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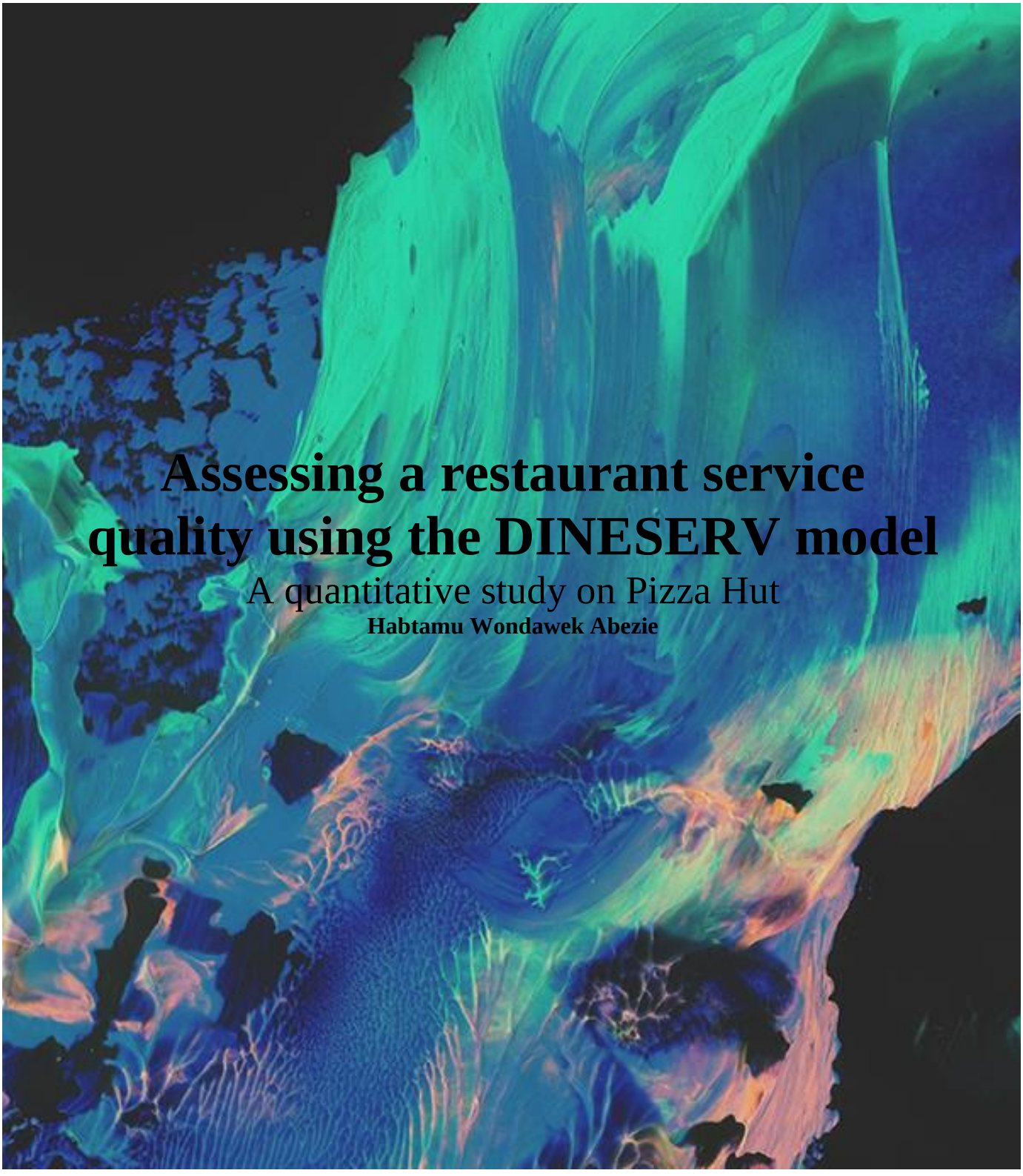

# Assessing a restaurant service quality using the DINESERV model

## A quantitative study on Pizza Hut

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**Abstract**
Customers are the main reason behind every companies' survival in the market. And winning their interest has now become the concern for company owners and managers as well. However, many factors can affect the customer's satisfaction in the marketing environment. Among the determinants, service quality takes the most substantial part. Many Scholars have also identified the underlying relationships between these two constructs. Notably, the perception-expectation gap is a useful cue to determine their link.

Thus, this research mainly relies on uncovering the customer's perception of service quality. As a result, the study is conducted in one of the biggest chain restaurant named Pizza Hut. And the author chooses the research location to be in Uppsala.

**Purpose**
This study has two-fold research purpose in that it aims at measuring the perception of customers in the restaurant industry and examining the validity of DINESERV in Sweden's cultural context.

**Design/Methodology/approach**
The author has employed a convenience sampling technique to conduct the research and pre-developed questionnaires from the so-called DINESERV instrument. Additionally, factor analysis and Cronbach's alpha were used to check the validity and reliability of the model, respectively. The gap score was also computed using the means. Then finally, a spearman's correlation coefficient was calculated to test the strength of the relationship between the customer's satisfaction and service quality dimensions.

**Finding**
The analysis carried out proved that DINESERV is a valid instrument to measure customer's perception of service quality in Sweden's cultural context. Besides, the correlation between service quality dimension and customer satisfaction were validated using a spearman's rho. Lastly, the result from the gap score indicates that the two dimensions (i.e., responsiveness & reliability) were perceived as inferior by the customers.

**Research implications**
The theoretical finding suggests that DINESERV is the right instrument to measure the service quality of restaurants in Sweden's context. And the practical implication approves that pizza hut in Uppsala has two inferior dimensions that need continuous improvement. Lastly, the demographic characteristics of the respondents show that most of the customers are categorized under the younger age group (i.e., 18-36), and this information can be used for marketing purposes by the company.

**Key Words** – DINESERV, Service quality, Customer satisfaction, Restaurant

**Key terms**

**Cronbach's alpha** measures the internal consistency of an instrument or a scale. It is a reliability test which determine the repeatability of the study.

**Factor analysis** is a technique that is used to reduce a large number of variables into fewer numbers of factors, and it extracts maximum common variance from all variables and puts them into a common score.

**Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO)** reflects the sum of the partial correlation relative to the sum of the correlation.

**Factor loading** are part of the outcome from factor analysis, which serves as a data reduction method designed to explain the correlations between observed variables using a smaller number of factors.

**Spearman's rho** is designed for the use of pairs of ordinal variables and can also be used when one variable is ordinal, and the other is interval/ratio and it indicates the strength and the direction of the variable's relationship.

## List of abbreviations

1. **SERVQUAL: Service quality**
2. **FAMM: five aspects meal model**
3. **KFC: Kentucky fried chicken**
4. **FT: First time**
5. **FC: Frequent customers**
6. **OSQ: Overall service quality**
7. **KMO: Kaiser-Meyer-Olkin**
8. **TA: Tangibility**
9. **RL: Reliability**
10. **RN: Responsiveness**
11. **AS: Assurance**
12. **EM: Empathy**

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## CHAPTER ONE: INTRODUCTION

The research topic and problem formulation are the central part of this chapter. The introductory background will be the break the ice by familiarizing the topic. Then, the reason for researching this area, the research objective, and the audience of this research will be discussed in detail. Finally, the delimitation of the study will be presented and end the chapter.

