |
| | cEDU | -.080 | .032 | -.103 | -2.481 | .013 | -.133 | -.104 | -.102 | .968 | 1.033 |
| 2 | (Constant) | 5.392 | .028 | | 194.406 | .000 | | | | | |
| | cVISITS | .018 | .006 | .090 | 2.897 | .004 | .174 | .121 | .088 | .955 | 1.047 |
| | cAGE | .070 | .031 | .069 | 2.241 | .025 | .105 | .094 | .068 | .983 | 1.017 |
| | cEDU | -.020 | .024 | -.026 | -.835 | .404 | -.133 | -.035 | -.025 | .945 | 1.058 |
| | cAMB | .158 | .053 | .121 | 2.968 | .003 | .483 | .124 | .090 | .560 | 1.785 |
| | cSPA | .190 | .038 | .196 | 5.022 | .000 | .514 | .207 | .153 | .606 | 1.650 |
| | cSIG | .079 | .044 | .070 | 1.777 | .076 | .450 | .075 | .054 | .599 | 1.670 |
| | cSOC | .446 | .041 | .416 | 10.836 | .000 | .629 | .416 | .330 | .629 | 1.591 |
| 3 | (Constant) | 5.392 | .026 | | 207.624 | .000 | | | | | |
| | cVISITS | .010 | .006 | .052 | 1.755 | .080 | .174 | .074 | .050 | .934 | 1.070 |
| | cAGE | .092 | .029 | .090 | 3.129 | .002 | .105 | .131 | .089 | .976 | 1.024 |
| | cEDU | -.008 | .023 | -.010 | -.341 | .733 | -.133 | -.014 | -.010 | .942 | 1.062 |
| | cAMB | .138 | .050 | .106 | 2.767 | .006 | .483 | .116 | .079 | .559 | 1.788 |
| | cSPA | .127 | .036 | .131 | 3.501 | .000 | .514 | .146 | .100 | .583 | 1.716 |
| | cSIG | .043 | .042 | .038 | 1.038 | .300 | .450 | .044 | .030 | .593 | 1.685 |
| | cSOC | .397 | .039 | .371 | 10.209 | .000 | .629 | .396 | .291 | .616 | 1.623 |
| | cSBC | .194 | .022 | .292 | 8.945 | .000 | .533 | .353 | .255 | .764 | 1.309 |
| 4 | (Constant) | 5.393 | .029 | | 188.132 | .000 | | | | | |
| | cVISITS | .009 | .006 | .048 | 1.609 | .108 | .174 | .068 | .046 | .923 | 1.083 |
| | cAGE | .092 | .029 | .090 | 3.118 | .002 | .105 | .131 | .089 | .969 | 1.032 |
| | cEDU | -.009 | .023 | -.011 | -.383 | .702 | -.133 | -.016 | -.011 | .939 | 1.065 |
| | cAMB | .148 | .051 | .113 | 2.920 | .004 | .483 | .123 | .083 | .538 | 1.859 |
| | cSPA | .127 | .036 | .131 | 3.479 | .001 | .514 | .146 | .099 | .570 | 1.755 |
| | cSIG | .022 | .043 | .020 | .526 | .599 | .450 | .022 | .015 | .566 | 1.766 |
| | cSOC | .405 | .040 | .378 | 9.997 | .000 | .629 | .390 | .285 | .567 | 1.763 |
| | cSBC | .195 | .022 | .294 | 8.962 | .000 | .533 | .355 | .255 | .753 | 1.328 |
| | cSBCxAMB | .025 | .039 | .024 | .631 | .529 | -.069 | .027 | .018 | .556 | 1.799 |
| | cSBCxSPA | .024 | .026 | .036 | .949 | .343 | -.095 | .040 | .027 | .576 | 1.735 |
| | cSBCxSIG | -.079 | .033 | -.094 | -2.391 | .017 | -.122 | -.101 | -.068 | .521 | 1.920 |
| | cSBCxSOC | .019 | .029 | .024 | .656 | .512 | -.107 | .028 | .019 | .582 | 1.718 |

a. Dependent Variable: SQ

Source: SPSS outcome

### 4.4.4 Hypotheses & Final Model

Having looked at Pearson correlations among the various constructs in this study, it would be assumed (Table 18) that support for all servicescape design dimensions; the proposed moderator effect is accessible and a matter of running the various analyses. However, conducting the actual regression model, the analysis and findings indicate some interesting conclusion. Table 25 summarizes the existence or nonexistence of support for each hypothesis developed through literature review. Thereafter, there is a figure depicting the final model supported by this study and the predictive regression model associated with the results as follows:

*Table 25: Summary of the Results of Hypotheses*

| H.# | Hypothesis | Test | Results |
|---|---|---|---|
| H1a | *Ambient Conditions positively affect perceived service quality* | Regression | Supported |
| H1b | *Spatial layout positively affects perceived service quality.* | Regression | Supported |
| H1c | *Signs & symbols and artifacts positively affect perceived service quality.* | Regression | Rejected |
| H1d | *Social interaction positively affects perceived service quality.* | Regression | Supported |
| H2a | *Self-brand congruence moderates the relationship between ambient conditions and perceived service quality* | Regression | Rejected |
| H2b | *Self-brand congruence moderates the relationship between spatial layout and functionality and perceived service quality*. | Regression | Rejected |
| H2c | *Self-brand congruence moderates the relationship between signs, symbols, and artifacts and perceived service quality.* | Regression | Rejected |
| H2d | *Self-brand congruence moderates the relationship between social interaction and perceived service quality* | Regression | Rejected |

Source: researcher.

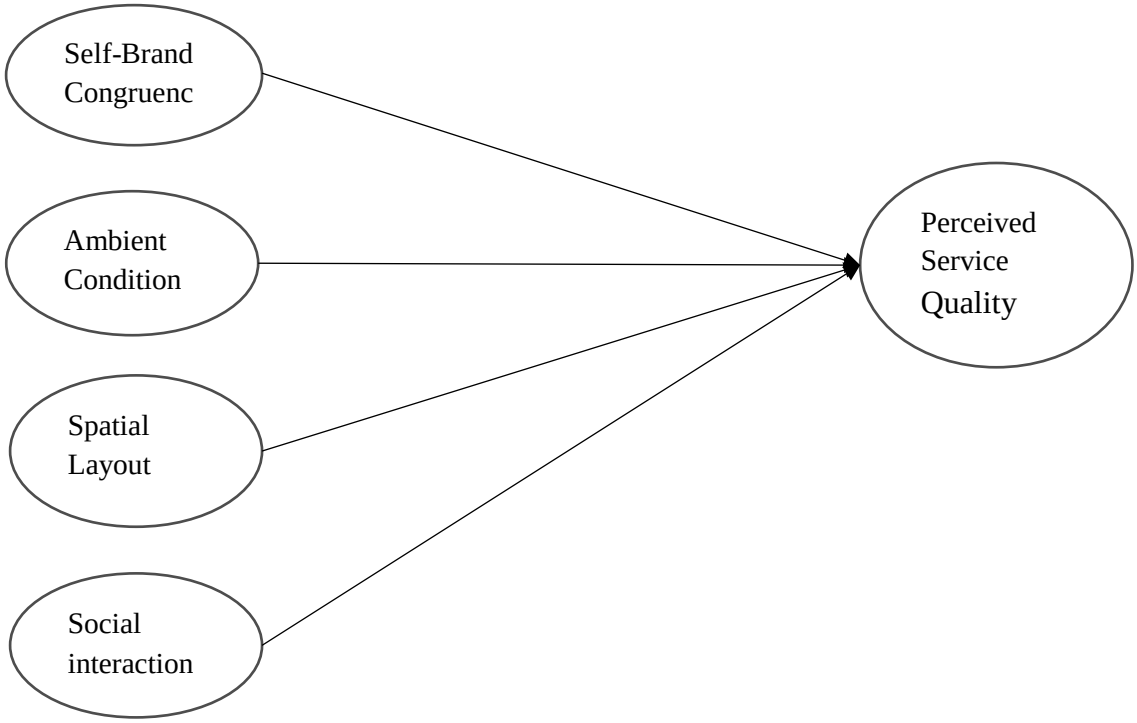


*Figure 7:* Final Study Model

Source: researcher.

**Predictive Model**

Perceived Service Quality = 5.392 + .093*Age + .156*Ambient Conditions + .131*Spatial Layout and Functionality + .411*Social Interaction + .202*Self-brand congruence

*Table 26: Final Model Summary*

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .735[a] | .540 | .536 | .62087 |

a. Predictors: (Constant), cSBC, cAGE, cAMB, cSOC, cSPA

*Table 27: Final ANOVA[a] results*

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 255.457 | 5 | 51.091 | 132.540 | .000[b] |
| | Residual | 217.409 | 564 | .385 | | |
| | Total | 472.866 | 569 | | | |

a. Dependent Variable: SQ

b. Predictors: (Constant), cSBC, cAGE, cAMB, cSOC, cSPA

*Table 28: Final Coefficients[a] Results*

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 5.392 | .026 | | 207.353 | .000 |
| | cAGE | .093 | .029 | .091 | 3.159 | .002 |
| | cAMB | .156 | .047 | .119 | 3.296 | .001 |
| | cSPA | .131 | .035 | .136 | 3.711 | .000 |
| | cSOC | .411 | .038 | .383 | 10.806 | .000 |
| | cSBC | .202 | .021 | .305 | 9.509 | .000 |

a. Dependent Variable: SQ

# CHAPTER FIVE

# SUMMARY AND CONCLUSION

This chapter presents an overall summary of this study. It is divided into four parts. The first part reviews the study purpose, significance, methodology, problem statement, hypotheses. The second part discusses the theoretical and practical implications of this study. The third part concentrates on the limitation of the current study. The fourth part discusses approaches for further research.

## 5.1 Research Summary

The servicescape (the physical environment or the place where the service is provided) has been explored by different researchers, such as Kotler (1973), Mary Jo Bitner (1992), and Juhari (2012), in different service setting. They hint to servicescape influence on customer's behaviors and perceptions of quality (satisfaction, loyalty, etc.), the relationship between the servicescape and perceived service quality, and other external factors that influence, which were not properly investigated in literature before. This study aimed at examining this relationship and highlighted the factors affecting it.

Servicescape design dimensions are important determinants of how a consumer thinks, feels and behaves towards a business (Bitner, 1992; Baker et al., 2002). When a customer visits a service or retail center, service environment, being first features of the service, attracts his attention in considering the service level essence; the quality is one of the perceptions created and sustained (Hooper et al., 2013). Nevertheless, it is important to note that elements within the service environment do not individually work. Different environmental influences on customer often happen simultaneously as they interact among each other in the consumer’s complicated, psychological, and mental operations (Mari and Poggesi, 2011). For example, it is demonstrated that customers nowadays are emphasizing

on the compatibility of the typical product, offering, and brand as if they are expressing their own self-image and personality. (O'Cass & Grace, 2008)

The main purpose of this research is to study how the various servicescape design elements affect the consumer's perception of service quality. Furthermore, believing that this relationship does not happen in a vacuum. This study also investigates the moderating role of self-brand congruence in relationships among servicescape design elements and the consumer's perception of service quality.

### 5.1.1 Servicescape Design and Perceived Quality

An extensive literature review has determined that servicescape design consists of four main dimensions. (Baker, 1987; Bitner, 1992; Turley and Milliman, 2000; Roy and Tai, 2003; Harris & Ezeh, 2008).