### 1. Introductory Background

Services account for a huge portion of the economic activity in most countries. For example, according to Trading Economics (2019), the GDP From Services in Sweden increased to 563344 SEK Million in the third quarter of 2019 from 558543 SEK Million in the second quarter of 2019. GDP From Services in Sweden averaged 323683.41 SEK Million from 1981 until 2019, reaching an all-time high of 563344 SEK Million in the third quarter of 2019 and a record low of 178733 SEK Million in the second quarter of 1981. Besides, marketing researchers have recognized a shift in companies' business orientation, from a goods-dominant logic to a service-dominant logic (Lusch and Vargo, 2006; Vargo and Lusch, 2004, cited in Guesalaga, (2014, p.145). That is, even in industries typically classified as "manufacturing," the service component has gained importance. All in all, service sectors have now become the most significant drivers of many countries' economies.

Admittedly, there exist customers who are the reason behind the increase in revenue in all the service sectors. If there is no customer, it is evident that there will be no service to be delivered because customers are the very first reason for every company's existence. Be it profitable or non-profitable, companies deliver products and Services for their targeted customers. In general, there is nothing more critical to the success or failure of a business than winning the customers' interest. According to (Shep, 2018), poor customer service is costing businesses more than $75 billion a year. That is up $13 billion since its last report in 2016. In order to succeed, an organization must focus on satisfying or exceeding the requirements, expectations, needs, and preferences of customers (Flott, 2013, p.45). He also mentioned that excellent customer service is the lifeblood of any business, and an organization can offer promotions and slash prices to bring in as many new customers as the company wants. However, unless the company can get some of those customers to come back, your business will not be profitable for long. Because, Good customer service is all about bringing customers back and about sending them away happy—happy enough to pass positive feedback about your business along to others who may then try the Product or Service you offer for themselves, and in their turn become repeat customers (Flott, 2013, p.45).

In the context of a restaurant business, the race to provide better service and value has become increasingly important to monitor customer perceptions of service quality (Nancy & Christina, 2011, p.21). According to Ryu and Han (2010, cited in Oswald, 2018, p.2), restaurateurs that are able to provide quality service to their customers will gain a greater advantage over their rivals in efforts to retain customers and to attain growth and be sustainable. Various scholars have developed service quality models in order to measure customer's perceptions in the hospitality industry. The most widely used model, which is the SERVQUAL instrument, was drafted by Parasuraman et al., (1988), to measure the gap between what customers expect from the service and what they perceive. And this Pre-post experience measures allow assessment of the extent and direction of the gap (Nancy & Christina, 2011, p.21). They were able to identify five

possible gaps that can affect service quality. These are consumer expectation – management perception gap, management perception – service quality specification gap, Service quality specifications-service delivery gap, service delivery-external communications gap, and Expected serviceperceived service gap. In addition, the authors have also identified five service quality dimensions with 22 question items. These dimensions are reliability, tangibility, responsiveness, assurance, and empathy. However, this model has shortcomings when it comes to measuring service quality in the restaurant industry. The study by Cornell, (1992, p.64 ) which were conducted in four different industries (i.e., bank, pest control, drycleaning, and fast foods), signifies the shortcoming of SERVQUAL when it comes to measuring service quality in the fastfood & dry-cleaning segment of the industry. It, in other words, means that SERVQUAL is not the right instrument for those industry types.

Consequently, DINESERV was drafted by Steven et al., (1995) to fit in the restaurant industry. Based on the SERVQUAL dimension, they came up with 29 question items that are restaurant specific. The goal of DINESERV is to give restaurant operators and owners a way to measure and acquire an overview of the service quality of their eating establishments as well as be ready to take the necessary actions so that the gaps can be solved or adjusted to the customers' needs and wants (Victor, 2014, p.119).

DINESERV (Stevens et al., 1995, p.82), is proposed as a reliable, relatively simple tool for determining how consumers view a restaurant's quality. Moreover, it also provides restaurateurs with a quantified measure of what consumers expect in a restaurant since their expectations are essential because unfulfilled expectations drive guests away.

### 1.1 Need for researching this area

Customer satisfaction has become a major concern for every company since winning their interest pays off and ensure their survival in the market. According to Miller (2007, cited in Nancy & Christina, 2011, p.21), 60% of new restaurants will close within three years of opening due to poor customer relationships. This scenario shows that customers are sensitive if not appropriately treated. So, every company needs to concentrate on strategies that can lead them towards gaining satisfied customers.

Furthermore, in order to satisfy customers, their behavior must be assessed through research because it will benefit businesses in a variety of ways. According to Ritesh Patil, (2019), business research can help companies to communicate with current and potential customers in a better way, identify opportunities and threats in the marketplace, minimize risk, plan investment and financial outcomes effectively, build a better market position and update the company with current trends and innovations in the market.

Furthermore, the restaurant industry has witnessed diversified changes and fierce competition over time, and this has fostered its consumers to become more sophisticated, value and price-conscious, demanding and thus switch swiftly to other alternatives in case of a single dodgy experience (Alam et al., 2015, p.187). It implies that the restaurant industry projects a robust environment that needs to be researched and assessed periodically. It will, as a result, enable organizations to predict their customer's behavior.

### 1.2 Problem formulation

According to Lundgren & Dahlen, (2019), Sweden is shedding its long-held belief that Pizza is only for fast food consumption, and Pizza is now appearing in upscale restaurants

and other areas it was never seen in before, such as pubs, resorts, and airports. Accordingly, pizza competitions and education events are also on the rise in Sweden. It shows that the restaurant business in Sweden is snowballing than before. Besides, service quality has become a significant concern for managers, business owners, and customers as well. On the one hand, managers want to improve service quality in order to retain customers and maximize their profit.
On the other hand, customers want to obtain a maximum service quality for what they have paid. According to Litchford, (2007 cited in Nancy & Christina, 2011, p.120), Industry experts believe that the restaurants best positioned to harness future growth will be the ones that can elevate the guest experience and meet escalating customer service and quality expectations. Moreover, to be able to do this, one must ask questions like what makes customers behave in a certain way in a service context? How do customers perceive service quality? What is their expectation of service quality before experiencing it? These interrelated questions can be addressed through continuous research.

Moreover, many literatures (Parasuraman et al., 1985, Hyun, et al., 2003, Ursula-Sigrid & Meng-Keang, 2010, Liang & Zhang, 2012, Hsieh, and Yeh, 2015, Guesalaga & Denis 2014 & so on), dictate that the gap between customers expectation of service quality and the perceived service quality they experienced did relate with their satisfaction and repurchase intention.

Furthermore, a study which was conducted in the Malaysian fast-food restaurants by Ursula-Sigrid & Meng-Keang, (2010) did give me a greater insight to concentrate on this area. Their research aim was about exploring external validation of Western-based marketing concepts and theory in the East. Consequently, they chose DINESERV, to prove the relationships between service quality, overall service quality perceptions, customer satisfaction, and repurchase intentions in the Malaysian fast-food restaurants (i.e., KFC, McDonald & Pizza Hut). Finally, they found that DINESERV is valid in the Malaysian context. The authors conclude that there is a significant relationship between service quality dimensions and customer satisfaction. Three dimensions of the DINESERV instrument were rated positively by the respondents. However, responsiveness and empathy received mean scores under 5/7, highlighting a gap between consumer expectations and their experiences in Malaysian McDonald's, KFC, and Pizza Hut restaurants.

Moreover, another study by Hyun et al., (2003) has also tried to validate the five dimensions of DINESERV and evaluate service quality of foreign-brand, casual dining restaurants in Korea using DINESERV. They, as a result, found that DINESERV is not a valid instrument in the Korean culture, and service quality differs significantly based upon customers' chrematistics and restaurants. However, both of the studies mentioned above did recommend future research in a different cultural context to check the external validity of DINESERV. And this implies that the customer's perception of service quality differs across different cultural settings. Guesalaga & Denis (2014, p.146), points out that in more and more globalized economies and marketplaces, companies need to understand the extent to which people from different countries evaluate service quality and its dimensions differently. Because "perceptions are filtered through the lens of culture," and that customers from different countries may hold different expectations of service encounters (Laroche et al. 2004, cited in Guesalaga, 2014, p.146). Also, Cultural differences hold importance, as they are likely to influence the dining orientations (Tripathi, 2014, p.9). So, this study will explore the relationship between customer

satisfaction and service quality in the Swedish cultural context and check the external validity of the DINESERV. Therefore, the research will be twofold research since it aims at measuring the relationship between customer satisfaction and service quality dimensions and prove the external validity of the DINESERV model in Sweden as well. In general, this study will be the first to scrutinize the external validity of DINESERV in the Swedish fast food industry.

### 1.3 Research audience

This research has direct (managers and future researchers) and indirect audiences (customers). So, the research result will entail pizza hut managers to understand better those service quality dimensions in which customers think have a significant effect on their satisfaction. In other words, the research will examine the gap between the customer's expectation and perception of service quality. As a result, managers will be able to improve their service quality by amending those specific service quality dimensions with flaws. Moreover, customers will also benefit indirectly. All in all, this is the practical contribution of the research.

This research aims at examining the validity of DINESERV in the restaurant business and investigate the relationship between service quality and customer satisfaction. Hence, this will provide future researchers with useful insight. This will be the theoretical beneficiation of the research, and it will enable future researchers by giving them a greater understanding of the relationship between service quality dimensions and customer satisfaction.

### 1.4 Research objective

For service providers, it is crucial to know which service attributes add value and increase satisfaction, which of them merely fulfill minimum requirements and minimize dissatisfaction and which do both. Only then can they make better decisions about how resources should be allocated to different service attributes in order to improve quality and satisfaction (Kurt, 2002, p.314). So, this study will examine the relationship between service quality dimensions and customer satisfaction using the DINESERV instrument. Additionally, the model will also be validated to see if it is applicable in Sweden. However, the primary purpose of this study will be assessing the expectation – perception gap.

### 1.5 Research question

Therefore this study would like to answer the following questions:

- Is there a relationship between DINESERV service quality dimensions and customer satisfaction?
- Is the DINESERV a valid instrument to measure service quality in Sweden's context?

### 1.6 Delimitation

Pizza Hut is an American restaurant chain and international franchise, which was founded in 1958 in Wichita, Kansas, by Dan and Frank Carney, and the company is known for its Italian-American cuisine menu, including Pizza and pasta, as well as side dishes and desserts
(Wikipedia, 2018). Also, Pizza Hut has 18,431 restaurants worldwide as of December 31, 2018. The company has 25 restaurants in the whole of Sweden (pizzahut.se).

Although it is a big chain restaurant, little research has been done in Sweden. So, I have decided to take part by examining the relationship between customer satisfaction and service quality using the DINESERV instrument in Pizza Hut, Uppsala.

Moreover, being a part of this giant restaurant chain, catch my interest in researching this particular restaurant. Besides, working in this specific branch gave me a closer look at the customers day to day experiences. I did even get the chance to observe their behavior during rush hours and off-peak hours, and this makes me decide to conduct the research in Uppsala and formally approach them to explore their real experience in Pizza Hut. In addition, I believe that researching in an environment that is familiar to the author will yield many benefits. In this study, for instance, the waitress, shift leaders, and the manager help me in informing the customers about the questionnaires' general aim and convincing them to fill it up. In general, its convenience and accessibility to gather primary data have made me pick this specific branch.

## CHAPTER TWO: METHODOLOGY

The methods used in carrying out this research will be discussed in section. The chapter begins with the choice of subject and then the research philosophy, and the research approach will be presented in detail. The strategy chosen, the research design employed, and the data collection method are also included in this section of the paper. Finally, the data analysis method and the ethical consideration taken ends the chapter.

### 2. Choice of the subject

In today's highly competitive restaurant market, companies need to formulate a strategy that can improve their service quality over their competitors. And In the race to provide better service and value, it becomes increasingly essential for restaurants to monitor customer perceptions of service quality (Nancy & Christina, 2011, p.21). According to Anderson et al., (1994, cited in Cheng, 2012, P.1155), the improvement of service quality will result in the satisfaction improvement of service recipients and lead to the increasing opportunity of the next consumption opportunity.

On the contrary, paul O' Mahony, (2009) states that Sixty, one of seventy pizzerias in Sweden fail hygiene inspection. It, in other words, means that the cleanness of the restaurant in Sweden is a severe issue that needs to be assessed from the customer's point of view. In general, the statements mentioned above clearly show that customer's perception of service quality has become a severe issue in the restaurant business. It is because their positive perception will result in a higher satisfaction level. So, I believe that such an area needs continuous research to explore more useful results regarding their perception of service by customers.

Furthermore, when it comes to measuring the customer perception of service quality in the restaurant business, the DINESEREV instrument, which was developed by Stevens et al., (1995), has become beneficial in many cultural settings. So, I decided to choose this model since it is was developed to fit in the restaurant industry.

Moreover, it is believed that customers satisfaction and their loyalty is a core element for every business success. According to Wilson et al., (2008, p. 79), customer satisfaction has been a subject of great interest to organizations and researchers alike. The principal objective of organizations is to maximize profits and to minimize costs. Profit maximization can be achieved through an increase in sales with lesser costs. One of the factors that can help to increase sales is customer satisfaction because satisfaction leads to customer loyalty, recommendation, and repeat purchase.

Furthermore, knowing their perception of service quality is critical for managers since it will help them develop a successful strategy. And this, as a result, will give them a competitive advantage. So, I decided to run this research to uncover useful insights about the customer's perception of service quality in the restaurant industry.