First, **Ambient condition** includes the basic characteristics of the service environment, such as temperature, lighting, noise, music, and scent. These conditions affect the five senses making customers respond to the environment surrounding them. Second, **Spatial layout and functionality** refer to the equipment and furnishing arrangement in the service space, its size, shape, position and spatial relationships among them called spatial layout; all of these things are coherently arranged (physical design) to facilitate employees' work, save the time of accomplishing work, and to let employees perfectly serve customers; this enhances customers' cognition and visits (Liu and Jang, 2009). Third, **Signs, symbols, and artifacts**: They refer to indoor and outdoor signs, furniture, artistic works, etc., used to reflect company's image, rules, behavior, and direction handling any prospected confusion. These factors have a great impact on shaping customers' first impression (Bitner, 1992). Fourth, **Social interaction** refers to direct communication or interaction between the customers and employees which significantly affects the customers' awareness and perceptions of service

quality considering their aspirations and expectations; therefore, companies should invest more to develop its employees' skills when dealing with customers

The findings of this study supported three out of the four hypotheses related to the relationship between servicescape dimensions and perceived service quality. The findings emphasized direct positive relationship among the ambient conditions, spatial layout and functionality, and social interaction dimensions of perceived service quality.

The findings never emphasized the influence of the signs, symbols and artifacts dimension on the perception of service quality in this study. The latter finding allowed the assumption that servicescape dimensions could differently operate contexts (industry/culture). It is indicated that most scholars focus on how to recognize servicescape features in non-western cultures (Mari & Poggesi, 2013).

China is considered to be important for researchers' investigation as the Chinese emphasize strongly on the service purchase value dimension rather than the aesthetic dimensions. Chinese culture plays a key role in this observation, which is more specifically associated to the service environment (ambience, design, and layout) and the excitement influence low level (Sayed, Farrag, & Belk, 2003; Tang, Chan, & Tai, 2001). In another study, Egyptians do not tend to be enthusiastic observers because of the high population density, retail space has become overcrowded, so the customers never affected by center interior design, they are more influenced by other environmental elements, such as music instead. (Sayed et al., 2003). Therefore, Hispanics are more affected by how employees deal with them than the service itself; they sometimes forget how long the process of receiving service takes though they get bored of waiting; what compensates them for this is employees' treatment towards them in a polite manner, which is more important than receiving the service on time. (Fowler et al., 2007).

### 5.1.2 The Role of Brand Congruence

Congruence of brand personality has witnessed a rapid growth for the past three decades (Parker, 2009). It studies the compatibility between consumer personality and brand personality influencing on consumer behaviors (Levy, 1959; Sirgy, 1982; Sirgy et al., 1997; Sirgy & Su, 2000). In this regard, the researcher studied the harmony between consumer's self-concepts and brand image attempting to explain his choices, such as brand preferences, purchase intentions, usage and loyalty. According to empirical evidence that consumers reveal positive attitudes to the most preferred brand reflecting self-concept and representation, and enhancing their brand identity (Birdwell, 1968; Bellenger et al., 1976; Dolich, 1969; Munson, 1973; Sirgy, 1980; Stern et al., 1977). Servicescape can act like an extension or a reminder of a brand identity. Therefore, activating self-brand congruence influence on any responses the servicescape may produce. Consequently, this study tested the idea that self-brand congruence has a moderating effect on the relationship between servicescape design and the perception of service quality. The logic hinted by the literature was that the stronger the congruence between the consumer and the servicescape brand, the stronger the relationship between servicescape design and service quality perceptions. Nonetheless, the results of moderation analysis using multiple regression did not find evidence of a moderating effect for self-brand congruence on the relationship between servicescape design and perceived service quality. In fact, the evidence emphasized the idea that self-brand congruence is a significant predictor of perceived service quality.

Reviewing Parasuraman’s work and the gap model (figure 1), it is found that a clear direct connection between past experiences and expectation of delivered services (Parasuraman et al., 1985). In this study, self-brand congruence is assumed to be interwoven with those past experiences. Adopting that logic, it makes sense that the findings support a direct significant positive influence for self-brand congruence on perceptions of service

quality. Most importantly, it is a role rather than a possible intervening variable (a moderator). Clearly, the level of customer's expectations is mostly reflected in how he feels towards the evaluated brand (self-brand congruence) and perceived service quality being one of the expectation gaps.

Furthermore, another study of literature argues that quality awareness is related to identifying the customer's cognitive and emotional elements of service. (Homburg & Stock, 2004). Assuming that servicescape design dimensions related to the cognitive factors of services, it can be suggested that self-brand congruence includes an emotional evaluation of how the brand personality is close to customer’s; that could be linked to the services effective factors which he takes into consideration when building quality perceptions. It is emphasized that this mental operation matching brand personality with the concept of consumer's emotions, such as love, self-esteem, and joy ultimately promotes consumer-brand long-term relationship through brands attachment or a process of building self-esteem. (Kim et al., 2005)

## 5.2 Research Contributions

### 5.2.1 Theoretical Contributions

Most of the literature on service quality comes from three strains of these most common models being thoroughly analyzed: marketing, supply chain, and information systems (Conger, 2012). They all did consider the topic of the study as it was at that time in spite of the growing research efforts in this field. Nevertheless, this study addresses one of marketing contributions to the service quality literature, particularly, servicescape design and perceived service quality. In addition, it provides a whole understanding of Palestinian case of study in West Bank according to topic of this research, which has not been investigated before.

As with other researchers conducted, this research supports body of evidence positively linking servicescape design dimensions to perceptions of service quality (Bitner, 1992; Wakefield & Blodgett, 1996; Reimer & Kuehn, 2005; Lee & Kim, 2014). Nevertheless, it suggests the idea that dimensions of servicescape might not work the same in different contexts (Mari and Poggesi, 2013). The most important contribution of this study is that it allows the researchers to investigate complex intervened constructs and processes in service spaces. This study more indicates that self-brand congruence as a predictor rather than a moderator of the relationship between servicescape design and perceived service quality. More investigations of this idea are needed to clarify the roles of other constructs and processes.

### 5.2.2 Managerial Implications

For managers, the key lessons learnt from this study that they should not underestimate the importance of their servicescape design and its influence on customer's behavior. In the context of this study, managers of mobile carrier service should be attentive to the servicescape various dimensions design which are influential elements on the perception of service quality affecting customer's satisfaction, loyalty and other desired positive behaviors. The findings of this study tend to recommend that designer of mobile carrier service centers should pay more attention to design the ambient conditions, spatial layout, and functionality.

Furthermore, internal marketing and human resource managers should pay more attention to empowerment of employees for social interaction aspects of the servicescape. The findings of the study did not find support for signs, symbols, and artifacts effect on perceived service quality; this conclusion could hint to managers that not all dimensions work the same way or have the same level of importance in various contexts, such as industry,

cultural, etc.; moreover, the study provides managers with a fact that customers do come into servicescape for their own desired needs and expectations, indeed, they come with a complex set of cues, stimuli, and personal experiences that affect their perceptions of quality, some of these might be related to servicescape design, such as the servicescape dimensions discussed before, and some of these are accumulated experiences a customer builds with the service, company, or brand occurring outside the context of the servicescape.

For example, self-brand congruence construct studies matching his perceptions, which could be influenced by some marketing activities related to the servicescape; this might need marketing efforts outside the servicescape being a must before and after customer's visit to the servicescape. It is indicated that attracting customers using price is a losing strategy on a long term. Customers pay more attention to companies provide them with lifetime value. Servicescape is an integral part of customer's determination of company value. It is worthy of more managerial attention.

## 5.3 Study Limitation

This study has actual limitations. First, getting information from specialized peers' full-text researches is very limited at many, if not all, Palestinian universities. Furthermore, library resources are not up-to-date. Most online database subscriptions are basic and restricted. The literature review, done for this study, aimed at being exhaustive and up-to-date. Nevertheless, there could have been ideas not mentioned in the literature review because of this restriction. Second, this study could have been vulnerable to measurement errors due to the respondent, data collection method, and other contextual factors. For example, the data in this study is self-reported, which introduces the potential for biased responses; there could be unique personal experiences or cultural influences which may motivate these biases. Because of time allocated to resource, there was a difficulty of reaching respondents across the west bank, the researcher couldn’t obtain a more representative sample of the target study

population. The researcher made much efforts to exceed the above mentioned limitations to achieve reliable and valid results. The researcher recommended that future studies should address these limitations.

## 5.4 Future Research

This study opens the door for more researches on several fields. First, the work on servicescape design dimensions has showed that the scales, developed so far in this area, are not constant to the extent that supported by their authors. Further research on servicescape design could lead researchers to new dimensions, which have not been investigated recently, or a better dimensions structure (labelling thereof) that could be more universal and applicable in cultures. In the same area, it would be encouraging to see researchers investigate the difference in customer perception of various servicescape design dimensions due to cultural factors (e.g. understanding why 'symbols and signs' dimensions did not work as a predictor for perceived servicescape in this study') or service industry uniqueness (hotel, after-sale car maintenance, beauty care, government services, healthcare, etc.). Second, the study of servicescape design dimensions and their influence on perception of service quality is just scratching the top of the ice-berg when it comes to controlling, understanding, and explaining what happens in the service environment, there are more stimuli and response elements to uncover in this rich research space (Meherabian & Rusell, 1974).

Furthermore, the servicescape design and perceived service quality across online and offline service contexts are still an understated area that needs work. Third, this study extensively hypothesized a moderating role of self-brand congruence in the relationship between servicescape design and perceptions of service quality; nevertheless, there are a lot of other intervening constructs to examine in a complex space through encompassing temporal and persistent stimuli, conscious and unconscious cues, tangible and intangible service aspects comprising a hierarchy of importance levels (e.g. brand experience,

susceptibility to other people's influence, consumption style whether it is hedonic or utilitarian, religiosity, Hofstede's five dimensions of cultural differences, and identification with brand customers).

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# APPENDIX A

## Outliers and Influential Points

*Outliers Detection*

| Method | Scale | Case Number |
|---|---|---|
| Univariate Detection | ± 2.5 | - |
| SBC | | - |
| AMB | | 140, 416, 180, 110, 210, 38, 47, 483, 461, 188, 130, 353, 212, 480 |
| SPA | | 314, 2, 310, 81, 27, 376, 380, 382, 227, 210, 66, 188, 157, 343, 47, 207, 2, 416, 461 |
| SIG | | 2, 416, 310, 27, 180, 67, 188, 480, 210, 461, 28, 81, 472, 127, 320, 140, 367 |
| SOC | | 127, 380, 353, 480, 382, 381, 367, 180, 416, 227, 475, 210, 472, 67, 140, 483, 267, 275, 219 |
| SQ | | 2, 472, 380, 180, 373, 459, 127, 353, 188, 210, 275, 381, 416, 376 ,67 |
| Bivariate Detection | ± 1.96 | |
| Standardized residual | | 438, 451, 37, 56, 461, 373, 275, 210, 376, 67, 403, 227, 243, 148, 47, 188, 4, 206, 220, 260, 331, 390, 540, 188, 367, 19, 18, 140, 367, 2, 335, 26, 35, 311, 28, 382, 388, 480, 268 |
| Studentized residual | | 438, 451, 37, 56, 461, 373, 275, 210, 67, 376, 403, 227, 243, 148, 47, 188, 4, 220, 206, 390, 260, 331, 2, 540, 472, 19, 355, 18, 459, 458, 140, 367, 2, 335, 26, 35, 311, 28, 382, 480, 388, 268 |
| Deleted residual | | 451, 438, 268, 140, 26 |
| Multivariate Detection | 10 | |
| | | 127, 2, 310, 275, 81, 380, 381, 157, 67, 140 |
| Leverage Point | 2(5+1)/600 | |
| | 0.02 | 127, 314, 310, 275, 367, 81, 380, 381, 2, 157, 67, 140, 416, 353, 382, 343, 27, 2, 28, 194, 26, 268, 472 |
| COVRATIO | 1± ((3*5)/600) | |
| | 1.03, 0.97 | Upper than 1.03 : 127, 314 ,310, 380, 381, 353, 416, 343, 81, 157, 194, 117, 525, 110<br>Lower than 0.97: 438, 451, 140, 37, 56, 373, 367, 403, 210, 243, 335, 35, 148, 227, 376, 47, 188, 331, 206, 26, 260, 311, 472 |

Source: SPSS Analysis and Researcher Calculations.

| | |
|---|---|
| Cases numbers deleted | 2, 127, 140, 210, 227, 268, 27, 275, 28, 310, 367, 373, 380, 382, 416, 481, 472, 67, 81 |

# APPENDIX B


الجامعة العربية الأمريكية
ARAB AMERICAN UNIVERSITY
FACULTY OF GRADUATE

أخي الفاضل / أختي الفاضلة،

تحية طيبة وبعد،

تأتي هذه الدراسة ضمن إعداد رسالة الماجستير واستكمالي لمتطلبات التخرج من برنامج إدارة الجودة في كلية الدراسات العليا في الجامعة العربية الأمريكية. حيث تهدف الدراسة الى قياس تأثير بيئة موقع الخدمة على مفهوم جودة الخدمة عند المستهلك، مع الأخذ بعين الاعتبار دور الموائمة ما بين المستهلك و العلامة التجارية

من أجل تحقيق هذه الغاية، أرجو مساعدتكم في توفير إجابات صادقة، ودقيقة، وموضوعية على الأسئلة الواردة في هذا الاستبيان والتي تعتمد على خبرتكم عند زيارة معارض الشركة التي تعتمدونها كمزود لخدمات الاتصالات الخلوية بشكل رئيسي. تحتاجون إلى 10 دقائق من أجل اكمال هذا الاستبيان.

إن المعلومات التي تجمع من خلال هذا الاستبيان سيتم استخدامها لأغراض البحث العلمي مع الحفاظ على السرية التامة لهذه المعلومات ومصدرها. إذا كان لديكم أي استفسار، يمكنكم مراسلتي على البريد الإلكتروني المرفق أدناه.

مع وافر الشكر والاحترام،

الباحثة أمال خير الدين
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**القسم الأول:– المزود الرئيس للخدمة**

| | | | |
|---|---|---|---|
| M1 | أي شركة تعتمدها كمزود لخدمات الاتصالات الخلوية بشكل رئيسي؟ | ☐ أوريدو | ☐ جوّال |
| M2 | ما معدل عدد زياراتك للمعارض الرسمية للشركة في العام الواحد؟ | _____ | (يرجى كتابة الرقم) |
| | **يرجى الأخذ بعين الاعتبار علاقتك مع الشركة التي حددتها أعلاه وخبرتك عند زيارة معارضها عند إجابتك للأسئلة في الاقسام التالية من الاستبيان.** | | |

**القسم الثاني:– محاور الدراسة**

**تنقسم محاور الدراسة الى ثلاثة محاور كالتالي:**

**المحور الأول :درجة الموائمة ما بين العلامة التجارية و المستهلك (Self–Brand congruence)**

يقصد بالعلامة التجارية: هي العلامة التي تميز المؤسسة و تحدد المنتج الذي تقدمه بسهولة و تتذكر خبراتك معها و ما تعنيه لك. (**مثال:أوريدو** ooredoo **أو جوّال** )

تعليمات: يرجى وضع دائرة (O) حول الرقم المعبر عن درجة موافقتك مع كل من العبارات التالية حسب وجهة نظرك.

| الرمز | السؤال | أوافق بشده | أوافق | أوافق نوعا ما | محايد | لا أوافق نوعا ما | لا أوافق | لا اوافق بشده |
|---|---|---|---|---|---|---|---|---|
| SBC 1 | اشعر بأن العلامة التجارية مشابهة لشخصيتي. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SBC 2 | أشعر بعلاقة شخصية مع هذه العلامة التجارية. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SBC 3 | هذه العلامة التجارية تعكس من انا. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SBC 4 | أشعر بأن العلامة التجارية تناسب نمط حياتي. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SBC 5 | هذه العلامة التجارية تناسبني. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SBC 6 | أستطيع استخدام هذه العلامة التجارية لكي أعبّر للآخرين من أنا | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SBC 7 | إذا كانت هذه العلامة التجارية إنسان، اعتقد أننا سنكون أصدقاء | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SBC 8 | هناك تشابه كبير بيني وبين هذه العلامة التجارية | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

**المحور الثاني:- تصميم المعرض داخلياً (Servicescape).**

**يقصد بتصميم المعرض هو كل ما يوجد في داخل المعرض ملموساً او غير ملموس يمكن بدوره ان يؤثر على جودة الخدمة المقدمة. و ينقسم هذا المحور الى اربعة اجزاء وهم :1- بيئة المعرض. 2- تصميم المساحات و عملية العرض. 3- الإشـــارات، الرمـــوز والتحف و تأثيرها على جودة الخدمة. 4- درجة تأثير التواصل الاجتماعي بين الموظف والمستهلك على جودة الخدمة.**

| الرمز | السؤال | أوافق بشده | أوافق | أوافق نوعا ما | محايد | لا أوافق نوعا ما | لا أوافق | لا اوافق بشده |
|---|---|---|---|---|---|---|---|---|
| الجزء الأول | بيئة المعرض (Ambient Conditions) | | | | | | | |
| AMB 1 | أجد المرافق المخصصة لزوار المعرض نظيفة. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| AMB 2 | المظهر الداخلي للمعرض أنيق. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| AMB 3 | أجد رائحة المعرض منعشة عند دخولي اليه. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| AMB 4 | الألوان المستخدمة في داخل المعرض تجعلني أشعر بالراحة . | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| AMB 5 | يتم استخدام موسيقى مناسبة في داخل المعرض. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| AMB 6 | مستوى الصوت (الضجيج/ الإزعاج) في داخل المعرض مقبول بالنسبة لي. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| AMB 7 | الإضاءة المستخدمة داخل المعرض مناسبة. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| AMB 8 | درجة الحرارة داخل المعرض مناسبة. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| AMB 9 | تفاصيل البيئة الداخلية للمعرض تحفزني لزيارة المعرض مرة اخرى. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| الجزء الثاني | تصميم المساحات ووظائف المعرض (Spatial layout and Functionality) | | | | | | | |
| SPA 1 | التصميم الهندسي في داخل المعرض جيد. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SPA 2 | المساحة الداخلية للمعرض كافية. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SPA 3 | الأماكن المخصصة لجلوس زوار المعرض موزعة بشكل مناسب. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SPA 4 | المقاعد المسخدمة في داخل المعرض مريحة. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SPA 5 | المساحة بين مكاتب الموظفين جيدة لتمنحني الخصوصية. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SPA 6 | المعدات المكتبية ( الطابعة، الأوراق و غيرها) قريبة من الموظف مما تسرع عمله. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SPA 7 | لا يشتكي موظفو المعرض من النظام المحوسب الذي يستخدمونه. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SPA 8 | يتم استخدام آلة تنظيم الدور عند الدخول للمعرض. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SPA 9 | أجد ان توزيع المساحات داخل المعرض عملي | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SPA 10 | أجد ان توزيع المساحات داخل المعرض مناسب لأداء الخدمة. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SPA 11 | لا أجد صعوبة في ايجاد الوجهة المناسبة عند دخولي المعرض. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| الجزء الثالث | الإشارات، الرموز والتحف و تأثيرها على جودة الخدمة ( Signs, Symbols and Artifacts ) | | | | | | | |
| SIG 1 | الإشارات التوجيهية (مكان الدخول، الخروج، الجلوس و غيرها ) تعطي ارشادات واضحة لكيفية التحرك. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

| الرمز | السؤال | أوافق بشده | أوافق | أوافق نوعا ما | محايد | لا أوافق نوعا ما | لا أوافق | لا اوافق بشده |
|---|---|---|---|---|---|---|---|---|
| SIG 2 | عدد الإشارات التوجيهية داخل المعرض كافية. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SIG 3 | يتم استخدام العلامات التي تدل على قيم الشركة (كممنوع التدخين أو الرجاء ابقاء المكان نظيفا في داخل المعرض) . | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SIG 4 | العلامات المستخدمة في داخل المعرض جذابة بصريا. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SIG 5 | اجد اسم الشركة مكتوب بشكل واضح داخل المعرض. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SIG 6 | اجد شعار الشركة مكتوب بشكل واضح داخل المعرض (مثال: استمتع بالإنترنت / كل يوم جديد) | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SIG 7 | اجد العلامة التجارية للشركة مدمجة بشكل واضح بتصميم المعرض الداخلي. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SIG 8 | تتوفر مواد ترويجية كافية عن الخدمات المقدمة من قبل الشركة في داخل المعرض بشكل كافي. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SIG 9 | رسالة الشركة تظهر بشكل واضح في الملصقات الحائطية. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| **الجزء الرابع** | **درجة تأثير التواصل الاجتماعي بين الموظف و المستهلك على جودة الخدمة ( Social Interaction)** | | | | | | | |
| SOC 1 | موظفو المعرض لطيفون. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SOC 2 | موظفو المعرض متعاونون | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SOC 3 | موظفو المعرض مدربون بشكل جيد لتلبية احتياجاتي. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SOC 4 | موظفو المعرض لديهم الخبرة الكافية في التعامل مع الزبائن المتذمرون. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SOC 5 | موظفو المعرض ملمون بجميع تفاصيل الخدمة المتوفرة لزائر المعرض. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SOC 6 | دائما ما يقابلني الموظف بابتسامة. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SOC 7 | يحافظ الموظف دائما على نبرة صوت واضحة عن تقديم الخدمة. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SOC 8 | يحافظ الموظف على هدوئه و اتزانه حتى عند طلب اكثر من خدمة. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SOC 9 | يستخدم الموظف التواصل الغير لفظي(لغة الجسد) بشكل جيد. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SOC 10 | التواصل المباشر مع الموظف يؤثر ايجابيا على جودة الخدمة المقدمة من الشركة. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SOC11 | السلوك المهني الحسن لموظفي المعرض يجعلني اتحدث بشكل ايجابي عن الشركة. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