### 2.1. Research philosophy

Every research motive is to obtain detailed knowledge about a particular phenomenon and pave the way for future researchers and concerned bodies. Plus, the research philosophy contains an important assumption on the way the researcher views the world. These assumptions will underpin the research strategy and methods chosen as part of the research strategy (Saunders et al., 2009, p.108). There are two types of research philosophies that shape the way we think about the research process. These are ontology

and epistemology. Questions of social ontology are concerned with the nature of social entities. The central point of orientation here is the question of whether social entities can and should be considered objective entities that have a reality external to social actors, or whether they can and should be considered social constructions built up from the perceptions and actions of social actors. These positions are frequently referred to, respectively, as Objectivism and constructionism (Bryman & Bell, 2011, p.17).

Objectivism represents the position that social entities exist in reality external to social actors. According to Wilson, (2014, p.11), the concept objectivism implies that social phenomena are based on external realities that are beyond our reach or control. And constructionism/subjectivism, on the other hand, dictates that social phenomena are created from the perception and consequent action of social actors. What is more, this is a continual process in that through the process of social interaction, these social phenomena are in a constant state of revision (Saunders et al., 2009, p.111). Also, subjectivism is linked to interpretivism in that the researcher examines the motivation and social interactions of respondents (Wilson, 2014, p.11).

The reason why I prefer to choose objectivism side over subjectivism is for two reasons; First, I believe that the reality (i.e., customers and their satisfaction) did exist outside of the social actors (i.e., service providers). Besides, both customer satisfaction and service quality are tangible objects, and they are clearly defined facts on so many works of literature. However, these realities are beyond our reach or control. And the reality is an individual matter that differs across a variety of contexts. For example, the way a customer perceives a service quality in the airline industry differs from that of a restaurant business. So, I decided to measure the customer's perception of service quality using objective measurement. By objective measurement, I mean that pre-structured questionnaires developed by the so-called ¨DINESERV instrument¨ will be used to uncover the fact or truth.

Second, I believe that the researcher's research strategy dictates its ontological position. According to Bryman & Bell (2011, p.27), quantitative research embodies a view of social reality as an external, objective reality. So, besides the topic/research question, I prefer to conduct the study using a quantitative method. For this reason, I choose the objectivism view of ontology.

Epistemology refers to the nature of knowledge (Wilson, 2014, p.9), which means how we conceive our surroundings. According to Bryman & Bell, (2007, p.16), An epistemological issue concerns the question of what is (or should be) regarded as acceptable knowledge in a discipline. A particularly central point in this context is the question of whether or not the social world can and should be studied according to the same principles, procedures, and ethos as the natural sciences.

Epistemology has two edges, which are **positivism** and **interpretivism**. Wilson, (2014, p.9) stated that if a researcher assumes a positivist approach to his study, then it is his belief that he is independent of his research, and his research can be truly objective. Independent means that the researcher maintains minimal interaction with his research participants when carrying out his research. Through being detached in this way, the hope is that the researcher can be truly objective. In other words, your personal biases have no effect on the research effort.

Interpretivism is an epistemological view that puts the researcher to inside of the social world that is under examination. If the researcher decides to assume the interpretivism perspective, then he is likely to analyze social actors within their cultural setting. It, as a result, may involve observations that are qualitative and subjective in nature (Wilson, 2014, p.10).

My choice of epistemological view is the positivist perspective. The first reason behind this choice is because the study will be conducted using the so-called DINESERV model. And this model has twenty-nine questions that were pre-developed to measure customer's perception of service quality. Moreover, the interaction with the participants will be limited Since I chose to use this pre-developed questionnaire. This scenario put me in the positivist side of the epistemology philosophy. Therefore, I will measure the customer's perception outside of the nutshell and persist in being objective as much as possible.

Furthermore, my ontological choice of Objectivism is also another reason for choosing the positivist perspective. The choice of ontological stance dictates the researcher's epistemological views to some extent. For instance, Objectivism mentions that realities are outside of our control, and positivism, on the other side, forces researchers to limit their interaction from those predefined realities while measuring them, (Wilson, 2014, p.11) and the research can be truly objective. The reason why I did not choose interpretivism is that it urges the researcher to immerse himself inside of the cultural setting, observe the respondents, and interact with them. Moreover, I believe that this will take much time, which is not available in my case. Plus, it will also change my objective stance of ontology to subjectivism since it is subjective in nature (Wilson, 2014, p.10). Also, I believe that the only better way to maintain minimal interaction with the participants is to use questionnaires. All in all, the above inter-related reasons shape the choice of my epistemological stance to be positivist.

### 2.2. Research approach

According to Sachdeva, (2009, p.31), inductive reasoning moves from specific observations to broader generalizations and theories. Informally, we sometimes call this a "bottom up" approach. In inductive reasoning, we begin with specific observations and measures, begin to detect patterns and regularities, formulate some tentative hypotheses that we can explore, and finally end up developing some general conclusions or theories. Conversely, deductive reasoning works from the more general to the more specific. Sometimes this is informally called a "top-down" approach. We might begin by thinking up a theory about our topic of interest. We then narrow that down into more 'specific hypotheses that we can test. We narrow down even further when we collect observations to address the hypotheses (Sachdeva, 2009, p.31). This ultimately leads us to be able to test the hypotheses with specific data, a confirmation (or not) of our original theories. Wilson, (2014, p.13) propose the following figure to show how theory fits into your research:

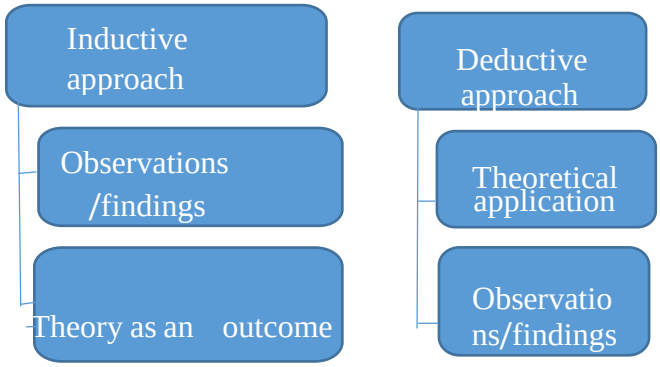


**FIGURE 1 How theory fits into your research**

Thus, I choose the deductive approach because it fits in this research. As mentioned earlier, I will use a pre-developed model (i.e., DINESERV). This, as a result, signifies that I am not going to develop any model and theory to conduct this research. Whereas, I will propose a set of hypotheses based on existing theory and test them at the end. This is because the theories about customer satisfaction and service quality are already out there in the literature.

### 2.3. Research strategy

There exist two types of research strategies: qualitative and quantitative research. Quantitative research examines data that are numerical, whereas qualitative inquiry examines data that are narrative (Wilson, 2014, p.15). A qualitative strategy, according to Wilson, (2014, p.15), is usually linked with an inductive strategy since the inductive theory means that theory is likely to be an outcome rather than applied from the outset. Also, combining qualitative strategy and inductive theory are common as they are well suited to providing insights that allow for the generation of theoretical frameworks.