**المحور الثالث :- درجة جودة الخدمة في شركات الاتصالات الخلوية الفلسطينيه بشكل عام Service Quality**

| الرمز | السؤال | أوافق بشده | أوافق | أوافق نوعا ما | محايد | لا أوافق نوعا ما | لا أوا فق | لا اوافق بشده |
|---|---|---|---|---|---|---|---|---|
| SQ1 | الشركة التي أتعامل معها دائما تقدم الخدمة في الوقت المحدد. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SQ2 | عندما تواجهني مشكلة تظهر الشركة رغبة صادقة في حلها. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SQ3 | يتم دائما تقديم الخدمة بشكل صحيح من أول مرة. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SQ4 | يقوم الموظف في الشركة بتقديم الخدمة بشكل فوري. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SQ5 | الموظفون دائما على استعداد لتقديم المساعدة لي. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SQ6 | تبقينا الشركة دائما على علم حول وقت اجراء الخدمة. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SQ7 | أشعر بالأمان عند التعامل مع هذه الشركة. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SQ8 | الموظفون في هذه الشركة لبقون في التعامل معي. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SQ9 | لدى الموظفون المعرفة الكافية للإجابة على جميع أسئلتي. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SQ10 | الشركة تظهر الاهتمام الفردي عند تقديم الخدمة. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SQ11 | الموظفون قادرون على فهم احتياجاتي الخاصة. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SQ12 | ساعات عمل الشركة مناسبة لكل المشتركين. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SQ13 | المرافق المادية للشركة جذابة بصريا. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SQ14 | موظفون الشركة انيقو المنظر. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| SQ15 | الشركة لديها معدات حديثة. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

**القسم الثالث :- معلومات شخصية (Personal)**: معلومات عامة عن المشترك في تعبئة الاستمارة:

| الرمز | السؤال |
|---|---|
| PER 1 | مكان السكن: ☐ مدينة ☐ قرية ☐ مخيم |
| PER2 | المحافظة: ☐ رام الله ☐ نابلس ☐ جنين ☐ الخليل ☐ بيت لحم ☐ غير ذلك |
| PER3 | العمر: ☐ أقل من 20 ☐ 21- 30 ☐ 31- 40 ☐ 41- 50 ☐ 51 - 60 ☐ 61- فأكثر |
| PER4 | الجنس: ☐ ذكر ☐ انثى |
| PER5 | درجة التعليم: ☐ دون الثانوية ☐ توجيهي ☐ دبلوم ☐ بكالوريوس ☐ دراسات عليا |
| PER6 | المهنة: ☐ لا أعمل ☐ طالب ☐ موظف قطاع خاص ☐ موظف قطاع حكومي ☐ ربة منزل ☐ قطاع غير ربحي |
| PER7 | نوع البرنامج: ☐ دفع مسبق ☐ فاتورة |
| PER8 | طبيعة الأشتراك: ☐ أفراد (شخصي) ☐ تابع لمؤسسة حكومية ☐ تابع لمؤسسة خاصة ☐ تابع لمؤسسة غير ربحية |

**انتهى الاستبيان**

**أشكركم على حسن تعاونكم**

# APPENDIX C

## Pre-test, Assessment of Reliability and Validity

*Reliability Statistics*

| Variable | N | Cronbach's Alpha | N of Items |
|---|---|---|---|
| SBC | 50 | .949 | 8 |
| AMB | 50 | .821 | 9 |
| SPA | 50 | .921 | 11 |
| SIG | 50 | .924 | 9 |
| SOC | 50 | .972 | 11 |
| SQ | 50 | .964 | 15 |

Source: SPSS outcome.

*Overall Reliability*

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .979 | .980 | 50 |

Source: SPSS outcome.

*Summary Item Statistics*

| Variable | | Mean | Minimum | Maximum | Range | Max/Min | Variance | Num. of Item |
|---|---|---|---|---|---|---|---|---|
| SBC | Item Means | 3.688 | 3.520 | 3.940 | .420 | 1.119 | .017 | 8 |
| | Item Variances | 3.127 | 2.785 | 3.547 | .761 | 1.273 | .081 | 8 |
| AMB | Item Means | 5.180 | 4.300 | 5.880 | 1.580 | 1.367 | .316 | 9 |
| | Item Variances | 1.533 | .679 | 2.727 | 2.048 | 4.015 | .672 | 9 |
| SPA | Item Means | 4.887 | 3.820 | 5.460 | 1.640 | 1.429 | .169 | 11 |
| | Item Variances | 2.929 | 1.764 | 3.742 | 1.979 | 2.122 | .376 | 11 |
| SIG | Item Means | 5.369 | 4.900 | 5.760 | .860 | 1.176 | .068 | 9 |
| | Item Variances | 1.500 | 1.084 | 2.051 | .967 | 1.892 | .097 | 9 |
| SOC | Item Means | 4.991 | 4.680 | 5.200 | .520 | 1.111 | .025 | 11 |
| | Item Variances | 3.006 | 2.531 | 4.039 | 1.509 | 1.596 | .188 | 11 |
| SQ | Item Means | 4.897 | 4.500 | 5.520 | 1.020 | 1.227 | .068 | 15 |
| | Item Variances | 2.876 | 2.075 | 3.847 | 1.772 | 1.854 | .340 | 15 |

Source: SPSS outcome

# APPENDIX D

## Results of End factor analysis

**KMO and Bartlett's Test**

| | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .944 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 15675.732 |
| | df | 903 |
| | Sig. | .000 |

**Communalities**

| | Initial | Extraction |
|---|---|---|
| SBC1 I feel that the brand is similar to my personality. | 1.000 | .635 |
| SBC2 I feel a personal relationship with this brand | 1.000 | .631 |
| SBC3 This brand reflects who I am. | 1.000 | .706 |
| SBC4 I feel that the brand suits my lifestyle. | 1.000 | .713 |
| SBC5 This brand suits me. | 1.000 | .639 |
| SBC6 I can use this brand to tell others who I am | 1.000 | .652 |
| SBC7 If this brand is human, I think we will be friends | 1.000 | .637 |
| SBC8 There is a great similarity between me and this brand | 1.000 | .708 |
| amb1 I find the facilities for visitors to the Servicescape clean. | 1.000 | .519 |
| amb2 The interior of the Servicescape is elegant. | 1.000 | .634 |
| amb3 I find the smell of the servicescape refreshing when I enter it. | 1.000 | .603 |
| amb4 The colors used inside the servicescape make me feel comfortable. | 1.000 | .573 |
| amb7 The lighting used inside the servicescape is suitable. | 1.000 | .486 |
| amb8 The temperature inside the servicescape is suitable. | 1.000 | .454 |

| | | |
|---|---|---|
| spa2 The interior space of the servicescape is sufficient. | 1.000 | .546 |
| spa4 The seats in the servicescape are comfortable. | 1.000 | .489 |
| spa5 The space between staff offices is good to give me privacy. | 1.000 | .647 |
| spa6 Office equipment (printer, paper, etc.) close to the employee, which speeds up his work. | 1.000 | .555 |
| spa9 I find that the distribution of spaces within the exhibition is practical | 1.000 | .655 |
| spa10 I find that the distribution of spaces within the exhibition is suitable for service performance. | 1.000 | .625 |
| sig4 signs used inside the servicescape are visually attractive. | 1.000 | .593 |
| sig5 I find the name of the company clearly written inside the servicescape . | 1.000 | .697 |
| sig6 I find the logo of the company clearly written inside the servicescape (example: enjoy the internet / every day is new) | 1.000 | .625 |
| sig7 I find the brand of the company clearly integrated into the interior servicescape design. | 1.000 | .564 |
| SOC1 The servicescape staff are nice. | 1.000 | .659 |
| SOC2 The servicescape staff are Collaborators | 1.000 | .727 |
| SOC3 The servicescape staff are well trained to meet my needs. | 1.000 | .657 |
| SOC4 servicescape staff have sufficient experience in dealing with disgruntled customers. | 1.000 | .726 |
| SOC5 The servicescape staff is familiar with all the details of the service available to the servicescape visitor. | 1.000 | .535 |
| SOC6 The employee always meets me with a smile. | 1.000 | .670 |
| SOC7 The employee always maintains a clear voice of service delivery. | 1.000 | .643 |
| SOC8 The employee maintains his calm and tightness even when ordering more than one service. | 1.000 | .640 |
| SOC10 Direct communication with the employee positively affects the quality of service provided by the company. | 1.000 | .502 |
| SQ1 The company I deal with always offers service on time. | 1.000 | .581 |
| SQ2 When faced with a problem, the company shows a sincere desire to solve it. | 1.000 | .685 |

| | | |
|---|---|---|
| SQ3 The service is always provided correctly from the first time. | 1.000 | .654 |
| SQ4 The employee in the company provides the service immediately. | 1.000 | .558 |
| SQ6 The company keeps us informed about the time of service. | 1.000 | .516 |
| SQ7 I feel safe when dealing with this company. | 1.000 | .565 |
| SQ10 The company shows individual attention when providing service. | 1.000 | .559 |
| SQ11 The staff are able to understand my own needs. | 1.000 | .517 |
| SQ12 The company's business hours are suitable for all participants. | 1.000 | .468 |
| SQ13 The physical facilities of the company visually attractive. | 1.000 | .516 |

Extraction Method: Principal Component Analysis.

**Total Variance Explained**

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings[a] |
|---|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total |
| 1 | 14.966 | 34.806 | 34.806 | 14.966 | 34.806 | 34.806 | 10.549 |
| 2 | 3.804 | 8.848 | 43.653 | 3.804 | 8.848 | 43.653 | 8.455 |
| 3 | 2.678 | 6.228 | 49.881 | 2.678 | 6.228 | 49.881 | 7.049 |
| 4 | 1.767 | 4.109 | 53.989 | 1.767 | 4.109 | 53.989 | 10.022 |
| 5 | 1.483 | 3.449 | 57.438 | 1.483 | 3.449 | 57.438 | 7.342 |
| 6 | 1.264 | 2.941 | 60.379 | 1.264 | 2.941 | 60.379 | 4.659 |
| 7 | 1.114 | 2.590 | 62.969 | | | | |
| 8 | .851 | 1.979 | 64.948 | | | | |
| 9 | .826 | 1.921 | 66.869 | | | | |
| 10 | .806 | 1.875 | 68.744 | | | | |
| 11 | .722 | 1.680 | 70.423 | | | | |
| 12 | .705 | 1.639 | 72.062 | | | | |
| 13 | .664 | 1.545 | 73.608 | | | | |
| 14 | .651 | 1.515 | 75.122 | | | | |
| 15 | .611 | 1.421 | 76.543 | | | | |
| 16 | .595 | 1.383 | 77.927 | | | | |
| 17 | .566 | 1.316 | 79.243 | | | | |
| 18 | .556 | 1.293 | 80.536 | | | | |
| 19 | .542 | 1.262 | 81.798 | | | | |
| 20 | .534 | 1.242 | 83.040 | | | | |
| 21 | .491 | 1.143 | 84.183 | | | | |
| 22 | .479 | 1.114 | 85.297 | | | | |
| 23 | .475 | 1.104 | 86.401 | | | | |
| 24 | .457 | 1.063 | 87.464 | | | | |
| 25 | .416 | .966 | 88.430 | | | | |
| 26 | .404 | .939 | 89.369 | | | | |
| 27 | .380 | .884 | 90.253 | | | | |
| 28 | .361 | .840 | 91.093 | | | | |
| 29 | .359 | .835 | 91.928 | | | | |
| 30 | .341 | .793 | 92.721 | | | | |
| 31 | .332 | .773 | 93.494 | | | | |
| 32 | .301 | .700 | 94.194 | | | | |
| 33 | .286 | .666 | 94.860 | | | | |
| 34 | .279 | .649 | 95.510 | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 35 | .275 | .639 | 96.149 | | | | |
| 36 | .252 | .585 | 96.734 | | | | |
| 37 | .250 | .582 | 97.317 | | | | |
| 38 | .230 | .535 | 97.852 | | | | |
| 39 | .219 | .508 | 98.360 | | | | |
| 40 | .203 | .471 | 98.832 | | | | |
| 41 | .192 | .447 | 99.278 | | | | |
| 42 | .165 | .383 | 99.661 | | | | |
| 43 | .146 | .339 | 100.000 | | | | |

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

**Component Matrix[a]**

| | Component | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| SOC3 The servicescape staff are well trained to meet my needs. | .708 | | | | | |
| SOC4 servicescape staff have sufficient experience in dealing with disgruntled customers. | .699 | | | | | |
| SOC2 The servicescape staff are Collaborators | .690 | | | | | |
| SOC6 The employee always meets me with a smile. | .685 | | | | | |
| SOC1 The servicescape staff are nice. | .677 | | | | | |
| SQ10 The company shows individual attention when providing service. | .667 | | | | | |
| SOC8 The employee maintains his calm and tightness even when ordering more than one service. | .662 | | -.310 | | | |
| SQ7 I feel safe when dealing with this company. | .655 | | | | | |
| SQ2 When faced with a problem, the company shows a sincere desire to solve it. | .648 | | | .396 | | |
| SOC5 The servicescape staff is familiar with all the details of the service available to the servicescape visitor. | .642 | | | | | |
| sig4 signs used inside the servicescape are visually attractive. | .635 | | | | | -.331 |
| SOC7 The employee always maintains a clear voice of service delivery. | .628 | | | | | |
| SQ6 The company keeps us informed about the time of service. | .624 | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| SOC10 Direct communication with the employee positively affects the quality of service provided by the company. | .624 | | | | | |
| SQ11 The staff are able to understand my own needs. | .623 | | | | | |
| SQ13 The physical facilities of the company visually attractive. | .621 | | | .301 | | |
| SQ4 The employee in the company provides the service immediately. | .618 | | -.322 | | | |
| SQ1 The company I deal with always offers service on time. | .603 | | | .377 | | |
| SQ3 The service is always provided correctly from the first time. | .599 | | -.325 | .364 | | |
| spa9 I find that the distribution of spaces within the exhibition is practical | .596 | | .305 | | -.364 | |
| SBC5 This brand suits me. | .593 | .445 | | | | |
| SBC7 If this brand is human, I think we will be friends | .591 | .500 | | | | |
| SBC8 There is a great similarity between me and this brand | .590 | .575 | | | | |
| spa10 I find that the distribution of spaces within the exhibition is suitable for service performance. | .584 | | | | | |
| amb4 The colors used inside the servicescape make me feel comfortable. | .579 | | | | | |
| SBC4 I feel that the brand suits my lifestyle. | .577 | .574 | | | | |
| spa5 The space between staff offices is good to give me privacy. | .569 | | .339 | | -.373 | |
| SQ12 The company's business hours are suitable for all participants. | .566 | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| sig7 I find the brand of the company clearly integrated into the interior servicescape design. | .555 | | .307 | | | -.302 |
| SBC2 I feel a personal relationship with this brand | .543 | .541 | | | | |
| spa6 Office equipment (printer, paper, etc.) close to the employee, which speeds up his work. | .537 | | .360 | | -.310 | |
| amb3 I find the smell of the servicescape refreshing when I enter it. | .535 | | | | .303 | .354 |
| spa4 The seats in the servicescape are comfortable. | .534 | | | | | |
| amb2 The interior of the Servicescape is elegant. | .516 | -.318 | .321 | | .323 | |
| amb7 The lighting used inside the servicescape is suitable. | .510 | | | | | |
| sig6 I find the logo of the company clearly written inside the servicescape (example: enjoy the internet / every day is new) | .504 | | | | | -.470 |
| amb1 I find the facilities for visitors to the Servicescape clean. | .478 | | | | .378 | |
| spa2 The interior space of the servicescape is sufficient. | .449 | | .345 | | -.347 | |
| amb8 The temperature inside the servicescape is suitable. | .413 | -.332 | .341 | | | |
| SBC3 This brand reflects who I am. | .541 | .604 | | | | |
| SBC6 I can use this brand to tell others who I am | .514 | .590 | | | | |
| SBC1 I feel that the brand is similar to my personality. | .508 | .577 | | | | |
| sig5 I find the name of the company clearly written inside the servicescape . | .504 | -.304 | | | | -.513 |

Extraction Method: Principal Component Analysis.

a. 6 components extracted.

**Pattern Matrix[a]**

| | Component | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| SOC2 The servicescape staff are Collaborators | .843 | | | | | |
| SOC4 servicescape staff have sufficient experience in dealing with disgruntled customers. | .832 | | | | | |
| SOC6 The employee always meets me with a smile. | .792 | | | | | |
| SOC7 The employee always maintains a clear voice of service delivery. | .773 | | | | | |
| SOC1 The servicescape staff are nice. | .772 | | | | | |
| SOC8 The employee maintains his calm and tightness even when ordering more than one service. | .756 | | | | | |
| SOC3 The servicescape staff are well trained to meet my needs. | .720 | | | | | |
| SOC5 The servicescape staff is familiar with all the details of the service available to the servicescape visitor. | .623 | | | | | |
| SOC10 Direct communication with the employee positively affects the quality of service provided by the company. | .539 | | | | | |
| SBC3 This brand reflects who I am. | | .844 | | | | |
| SBC4 I feel that the brand suits my lifestyle. | | .819 | | | | |
| SBC6 I can use this brand to tell others who I am | | .804 | | | | |
| SBC1 I feel that the brand is similar to my personality. | | .803 | | | | |
| SBC8 There is a great similarity between me and this brand | | .793 | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| SBC2 I feel a personal relationship with this brand | | .781 | | | | |
| SBC5 This brand suits me. | | .752 | | | | |
| SBC7 If this brand is human, I think we will be friends | | .739 | | | | |
| amb2 The interior of the Servicescape is elegant. | | | .741 | | | |
| amb3 I find the smell of the servicescape refreshing when I enter it. | | | .737 | | | |
| amb1 I find the facilities for visitors to the Servicescape clean. | | | .709 | | | |
| amb4 The colors used inside the servicescape make me feel comfortable. | | | .663 | | | |
| amb8 The temperature inside the servicescape is suitable. | | | .545 | | | |
| amb7 The lighting used inside the servicescape is suitable. | | | .522 | | | |
| SQ3 The service is always provided correctly from the first time. | | | | .814 | | |
| SQ2 When faced with a problem, the company shows a sincere desire to solve it. | | | | .807 | | |
| SQ1 The company I deal with always offers service on time. | | | | .735 | | |
| SQ4 The employee in the company provides the service immediately. | | | | .654 | | |
| SQ11 The staff are able to understand my own needs. | | | | .615 | | |
| SQ6 The company keeps us informed about the time of service. | | | | .585 | | |
| SQ12 The company's business hours are suitable for all participants. | | | | .581 | | |
| SQ7 I feel safe when dealing with this company. | | | | .567 | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| SQ10 The company shows individual attention when providing service. | | | | .558 | | |
| SQ13 The physical facilities of the company visually attractive. | | | | .543 | | |
| spa2 The interior space of the servicescape is sufficient. | | | | | -.744 | |
| spa5 The space between staff offices is good to give me privacy. | | | | | -.743 | |
| spa9 I find that the distribution of spaces within the exhibition is practical | | | | | -.689 | |
| spa10 I find that the distribution of spaces within the exhibition is suitable for service performance. | | | | | -.677 | |
| spa6 Office equipment (printer, paper, etc.) close to the employee, which speeds up his work. | | | | | -.663 | |
| spa4 The seats in the servicescape are comfortable. | | | | | -.566 | |
| sig5 I find the name of the company clearly written inside the servicescape . | | | | | | -.758 |
| sig6 I find the logo of the company clearly written inside the servicescape (example: enjoy the internet / every day is new) | | | | | | -.698 |
| sig7 I find the brand of the company clearly integrated into the interior servicescape design. | | | | | | -.545 |
| sig4 signs used inside the servicescape are visually attractive. | | | | | | -.514 |

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.[a]

a. Rotation converged in 10 iterations.

**Structure Matrix**

| | Component | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| SOC2 The servicescape staff are Collaborators | .848 | | .314 | .461 | -.374 | -.302 |
| SOC4 servicescape staff have sufficient experience in dealing with disgruntled customers. | .847 | .323 | .397 | .468 | -.348 | |
| SOC6 The employee always meets me with a smile. | .813 | .346 | .359 | .453 | -.345 | |
| SOC1 The servicescape staff are nice. | .807 | | .340 | .458 | -.379 | |
| SOC3 The servicescape staff are well trained to meet my needs. | .801 | .322 | .393 | .499 | -.403 | |
| SOC8 The employee maintains his calm and tightness even when ordering more than one service. | .797 | | .356 | .480 | -.304 | |
| SOC7 The employee always maintains a clear voice of service delivery. | .787 | | .350 | .425 | | -.363 |
| SOC5 The servicescape staff is familiar with all the details of the service available to the servicescape visitor. | .717 | | .396 | .474 | -.313 | |
| SOC10 Direct communication with the employee positively affects the quality of service provided by the company. | .675 | | .306 | .502 | -.321 | -.349 |
| SBC4 I feel that the brand suits my lifestyle. | .304 | .839 | | .400 | -.323 | |
| SBC3 This brand reflects who I am. | | .839 | | .389 | | |
| SBC8 There is a great similarity between me and this brand | | .837 | | .444 | -.306 | |
| SBC6 I can use this brand to tell others who I am | | .805 | | .376 | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| SBC1 I feel that the brand is similar to my personality. | | .796 | | .365 | | |
| SBC2 I feel a personal relationship with this brand | | .792 | | .386 | | |
| SBC7 If this brand is human, I think we will be friends | .359 | .789 | | .418 | | |
| SBC5 This brand suits me. | .318 | .778 | .315 | .376 | -.306 | |
| amb2 The interior of the Servicescape is elegant. | .370 | | .789 | | -.386 | -.351 |
| amb3 I find the smell of the servicescape refreshing when I enter it. | .352 | .314 | .758 | .308 | -.373 | |
| amb4 The colors used inside the servicescape make me feel comfortable. | .429 | .315 | .735 | .349 | -.370 | |
| amb1 I find the facilities for visitors to the Servicescape clean. | | | .712 | .312 | | |
| amb7 The lighting used inside the servicescape is suitable. | .395 | | .649 | | -.333 | -.453 |
| amb8 The temperature inside the servicescape is suitable. | | | .629 | | -.374 | -.412 |
| SQ2 When faced with a problem, the company shows a sincere desire to solve it. | .435 | .421 | | .821 | -.338 | |
| SQ3 The service is always provided correctly from the first time. | .411 | .411 | | .801 | | |
| SQ1 The company I deal with always offers service on time. | .366 | .418 | | .751 | -.331 | |
| SQ4 The employee in the company provides the service immediately. | .516 | .330 | .301 | .729 | | |
| SQ7 I feel safe when dealing with this company. | .506 | .480 | | .720 | -.306 | |
| SQ10 The company shows individual attention when providing service. | .556 | .370 | | .713 | -.384 | |
| SQ11 The staff are able to understand my own needs. | .494 | .326 | .329 | .704 | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| SQ6 The company keeps us informed about the time of service. | .465 | .407 | .323 | .698 | -.310 | |
| SQ13 The physical facilities of the company visually attractive. | .406 | | .393 | .630 | -.439 | -.418 |
| SQ12 The company's business hours are suitable for all participants. | .386 | | .397 | .626 | | -.347 |
| spa5 The space between staff offices is good to give me privacy. | .330 | .395 | .361 | .337 | -.782 | |
| spa9 I find that the distribution of spaces within the exhibition is practical | .388 | | .314 | .368 | -.770 | -.443 |
| spa10 I find that the distribution of spaces within the exhibition is suitable for service performance. | .380 | | .383 | .381 | -.764 | -.403 |
| spa2 The interior space of the servicescape is sufficient. | | | .336 | | -.736 | |
| spa6 Office equipment (printer, paper, etc.) close to the employee, which speeds up his work. | .344 | | .396 | | -.732 | |
| spa4 The seats in the servicescape are comfortable. | .427 | | .399 | .354 | -.651 | |
| sig5 I find the name of the company clearly written inside the servicescape . | .389 | | .385 | | -.325 | -.819 |
| sig6 I find the logo of the company clearly written inside the servicescape (example: enjoy the internet / every day is new) | .398 | | .378 | | -.315 | -.768 |
| sig7 I find the brand of the company clearly integrated into the interior servicescape design. | .383 | | .475 | .301 | -.444 | -.681 |
| sig4 signs used inside the servicescape are visually attractive. | .415 | .338 | .409 | .458 | -.502 | -.652 |