According to Hyde (2000, cited in Wilson, 2014, p.15), A quantitative approach to research might draw a large and representative sample from the population of interest, measure the behavior and characteristics of that sample, and attempt to construct generalizations regarding the populations as a whole. Unlike the qualitative approach, quantitative research is associated with a deductive approach. In other words, the theory is applied from the outset. The analysis is usually statistical and involves analyzing the results following theoretical application (Wilson, 2014, p.15-16).

So, I will conduct quantitative research mainly for two reasons. Firstly, the topic has two variables (i.e., customer satisfaction & service quality) that needs to be tested and validated. It, in other words, indicates that I am not going to develop a new theory; instead, I will propose a set of hypotheses and validate the relationship between the variables to see if they have a significant relationship or not. This means that this research will follow a deductive approach. Furthermore, as mentioned above, quantitative research and deductive approach have a link when doing research. Besides, this particular study is going to validate the model (i.e., DINESERV) in the process. Secondly, my choice of positivism stance also shapes the research strategy to be quantitative. According to Wilson, (2014, p.9), positivist want their finding to have applicability to

the whole population and analysis of observation is likely to be quantifiable as opposed to qualitative research.

### 2.4. Research design

A research design provides a framework for the collection and analysis of data (Bryman & Bell, 2011, p.40). Moreover, according to Kothari, (2004, p.31) research design is the arrangement of conditions for the collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. The latter definition dictates that the research purpose has a vital role in determining the research design. Furthermore, the classification of research purposes most often used in the research methods' literature is the threefold one of exploratory, descriptive, and explanatory (Saunders et al., 2009, p.139).

**Table 1: types of research purpose**

| Types of research purpose | Description |
|---|---|
| Exploratory | a valuable means of finding out what is happening; to seek new insights; to ask questions and to assess phenomena in a new light' (Robson (2002:59 cited by Saunders et al., 2009, p.139). |
| Descriptive | focuses to portray an accurate profile of a persons, events or situations' (Robson (2002:59 cited by Saunders et al., 2009, p.140). |
| Explanatory | emphasizes on establishing a causal relationship between variables (Saunders et al., 2009, p.140). |

I will not establish any causal relationships between customer satisfaction and service quality Because it is impossible for me to manipulate the variables. The exploratory study did not describe the nature of this study since it seeks new insights. As the research question implies, I am not going to generate new insights; instead, the research relies on previous theories in the literature to measure the perception of customers. For this reason, I chose a descriptive study since the author's concern is to portray the perception of a particular group of customers with respect to the service quality offered by Pizza hut using the ¨DINESERV¨ instrument.

Furthermore, the research design that best describes my research is survey design. I choose it because (Saunders et al., 2009, p.144):

- It is associated with a deductive approach. As mentioned in the research approach section of this research, I will not develop new ideas or theories. Instead, I will be based on theories that exist in the literature to propose a hypothesis and test it.
- It tends to be used in exploratory and descriptive studies, which, as a result, matches with the nature of the study.

- It also allows collecting quantitative data, which can be analyzed using descriptive and inferential statistics. This will also help me to meet the research objective since it matches the research strategy and the data analysis method used.
- Finally, it also suggests the reasons for the particular relationships between variables and to produce models of those relationships. Thus, the aim of this study, as mentioned in the research question section, is to examine the relationship between customer satisfaction and service quality dimension based on the perceptionexpectation gap theory. As a result, I will try to pinpoint whether there is a significant association between DINESERV service quality dimensions and customer satisfaction or not. For the above reasons, I believe that the cross-sectional design perfectly describes this study.

### 2.5. Data collection method

There exist two types of data, which are secondary and primary. According to Sachdeva, (2009, p.109), the primary source is used to collect initial material during the research process. Primary data is the data that the researcher collects himself using methods such as surveys, direct observations, interviews, as well as logs (objective data sources). Here I use pre-developed questionnaires by DINESERV instrument in order to get original data from the selected respondents about their perception of service quality. Plus, I asked the manager (Pizza Hut, Uppsala branch), about the number of customers they have in their branch. This combined with the respondents answer from the questionnaire will help me in fill in the gap by answering the research question.

Secondary sources are edited primary sources, second-hand versions. They represent thinking of someone else. Secondary data are data that were collected by persons or agencies for purposes other than solving the problem at hand. They are one of the cheapest and easiest means of access to information (Sachdeva, 2009, p.109). I endeavor to use the Umeå and Uppsala University database to access articles, books, journals and conferences. Moreover, I also use a book in a printed version and webpages in order to move forward in doing this research and narrowing down the vast topic into a more specific one. Because without this data, it will be hard to imagine the literature review, the research methodology, and other main parts of this research.

#### 2.5.1 Sampling technique and selection of respondents

It is hardly impossible to study the whole population without sampling. So, sampling will ease the researcher's job (i.e., in terms of having fruitful results, saving time and cost) by giving a small representative part of the population for detailed investigation. According to Sachdeva, (2009, p.144), there are two types of sampling methods called probability and non-probability samples. Probability or random sampling gives all members of the population a known chance of being selected for inclusion in the sample, and this does not depend upon previous events in the selection process. In other words, the selection of individuals does not affect the chance of anyone else in the population being selected (Sachdeva, 2009, p.144). Moreover, non-probability sampling on the other edge is a sampling technique where the probability of each case being selected from the total population is not known (Saunders et al., 2009, p.213).

Furthermore, I have decided to choose a non-probability sampling called convenience sampling. It is one that is merely available to the researcher by virtue of its accessibility (Bryman & Bell, 2011, p.190). The very first reason behind this choice is that the absence of the sampling frame. In many cases, it is not feasible to conduct a probability sampling

exercise because of the constraints of ongoing fifieldwork and also because it can be difficult and often impossible to map 'the population' from which a random sample might be taken— that is, to create a sampling frame(Bryman & Bell, 2011, p.441). Therefore, I have asked the manager (Pizza Hut in Uppsala) in order to get information regarding the number of customers they have. However, they do not have the exact figure. In addition, I have also asked her about their customer's email address. Because if it is accessible, it will be easy to use a random sample and do an online survey. But the manager informed me that it is not legal for them to hand over the customer's email, and they do not have the whole number of their customer's email addresses.

Nevertheless, she told me that they had served five thousand customers within the whole month of October 2019. The other reason behind this choice is the scarcity of time. Additionally, the cost-effectiveness of convenience sampling has also shaped my choice of sampling technique. Finally, the research was conducted entirely in Uppsala, Sweden.

### 2.5.2 Self-completion questionnaires

Questionnaires that are completed by respondents themselves are one of the main instruments for gathering data using a social survey design, along with the structured interview (Bryman & Bell, 2011, p.231). Self-completion questionnaires are one of these types. As was mentioned in the methodology section, I chose to use a pre-developed questionnaire from the DINESERV instrument. Unlike the SERVQUAL instrument, DINESERV has 29 items under five dimensions of service quality (i.e., tangibles, reliability, responsiveness, assurance, and empathy). The question items that are allocated for each dimension of service quality as follows:

- Tangibles has ten-question items (1-10)
- Reliability has five-question items (11-15)
- Responsiveness has three question items (16-18)
- Assurance has six-question items (19-24)
- And finally, empathy holds five-question items under it (25-29)

Even though the sampling method used seeks a large amount of sample, I planned to collect 350 fully answered responses. This is due to time and cost limitations. However, I ended up with 299 (i.e.,85% response rate) fully marked questionnaire and 15 partially answered responses.

### 2.5.3 Pilot study

According to Kothari, (2004, p.101). It is a wise decision to conduct a pilot survey Before distributing the self-completed questionnaire. A pilot study(survey) is, in fact, the replica and rehearsal of the main survey. Such a survey, being conducted by experts, brings to light the weakness (if any) of the questionnaires and also of the survey techniques (Kothari, 2004, p.101). Even though it is a pre-developed questionnaire, I believe that amending the content of the questions in a way that is more understandable by the respondents will be beneficial. And if it is understandable, the respondents with no confusion will honestly choose what affects their perception of service quality from the multiple-choice presented in the questionnaire. Besides, the questions were translated into the Swedish language. So, it is a must for me to conduct a pilot study. For this reason, I picked ten employees from Pizza hut (Uppsala) and handed them the translated version (translated by the manager) of the questionnaire. Then, they all describe the questioner as catchy, understandable, and on point.

### 2.5.4 Choice of location

After conducting the pilot study, selecting the right location to distribute the questionnaire will become the researcher's next task. Thus, I came up with the idea of putting the questionnaires on the restaurant's empty tables. Because I believe that the guests will have the time to fill in the question before their order arrives. Moreover, the first reason why I choose this location (i.e., pizza hut restaurant) is to get the guest's "right on the spot" perceptions of service quality and its dimension. It, in other words, means that the guests will be honest with their feelings since they are in the right place where they experience the service provided by Pizza Hut. So, as soon as the waitresses receive an order, they will also tell the guests about the purpose of the research and ask them to be a part of it by filling in the questionnaire.

secondly, I choose this location because of the belief that researching an environment that is familiar to the author will yield many benefits. In this study, for instance, the waitress, shift leaders, and the manager help me in informing the customers about the questionnaires' general aim and convincing them to fill it up. In general, its convenience and accessibility to gather primary data have made me pick this specific branch.

### 2.6. Data analysis

According to Saunders et al., (2009, p.414), quantitative data in a raw form, that is, before these data have been processed and analyzed, convey very little meaning to most people. These data, therefore, need to be processed to make them useful, that is, to turn them into information. Quantitative analysis techniques such as graphs, charts, and statistics allow me to be able to explore, present, describe, and examine relationships and trends within the data collected. However, since the human mind is not capable of processing a large amount of data (i.e., like those collected through questionnaires), selecting the right software that can analyze the collected data will become the researcher's consent. Furthermore, there exists a variety of software to choose from in order to analyze the data at hand. To my knowledge, one can use MINITAB, JMP, and SPSS. Consequently, I choose to analyze the data using SPSS software because of its accessibility, user-friendliness, and efficiency.

Furthermore, I am going to use quantitative data analysis method, since the data at hand is quantitative. Because the pre-developed questionnaire that was used from the DINESERV instrument, accompanied by a five-point Likert scale, has close-ended questions. Furthermore, since these types of questions have separate/discrete responses, I will assign a number (while coding in SPSS) for each of the respondents' answers, and this, as a result, will make the data a quantitative one.

Finally, the research will employ descriptive statistics to analyze the data at hand. I will use descriptive statistics in order to present the raw data in a more understandable manner for the audiences. It will, therefore, enable me to present the data in a more meaningful way, which allows a simpler interpretation of the data (Lund research ltd. 2018). Moreover, the questionnaire distributed is analyzed using this type of statistics, such as the mean score for customer expectation, and perception will be computed to implement the gap score analysis (P-E). The frequency table to clarify the demographic characteristics of the respondents will be presented.

Cronbach's alpha will be used through Statistical Package for Social Sciences (SPSS) in order to test the internal consistency of the DINESERV instrument/scale, and factor

analysis will also be employed to prove the validity of DINESERV in Sweden. According to Goos et al., (2015, p.9), The variable is ordinal if there is a logical order between the elements of the sample. Moreover, I will collect the primary data using a five-point Likert scale (i.e., ordinal data), since it shows a logical order. Then, Spearman's correlation rho will be employed to test the strength and direction of the variables and their relationship with each other. Because this statistical tool is suitable to analyze the correlation between ordinal variables, and it can also be used when one variable is ordinal, and the other variable is interval/ratio (Bryman & Bell, 2011, p.349).

Table 2: summary table of the methodology and choice of methods

| | type | Description | Reason for choosing |
|---|---|---|---|
| Research philosoph y | Ontology (objectivism) | Social entities exist in reality external to social actors. | The reality is beyond the control of the author and it is an individual matter that differs across a variety of context. And the research strategy dictates the ontological view. |
| | Epistemology (positivism) | The researcher maintains minimal interaction with his research participants. | choice of ontological stance dictates the epistemological choice |
| Research approach | Deductive | more general to the more specific. | The author will be based on predeveloped model/theory to reach at a generalization by testing the hypothesis. |
| Research strategy | Quantitative | examines data that are numerical. | Associated with research approach (deductive) and philosophy (positivist stance). |
| Research purpose | Descriptive | focuses to portray an accurate profile of a persons, events or situations. | The author concern is to portray the perception of certain group of customers with respect to the service quality offered by Pizza hut using ¨DINESERV¨ instrument. |
| Research design | Survey design | Can be analyzed using descriptive and inferential statistics. | It is associated with deductive approach and mostly used in descriptive studies.<br>It allows to collect quantitative data and suggest the reason for relationship between variables. |

| | | | |
|---|---|---|---|
| Data collection | Questionnaire | Are the means to collect primary data. | To limit the interaction with the respondents (i.e., positivism view). |
| Sampling technique | Convenience sampling | Involves selecting haphazardly those cases that are easiest to obtain for your sample. | The absence of sampling frame, time limit and cost effectiveness. |
| Data analysis | Frequency Table | Method of converting a raw data into a meaningful one. | To summarize the respondent's characteristics. |
| | Gap score Table | The mean gap between the respondent's perception and expectation. | To show the respondents level of perception with respect to their expectation. |
| | Cronbach's alpha | Measures the internal consistency of an instrument or model. | To test the reliability of DINESERV instrument. |
| | Factor analysis | Help to validate a certain model or instrument. | To check the validity of DINESERV instrument. |
| | Spearman's correlation rho | Enables to examine the correlation between variables. | To test the correlation between DINESERV service quality dimensions and customer satisfaction. |

### 2.7. Ethical consideration

The data (i.e. primary and secondary) that was presented on this research is original and the respondent's response were treated with confidentiality without disclosure. This means that I did not modify or change the originality of the data collected, instead I convert it to a more meaningful and bring useful knowledge to our audiences. In addition, the literatures reviewed were used in an ethical manner and the idea gathered from it was helpful and rewarding.