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

**Component Correlation Matrix**

| Component | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1 | 1.000 | .327 | .412 | .548 | -.386 | -.309 |
| 2 | .327 | 1.000 | .252 | .458 | -.301 | -.106 |
| 3 | .412 | .252 | 1.000 | .330 | -.419 | -.358 |
| 4 | .548 | .458 | .330 | 1.000 | -.357 | -.213 |
| 5 | -.386 | -.301 | -.419 | -.357 | 1.000 | .311 |
| 6 | -.309 | -.106 | -.358 | -.213 | .311 | 1.000 |

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

RESULTS OF END CRONBACH ALPHA for EACH scale

```
RELIABILITY
  /VARIABLES=SBC1 SBC2 SBC3 SBC4 SBC5 SBC6 SBC7 SBC8
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| .926 | 8 |

```
RELIABILITY
  /VARIABLES=amb1 amb2 amb3 amb4 amb7 amb8
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| .815 | 6 |

```
RELIABILITY
  /VARIABLES=spa2 spa4 spa5 spa6 spa9 spa10
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| .841 | 6 |

```
RELIABILITY
  /VARIABLES=sig4 sig5 sig6 sig7
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| .803 | 4 |

```
RELIABILITY
  /VARIABLES=SOC1 SOC2 SOC3 SOC4 SOC5 SOC6 SOC7 SOC8 SOC10
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| .926 | 9 |

```
RELIABILITY
  /VARIABLES=SQ1 SQ2 SQ3 SQ4 SQ6 SQ7 SQ10 SQ11 SQ12 SQ13
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| .901 | 10 |

**Descriptive Statistics for final factor analysis solution items.**

*Table 29*: *Descriptive statistics of Servicescape dimensions after Items deleted (n=570)*

| Label | Servicescape Dimensions | M | SD |
|---|---|---|---|
| ***Ambient condition*** | | | |
| AMB1 | I find the facilities for visitors to the Servicescape clean. | 6.29 | 0.806 |
| AMB2 | The interior of the Servicescape is elegant. | 6.21 | 0.842 |
| AMB3 | I find the smell of the servicescape refreshing when I enter it. | 5.8 | 1.059 |
| AMB4 | The colors used inside the servicescape make me feel comfortable. | 5.74 | 1.107 |
| AMB7 | The lighting used inside the servicescape is suitable | 5.82 | 0.984 |
| AMB8 | The temperature inside the servicescape is suitable. | 5.87 | 1.129 |
| ***Spatial Layout and Functionality*** | | | |
| SPA2 | The interior space of the servicescape is sufficient. | 5.50 | 1.298 |
| SPA4 | The seats in the servicescape are comfortable. | 5.53 | 1.283 |
| SPA5 | The space between staff offices is good to give me privacy. | 5.11 | 1.601 |
| SPA6 | Office equipment (printer, paper, etc.) close to the employee, which speeds up his work. | 5.60 | 1.325 |
| SPA9 | I find that the distribution of spaces within the exhibition is practical | 5.51 | 1.202 |
| SPA10 | I find that the distribution of spaces within the exhibition is suitable for service performance | 5.55 | 1.113 |
| ***Signs, Symbols and Artifacts*** | | | |
| SIG4 | Signs used inside the servicescape are visually attractive. | 5.59 | 1.144 |
| SIG5 | I find the name of the company clearly written inside the servicescape. | 5.98 | 0.971 |
| SIG6 | I find the logo of the company clearly written inside the servicescape (example: enjoy the internet / every day is new) | 5.89 | 1.042 |
| SIG7 | I find the brand of the company clearly integrated into the interior servicescape design. | 5.76 | 1.115 |
| ***Social Dimension*** | | | |
| SOC1 | The servicescape staff are nice. | 5.89 | 1.136 |
| SOC2 | The servicescape staff are Collaborators | 5.89 | 1.053 |
| SOC3 | The servicescape staff are well trained to meet my needs. | 5.79 | 1.144 |
| SOC4 | Servicescape staff have sufficient experience in dealing with disgruntled customers. | 5.70 | 1.175 |
| SOC5 | The servicescape staff is familiar with all the details of the service available to the servicescape visitor. | 5.69 | 1.183 |
| SOC6 | The employee always meets me with a smile. | 5.60 | 1.197 |
| SOC7 | The employee always maintains a clear voice of service delivery. | 5.74 | 1.092 |
| SOC8 | The employee maintains his calm and tightness even when ordering more than one service. | 5.78 | 1.083 |
| SOC10 | Direct communication with the employee positively affects the quality of service provided by the company. | 5.83 | 1.168 |

| | | | |
|---|---|---|---|
| | Average | 5.74 | 1.13 |

*Note:* AMB = 'Ambient conditions' dimension of servicescape design; SPA='Spacial layout and functionality' dimension of servicescape design; SIG='Signs, symbols and artifacts' dimension of servicescape design; SOC='Social interaction' dimension of servicescape design.
Source: SPSS outcome.

| **Label** | **Self-Brand congruence** | M | SD |
|---|---|---|---|
| SBC1 | I feel that the brand is similar to my personality. | 4.63 | 1.617 |
| SBC2 | I feel a personal relationship with this brand | 4.43 | 1.728 |
| SBC3 | This brand reflects who I am. | 4.16 | 1.741 |
| SBC4 | I feel that the brand suits my lifestyle. | 4.55 | 1.628 |
| SBC5 | This brand suits me. | 4.88 | 1.579 |
| SBC6 | I can use this brand to tell others who I am | 4.32 | 1.740 |
| SBC7 | If this brand is human, I think we will be friends | 4.51 | 1.820 |
| SBC8 | There is a great similarity between me and this brand | 4.08 | 1.796 |
| Average | | 4.44 | 1.70 |

*Table 30*: *Descriptive statistics of Self-Brand congruence after Items deleted (n=570)*

*Note:* SBC = Self-brand congruence
Source: SPSS outcome.

*Table 31: Descriptive statistics of Service Quality after Items deleted (n=570)*

| **Label.** | **Service Quality** | M | SD |
|---|---|---|---|
| SQ1 | The company I deal with always offers service on time. | 5.41 | 1.375 |
| SQ2 | When faced with a problem, the company shows a sincere desire to solve it. | 5.25 | 1.393 |
| SQ3 | The service is always provided correctly from the first time. | 5.18 | 1.446 |
| SQ4 | The employee in the company provides the service immediately | 5.43 | 1.187 |
| SQ6 | The company keeps us informed about the time of service. | 5.44 | 1.321 |
| SQ7 | I feel safe when dealing with this company. | 5.31 | 1.507 |
| SQ10 | The company shows individual attention when providing service. | 5.49 | 1.212 |
| SQ11 | The staff are able to understand my own needs. | 5.44 | 1.211 |
| SQ12 | The company's business hours are suitable for all participants. | 5.47 | 1.296 |
| SQ13 | The physical facilities of the company visually attractive. | 5.50 | 1.225 |
| | Average | 5.39 | 1.31 |

*Note:* SQ = Service Quality
Source: SPSS outcome

# APPENDIX E

## Part A

## Testing the Assumptions

### Normality Test

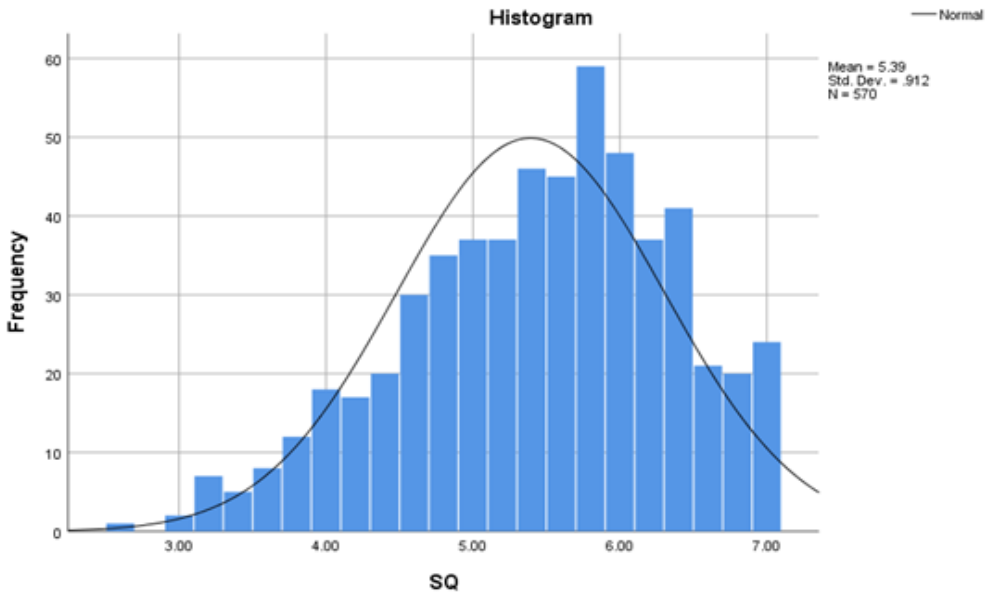


*Figure 8*: Normal distribution curve

Source: SPSS outcome.