## CHAPTER THREE: LITERATURE REVIEW AND THEORITICAL FRAMEWORK

In this section, I will go through all the possible kinds of literature that I think has a relation with my topic and present their finding. And, before diving into various models and discussing their merit and demerit, I will briefly present some useful concepts like Service, Quality, service quality, perceived service quality, customer satisfaction and determinants of customer satisfaction, the relationship between customer satisfaction and service quality. Then various service quality models in my area of research will be presented. Finally, I will embrace the reason why I choose the DINESERV model and based on that; the hypothesis will be proposed.

### 3. The concept of Service

So many authors have awarded the concept of Service a lot of definition. Although authors try to define Service, its characteristics are still confusing. The first reason behind this confusion is because of the intangibility nature of Service. Besides, authors with different backgrounds try to give Service a variety of definitions. Because of their previous background (in terms of academics) influences the way they experience Service. Economist (Mikhailovich, 2017, p.24) for instance, offers one of the simpler definitions when describing Service as "everything you can not fall at the feet" (http://www.economist.com). Besides, the marketing view of Service according to Kotler et al., (1999 cited in Mihailovic, 2017, p.23), is an activity or profit that one party can offer to another which is mostly intangible and does not result of ownership of something. Other authors try to define Service in terms of its technical and functional outcome. More specifically, there is typically a how and what component to services. That which is delivered is the what of service delivery (e.g., the meal eaten in a restaurant). The how of Service concerns the service delivery process itself (e.g., the process involved in being seated, in ordering the meal, the meal being brought to the table and served, the attention accorded the patrons while they consume the meal). Grönroos, (1990, cited in Schneider et al., 2004, p.5) distinguished these two aspects of Service from each other, calling the former a technical outcome dimension of Service and the latter a process-related or functional dimension of Service.

Furthermore, the other defining characteristics of Service has totally come from its purity. For a service to be pure, there will be no accompanying product or thing that can be seen and felt by those who involve in it. Schneider et al., (2004, p.6) classified service characteristics into three parts putting in mind that they are pure. These are:

**Intangibility** dictates that pure services cannot be seen, touched, held, or stored – they have no physical manifestation.

**Relative inseparability** dictates that pure services, which are composed entirely of delivery experience, cannot be produced at one time and place and then stored for later use at another place.

**Relative heterogeneity** – services also differ from physical goods in that Service is relatively heterogeneous than goods in their production and their delivery.

Along with the above definitions, one can easily understand that the concept of Service is wide and even hard to comprehend. However, the term service alone will result in a greater ambiguity if not accompanied by the quality concept because Service and Quality

are likely to happen at the same time. This, in other words, means that they are inseparable. So, the next section will be about defining the term quality.

### 3.1 The concept of Quality

Chakrapani, (1998, p.4) says, a product or Service has Quality if customers enjoyment of it exceeds their perceived value of the money, they paid for it. He also describes Quality for competitive market by saying, the product/or Service with the Highest Quality is the one that provides the greatest enjoyment. Schneider et al., (2004, p.9), on the other hand, propose three different ways to approach the definition of Quality. These are:

**Philosophical Approach –** under this Approach, people know Quality when they see it, but they cannot define Quality further (sounds like the definition of pornography to us!).
**Technical Approach –** this Approach to defining Quality is a stark contrast to the first and considers Quality from an objective and absolute perspective. Quality is often measured objectively in terms of the number of deviations from these standards or the number of defects.
**User-Based Approach – the focus of the present Book –** is a user-based one, in which its user determines the Quality of the product. It takes the view that Quality is subjective and hinges on the individual perceptions of customers.

In general, the above definition of Quality dictates about adding value on a given product or Service, and the Quality represents this value. When a product has a higher value, the customers perceive it as a high-quality product or Service and vice versa. This, as a result, will possibly give customers higher excitement and will also yield a differentiation advantage for the company. Finally, companies can shine in the market if they specialize and work hard towards delivering "quality" in all their offerings to customers.

### 3.2 Service quality

Nowadays, service quality has become the central focus of companies around the globe. This is because the world's economy has shifted to a service-driven economy. Plus, customers start giving a greater emphasis on the Quality of Service that is delivered to them. That’s why Grönroos, (1984, cited in Senay et al., 2019, p.1371) define Service quality as it is a customer service concept in business administration and is defined as "an outcome of an evaluation process where the consumer compares individuals' expectations with the service they have received."

However, defining service quality is a headache to many researchers due to the intangibility nature of Service. Unlike the Quality of products where there is "conformance to requirements" (Crosby, 1979, cited in Parasuraman et al., 1985, p.41-42), Service is a quite ambiguous concept which even hinders one to draw a line for their definition. Service quality is also a challenge for customers when evaluating their own experience. This is because Quality has no imprecise adjective like "goodness, or luxury, or shininess, or weight" (Crosby, 1979 cited in Parasuraman et al., 1985, p.42). As a result, Quality and its requirements are not easily articulated by consumers (Takeuchi and Quel, 1983, cited in Parasuraman et al., 1985, p.41).

On the contrary, customers form their expectations regarding the Quality of Service even before experiencing it. So, Before the service encounter, the customer builds expectations about the forthcoming experience using several intrinsic and extrinsic cues that indicate

the possible performance standards (Clow and Vorhies,1993; Gould-Williams, 1999, cited in Wilkins, 2007, p.841). This, in other words, means that customers will likely use their previous experience to forecast their future involvement. Let say, for example, a given customer visited MacDonald restaurant and had a bad/or excellent experience with their Service. And when this customer thinks about going to another competitive restaurant (like Max burger), he/she will likely form an expectation about the Service to be offered based on their previous experience in MacDonald.
Furthermore, service quality should be measured to lead any given company towards sustainable success. Because it will be hard to determine the company's position in today's competitive market unless the Quality delivered is monitored. As the economist (1992, cited in Chakrapani, 1998, p.9) points out, quality programs should be measured against customer expectations and not against quarterly profits. However, monitoring quality and related activities that will be done to increase the level of service quality is not an easy task. It needs a serious investment to maintain a higher competitive advantage. As Chakrapani, (1998, p.10) stated, Many world-class quality performers appear to believe that the cost is around 3% of their sales revenue (e.g., band 1991); that can be a lot of money and if your sales volume is $100 million, maintaining service quality will have an average price tag of $3 million.

### 3.3 Perceived service quality

According to Chakrapani, (1998, p.5), Quality, from the customer perspective, can be viewed as features that fulfill their wants in three psychological domains; cognitive, conative, and affective, and the customer enjoyment tends to be based on continuous improvement of these three dimensions. Besides, he tried to point out that customer enjoyment increases as a service get faster (or slower under certain conditions), gets cheaper (or provides better value at the same price), and exceeds expectation.