### Homoscedasticity Test

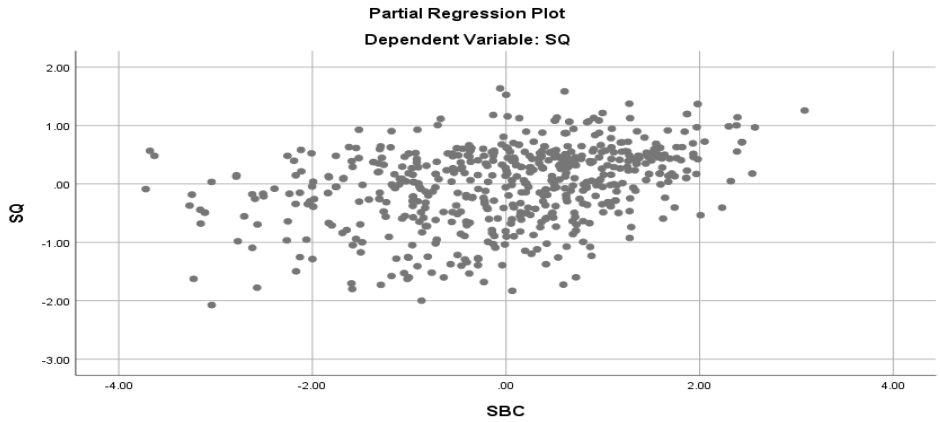


*Figure 9*: SQ with SBC

Source: SPSS outcome

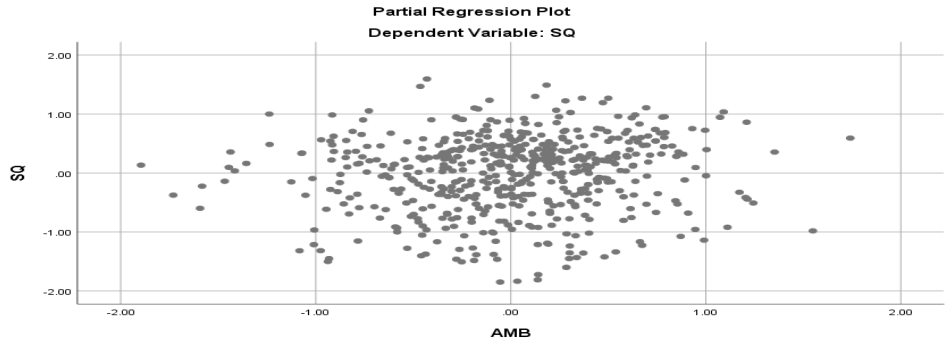


*Figure10 :* SQ with AMB

Source: SPSS outcome.

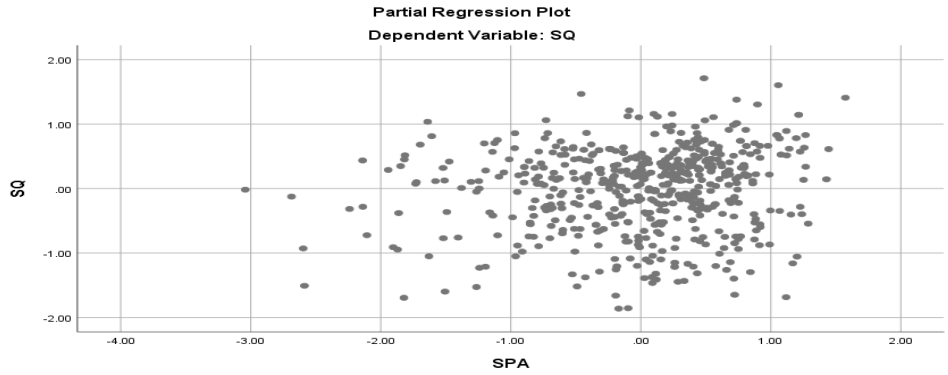


*Figure 11:* SQ with SPA

Source: SPSS outcome.

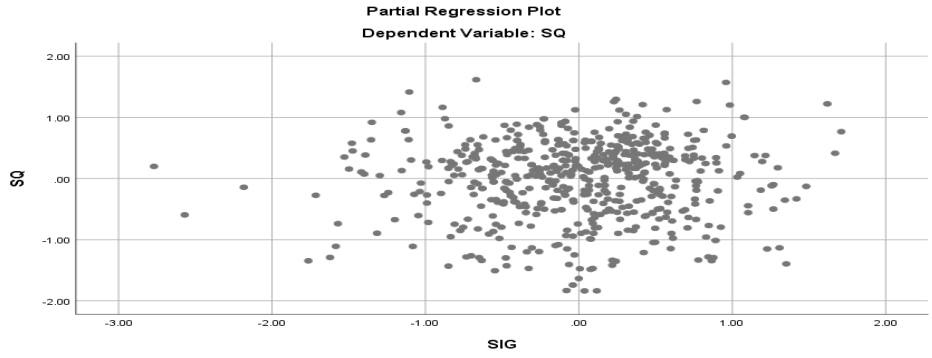


*Figure 12:* SQ with SIG

Source: SPSS outcome.

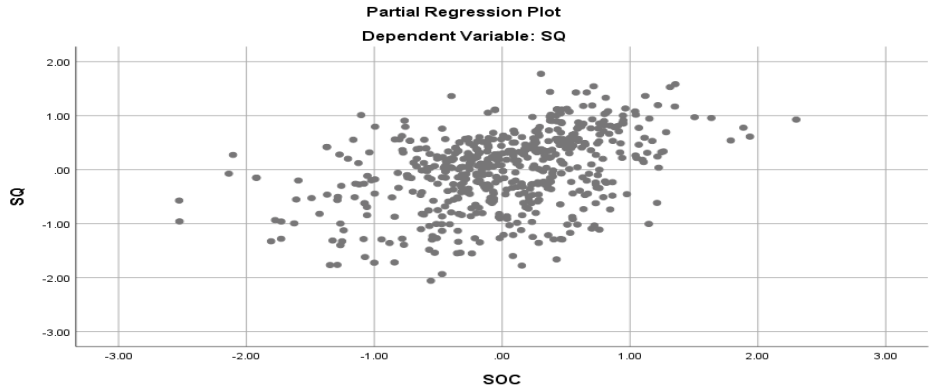


*Figure 13:* SQ with SOC

Source: SPSS outcome.

## Linearity Test

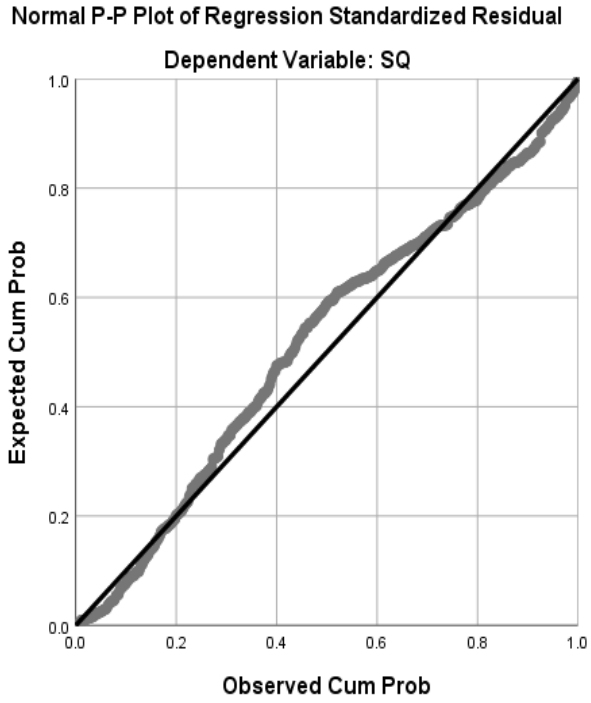


*Figure 14:* Linearity test

Source: SPSS outcome

**Part B**

First multiple Regression analysis

**Variables Entered/Removed[a]**

| Model | Variables Entered | Variables Removed | Method |
|---|---|---|---|
| 1 | cEDU, cAGE, cVISITS[b] | . | Enter |
| 2 | cSIG, cSBC, cSOC, cSPA, cAMB[b] | . | Enter |
| 3 | cSBCxAMB, cSBCxSPA, cSBCxSOC, cSBCxSIG[b] | . | Enter |

a. Dependent Variable: SQ

b. All requested variables entered.

**Model Summary[d]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change | |
| 1 | .229[a] | .052 | .047 | .88982 | .052 | 10.405 | 3 | 566 | .000 | |
| 2 | .737[b] | .544 | .537 | .62006 | .492 | 120.924 | 5 | 561 | .000 | |
| 3 | .741[c] | .549 | .539 | .61909 | .005 | 1.441 | 4 | 557 | .219 | 1.796 |

a. Predictors: (Constant), cEDU, cAGE, cVISITS

b. Predictors: (Constant), cEDU, cAGE, cVISITS, cSIG, cSBC, cSOC, cSPA, cAMB

c. Predictors: (Constant), cEDU, cAGE, cVISITS, cSIG, cSBC, cSOC, cSPA, cAMB, cSBCxAMB, cSBCxSPA, cSBCxSOC, cSBCxSIG

d. Dependent Variable: SQ

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 24.716 | 3 | 8.239 | 10.405 | .000[b] |
| | Residual | 448.150 | 566 | .792 | | |
| | Total | 472.866 | 569 | | | |
| 2 | Regression | 257.176 | 8 | 32.147 | 83.613 | .000[c] |
| | Residual | 215.690 | 561 | .384 | | |
| | Total | 472.866 | 569 | | | |
| 3 | Regression | 259.385 | 12 | 21.615 | 56.398 | .000[d] |
| | Residual | 213.481 | 557 | .383 | | |
| | Total | 472.866 | 569 | | | |

a. Dependent Variable: SQ

b. Predictors: (Constant), cEDU, cAGE, cVISITS

c. Predictors: (Constant), cEDU, cAGE, cVISITS, cSIG, cSBC, cSOC, cSPA, cAMB

d. Predictors: (Constant), cEDU, cAGE, cVISITS, cSIG, cSBC, cSOC, cSPA, cAMB, cSBCxAMB, cSBCxSPA, cSBCxSOC, cSBCxSIG

**Coefficients[a]**

| Model | | Unstandardized Coefficients B | Unstandardized Coefficients Std. Error | Standardized Coefficients Beta | t | Sig. | Collinearity Statistics Tolerance | Collinearity Statistics VIF |
|---|---|---|---|---|---|---|---|---|
| 1 | (Constant) | 5.392 | .037 | | 144.679 | .000 | | |
| | cVISITS | .031 | .008 | .158 | 3.790 | .000 | .969 | 1.032 |
| | cAGE | .107 | .042 | .106 | 2.581 | .010 | .999 | 1.001 |
| | cEDU | -.080 | .032 | -.103 | -2.481 | .013 | .968 | 1.033 |
| 2 | (Constant) | 5.392 | .026 | | 207.624 | .000 | | |
| | cVISITS | .010 | .006 | .052 | 1.755 | .080 | .934 | 1.070 |
| | cAGE | .092 | .029 | .090 | 3.129 | .002 | .976 | 1.024 |
| | cEDU | -.008 | .023 | -.010 | -.341 | .733 | .942 | 1.062 |
| | cSBC | .194 | .022 | .292 | 8.945 | .000 | .764 | 1.309 |
| | cAMB | .138 | .050 | .106 | 2.767 | .006 | .559 | 1.788 |
| | cSPA | .127 | .036 | .131 | 3.501 | .000 | .583 | 1.716 |
| | cSIG | .043 | .042 | .038 | 1.038 | .300 | .593 | 1.685 |
| | cSOC | .397 | .039 | .371 | 10.209 | .000 | .616 | 1.623 |
| 3 | (Constant) | 5.393 | .029 | | 188.132 | .000 | | |
| | cVISITS | .009 | .006 | .048 | 1.609 | .108 | .923 | 1.083 |
| | cAGE | .092 | .029 | .090 | 3.118 | .002 | .969 | 1.032 |
| | cEDU | -.009 | .023 | -.011 | -.383 | .702 | .939 | 1.065 |
| | cSBC | .195 | .022 | .294 | 8.962 | .000 | .753 | 1.328 |
| | cAMB | .148 | .051 | .113 | 2.920 | .004 | .538 | 1.859 |
| | cSPA | .127 | .036 | .131 | 3.479 | .001 | .570 | 1.755 |
| | cSIG | .022 | .043 | .020 | .526 | .599 | .566 | 1.766 |
| | cSOC | .405 | .040 | .378 | 9.997 | .000 | .567 | 1.763 |
| | cSBCxSIG | -.079 | .033 | -.094 | -2.391 | .017 | .521 | 1.920 |
| | cSBCxAMB | .025 | .039 | .024 | .631 | .529 | .556 | 1.799 |
| | cSBCxSPA | .024 | .026 | .036 | .949 | .343 | .576 | 1.735 |
| | cSBCxSOC | .019 | .029 | .024 | .656 | .512 | .582 | 1.718 |

a. Dependent Variable: SQ

**Excluded Variables[a]**

| Model | | Beta In | t | Sig. | Partial Correlation | Collinearity Statistics: Tolerance | Collinearity Statistics: VIF | Collinearity Statistics: Minimum Tolerance |
|---|---|---|---|---|---|---|---|---|
| 1 | cSBC | .520[b] | 14.508 | .000 | .521 | .950 | 1.052 | .941 |
| | cAMB | .471[b] | 13.025 | .000 | .481 | .987 | 1.014 | .963 |
| | cSPA | .498[b] | 13.911 | .000 | .505 | .975 | 1.026 | .948 |
| | cSIG | .433[b] | 11.745 | .000 | .443 | .992 | 1.008 | .964 |
| | cSOC | .607[b] | 18.502 | .000 | .614 | .969 | 1.032 | .956 |
| | cSBCxSIG | -.115[b] | -2.826 | .005 | -.118 | .999 | 1.001 | .968 |
| | cSBCxAMB | -.071[b] | -1.726 | .085 | -.072 | .995 | 1.005 | .966 |
| | cSBCxSPA | -.081[b] | -1.987 | .047 | -.083 | .993 | 1.007 | .963 |
| | cSBCxSOC | -.114[b] | -2.809 | .005 | -.117 | .996 | 1.004 | .966 |
| 2 | cSBCxSIG | -.048[c] | -1.648 | .100 | -.069 | .952 | 1.050 | .558 |
| | cSBCxAMB | .005[c] | .157 | .875 | .007 | .966 | 1.035 | .551 |
| | cSBCxSPA | .006[c] | .197 | .844 | .008 | .960 | 1.042 | .559 |
| | cSBCxSOC | .002[c] | .076 | .940 | .003 | .919 | 1.088 | .559 |

a. Dependent Variable: SQ

b. Predictors in the Model: (Constant), cEDU, cAGE, cVISITS

c. Predictors in the Model: (Constant), cEDU, cAGE, cVISITS, cSIG, cSBC, cSOC, cSPA, cAMB

**Residuals Statistics[a]**

| | Minimum | Maximum | Mean | Std. Deviation | N |
|---|---|---|---|---|---|
| Predicted Value | 3.1065 | 6.9022 | 5.3923 | .67518 | 570 |
| Residual | -1.91004 | 1.56948 | .00000 | .61252 | 570 |
| Std. Predicted Value | -3.386 | 2.236 | .000 | 1.000 | 570 |
| Std. Residual | -3.085 | 2.535 | .000 | .989 | 570 |

a. Dependent Variable: SQ

## Part C

Last multiple regression analysis For assumptions

**Variables Entered/Removed[a]**

| Model | Variables Entered | Variables Removed | Method |
|---|---|---|---|
| 1 | cAGE[b] | . | Enter |
| 2 | cSPA, cSBC, cSOC, cAMB[b] | . | Enter |
| 3 | cSBCxSIG[b] | . | Enter |

a. Dependent Variable: SQ

b. All requested variables entered.

**Model Summary**

| | | | | | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .105[a] | .011 | .009 | .90735 | .011 | 6.361 | 1 | 568 | .012 |
| 2 | .735[b] | .540 | .536 | .62087 | .529 | 162.279 | 4 | 564 | .000 |
| 3 | .737[c] | .543 | .538 | .61960 | .003 | 3.318 | 1 | 563 | .069 |

a. Predictors: (Constant), cAGE

b. Predictors: (Constant), cAGE, cSPA, cSBC, cSOC, cAMB

c. Predictors: (Constant), cAGE, cSPA, cSBC, cSOC, cAMB, cSBCxSIG

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 5.237 | 1 | 5.237 | 6.361 | .012[b] |
| | Residual | 467.629 | 568 | .823 | | |
| | Total | 472.866 | 569 | | | |
| 2 | Regression | 255.457 | 5 | 51.091 | 132.540 | .000[c] |
| | Residual | 217.409 | 564 | .385 | | |
| | Total | 472.866 | 569 | | | |
| 3 | Regression | 256.731 | 6 | 42.788 | 111.457 | .000[d] |
| | Residual | 216.135 | 563 | .384 | | |
| | Total | 472.866 | 569 | | | |

a. Dependent Variable: SQ

b. Predictors: (Constant), cAGE

c. Predictors: (Constant), cAGE, cSPA, cSBC, cSOC, cAMB

d. Predictors: (Constant), cAGE, cSPA, cSBC, cSOC, cAMB, cSBCxSIG

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 5.392 | .038 | | 141.884 | .000 |
| | cAGE | .107 | .042 | .105 | 2.522 | .012 |
| 2 | (Constant) | 5.392 | .026 | | 207.353 | .000 |
| | cAGE | .093 | .029 | .091 | 3.159 | .002 |
| | cSBC | .202 | .021 | .305 | 9.509 | .000 |
| | cAMB | .156 | .047 | .119 | 3.296 | .001 |
| | cSPA | .131 | .035 | .136 | 3.711 | .000 |
| | cSOC | .411 | .038 | .383 | 10.806 | .000 |
| 3 | (Constant) | 5.409 | .027 | | 197.029 | .000 |
| | cAGE | .092 | .029 | .091 | 3.151 | .002 |
| | cSBC | .204 | .021 | .308 | 9.609 | .000 |
| | cAMB | .155 | .047 | .119 | 3.292 | .001 |
| | cSPA | .125 | .035 | .130 | 3.539 | .000 |
| | cSOC | .407 | .038 | .380 | 10.726 | .000 |
| | cSBCxSIG | -.044 | .024 | -.052 | -1.822 | .069 |

a. Dependent Variable: SQ

**Excluded Variables[a]**

| Model | | Beta In | t | Sig. | Partial Correlation | Collinearity Statistics Tolerance |
|---|---|---|---|---|---|---|
| 1 | cSBC | .540[b] | 15.362 | .000 | .542 | .997 |
| | cAMB | .487[b] | 13.374 | .000 | .490 | .999 |
| | cSPA | .511[b] | 14.255 | .000 | .514 | .999 |
| | cSOC | .624[b] | 19.107 | .000 | .626 | .994 |
| | cSBCxSIG | -.120[b] | -2.900 | .004 | -.121 | 1.000 |
| 2 | cSBCxSIG | -.052[c] | -1.822 | .069 | -.077 | .979 |

a. Dependent Variable: SQ

b. Predictors in the Model: (Constant), cAGE

c. Predictors in the Model: (Constant), cAGE, cSPA, cSBC, cSOC, cAMB

# ABSTRACT IN ARABIC


## ملخص الدراسة

في الوقت الذي تتزايد فيه أهمية قطاع الخدمات في الاقتصاد الفلسطيني وفي جميع أنحاء العالم ، من الواضح أن الشركات تحتاج إلى تطوير فهم أفضل للقطاع الخدماتي ، ومفاهيمه واستراتيجياته الجديدة لتكون قادرة على المنافسة بشكل أفضل واكتساب ميزة تنافسية أو مستهلكين جدد. فإنه مع ازدياد عدد الشركات الخدماتية نجد ايضا هناك ازدياد في مواقع الخدمة (المعارض) التي تهدف للتواصل بشكل مباشر مع المستهلكين و تلبية احتياجاتهم و التأثير على قراراتهم و استجابتهم السلوكية تجاه مزود الخدمه. بالتالي و بالاستناد على الدراسات السابقة تم تصميم نموذج للغرض الرئيسي من هذه الأطروحة وهو فهم مدى تأثير بيئة موقع الخدمة على مفهوم جودة الخدمة عند المستهلك، و دور الموائمة ما بين المستهلك و العلامة التجارية، لمعرفة ما إذا كانت هناك علاقة بين بيئة موقع الخدمة و جودة الخدمة و هل هناك تأثير لدور الموائمة ما بين المستهلك و العلامة التجارية على العلاقة السابقة.

تم اختبار فرضيات الدراسة باستخدام الانحدار المتعدد باللاعتماد على عينة مؤلفة من 570 مستجيب. تم جمع البيانات من خلال مقابلات وجهاً لوجه لملئ استبيان ورقي. تشير نتائج الدراسة إلى أن أبعاد بيئة الموقع او ما هو معروف باسم المعرض (بيئة المعرض ، والتخطيط المكاني والوظائف ، والتفاعل الاجتماعي) لها علاقة إيجابية كبيرة مع جودة الخدمة المتصورة التي توفرها شركات خدمات الاتصالات المتنقلة للاتصالات في مراكزها. لم تقدم النتائج دعماً لعلاقة إيجابية بين العلامات والرموز والأبعاد الفنية لتصميم المعرض وجودة الخدمة المدركة. علاوة على ذلك ، لم تقدم نتائج الدراسة أي دليل على التطابق بين العلامات التجارية على أنها تؤدي دوراً معتدلاً بين أبعاد تصميم الخدمات و جودة الخدمة المدركة. في الواقع ، تدعم النتائج فكرة أن التطابق بين العلامات التجارية هو مؤشر هام على جودة الخدمة المتصورة.

أكاديميا ، تسهم هذه الدراسة في فهم كيفية تأثير العوامل البيئية والشخصية على المستهلكين وأهمية معالجة الاثنين معا. تبحث هذه الدراسة في العوامل الاساسية والعلاقات فيما بينهم التي تم بحثها في الأدبيات السابقة وخاصة في فلسطين. و بالتالي تدعو نتائج هذه الدراسة الباحثين بشكل عام و الباحثين الفلسطينيين إلى البحث اكثر في هذه العلاقة لمعرفة كيفية تأثير كل من العوامل البيئية وغير الشخصية (الشخصية ، النفسية ، إلخ) على سلوك المستهلك. من الناحية الإدارية ، تنبه هذه الدراسة المديرين إلى الحاجة إلى الاهتمام المنتظم والعميق بتصميم المعرض الذي يؤثر على تصور المستهلك للجودة. علاوة على ذلك ، فإنه يزيل الصور النمطية الضحلة للمستهلكين. توضح الدراسة كيف يمكن للعمليات النفسية (في هذه الحالة مطابقة العلامة التجارية الذاتية) أن تكون بنفس القدر من الأهمية في تصورات جودة الخدمة. يبدو أن حدود تصميم تجربة المستهلك يجب ألا تقتصر فقط على المساحات المادية لتقديم الخدمات ولكن أيضًا على المساحات غير المادية الأخرى حيث يطور المستهلكون مواقف تجاه الشركة وعروض منتجاتها.


المصطلحات :بيئة الموقع، جودة الخدمة المتصورة، توافق العلامة التجارية، قطاع الاتصالات، فلسطين.