Perceived service quality (Stevens et al., 1995, p.60), is a function of the interaction among three independent variables: normative expectations, predictive expectations, and actual service quality. They indicate that the lower the expectations the consumers have about what should happen, the better their perceptions of the actual Service. And the higher their expectations about what will happen, the better their perceptions of the actual Service. Therefore, they have proposed three ways to improve customers perception about Service:

- Improve the Service,
- Lower the expectations of what should happen,
- Raise the expectations of what will happen.

Perceived Quality according to Zeithaml, (1988, p.3-4), is (1) different from objective or actual Quality, (2) a higher-level abstraction rather than a specific attribute of a product, (3) a global assessment that in some cases resembles attitude, and (4) a judgment usually made within a consumer's evoked set. In addition, Customers perception of service experiences are key elements for the success of every service organizations (Kelley & Turley, 2001; Laming & Mason, 2014, cited in Brida et al., 2016, p.209) and the degree in which customers perceive every Service's attributes directly affect customer's attitude when they are asked to issue an overall judgment about their experience of the Quality of Service delivered (Brida et al., 2016, p.2019). Another famous authors Parasuraman, Zeithaml, and Berry (1988, cited in V. Kaura et al., 2013, p.541) have also defined perceived service quality as 'the discrepancy between what the customer feels that a

service provider should offer and his or her perception of what the service firm actually provides. However, unlike the product perceived Quality, the perceived service quality is a sensitive area that needs a closer look by managers. This is because What differs with services is the nature of the characteristics upon which they are evaluated (Parasuraman et.al, 1985, p.48). As described in "the concept of service" section of the literature, Service has three distinctive characteristics (i.e., intangibility, relative inseparability, and relative heterogeneity), which make it even tough for customers to evaluate the perceived Service. This scenario becomes more complicated when it comes to assessing the perceived service quality in the restaurant industry. This is due to the fact (Markovic et al., 2010, cited in Tripathi & Dave, 2014, p.12) that evaluation of service quality in the restaurant industry is difficult because both the process and delivery are at the focal point of customer's evaluation of service quality.

### 3.4 Customer satisfaction

Customer satisfaction is an essential and comprehensive concept that gets a greater emphasis by so many authors. According to Hill and Alexander, (2006, p.2), customer satisfaction is a measure of how your organization's total product performs in relation to a set of customer requirements. Another author defines Customer satisfaction, as it is the customer's fulfillment response, and it is a judgment that a product or service feature, or the product of Service itself, provided (or is providing) a pleasurable level of consumptionrelated fulfillment, including levels of under- or over-fulfillment (Oliver, 1997, cited in Liang & Zhang, 2012, p.155).

Furthermore, in the food services market, customer satisfaction has become a primary topic that has a strong influence on business performance and customer retention (Holjevac et al., 2009, cited in Dwaikat, 2019, p.713). However, it will be quite severe for companies to survive in the market without giving a greater emphasis on "what attitude their customer's form towards their offering. Because the average business loses between 10 to 30 percent of its customers each year; but they often don't know which customers they have lost, when they were lost, why they were lost, or how much sales revenue and profit this customer decay has cost them and the reason behind this scenario is the fact that most companies have traditionally placed more emphasis on winning new customers than worrying about customers they are losing (Hill and Alexander, 2006, p.5).

Moreover, at least two different conceptualizations of customer satisfaction can be distinguished: transaction-specific and cumulative (Boulding et al., 1993, cited in Anderson et al., 1994, p.54). w). By comparison, aggregate customer satisfaction is an overall evaluation based on the total purchase and consumption experience with a good or Service over time (Fornell, 1992; Johnson and Forell 1991, cited in Anderson et al.,1994, p.54). Whereas transaction-specific satisfaction may provide specific diagnostic information about a particular product or service encounter, cumulative satisfaction is a more fundamental indicator of the firm's past, current, and future performance. So, companies should focus on formulating effective strategies to have satisfied customers. And companies with many satisfied customers will likely benefit in several ways. Satisfied customers become more likely to repurchase or shop, which then increases company profits (Gupta et al., 2007, cited in Ivkov, 2014, p.371) and become repeat purchasers of products or services and provide family or friends with positive feedback regarding their experience (Gibson, 2005, cited in Ivkov,2014, p.371). Besides, high customer satisfaction should indicate increased loyalty for current customers, reduced price elasticities, insulation of existing customers from competitive efforts, lower costs

of future transactions, reduced failure costs, lower costs of attracting new customers, and an enhanced reputation for the firm (Anderson et al., 1994, p.55).

### 3.4.1 Factors affecting customer satisfaction

Customer satisfaction can be affected by so many factors. According to Stevens et al., (1995, p.60), 91 percent of a restaurant's dissatisfied customers will never come back, and they will typically tell eight to ten others about their negative experiences.

Furthermore, Hill and Alexander, (2006, p.5-6) Points out that the overall gap, which results in a dissatisfied customer, is a gap between expectation and experience. And Parasuraman et al., (1988, p.17) mentioned that the term "expectations" as used in the service quality literature differs from the way it is used in the consumer satisfaction literature. Specifically, in the satisfaction literature, expectations are viewed as predictions made by consumers about what is likely to happen during an impending transaction or exchange. In contrast, in the service quality literature, expectations are viewed as desires or want of consumers, i.e., what they feel a service provider should offer rather than would offer (Parasuraman et al., 1988, p.17). The statements mentioned above in other word means that customer satisfaction will be affected either positively or negatively if the gap between customer expectation and experience didn't go as expected by customers.

Furthermore, a study conducted in Malaysia by Bougoure & Neu, (2010), tries to examine the relationships between service quality, overall service quality perceptions, customer satisfaction, and repurchase intentions in the Malaysian fast food industry. As a result, responsiveness and empathy highlight the gap between consumer expectations and their experiences in Malaysian McDonald's, KFC, and Pizza Hut restaurants. So, according to their study, responsiveness and empathy affect customer satisfaction in the case of the Malaysian fast food industry.

Another study by Leonard et al., (2016) was conducted to measure the customers' perception of tangible service quality in the restaurant industry. They found that table aesthetics (i.e., the comfort of the diners and implication in Quality of the restaurants) and Hygiene purity (i.e., the cleanliness of the restaurants and the standards to its diners) have a significant effect on the diner's satisfaction, revisit, and word-of-mouth intentions. In general, tangible service quality is a possible factor in affecting customer satisfaction and related behavior.

Rong-Da & Jun-Shu (2012), tries to examine the relationships among interaction orientation, customer satisfaction, and behavioral intentions in a restaurant setting. Interaction orientation in this study represents restaurants' ability to interact with individual diners and obtain information from them to maintain profitable and long-term relationships (Rong-Da & Jun-Shu, 2012, p.154). In the process, they were able to classify restaurant customers into two groups as first-time customers (FT) and frequent customers (FC), and this helped them to see the precise effect of interaction orientation on customer satisfaction and behavioral intention. However, their result implies that the interaction orientation significantly influenced both customer groups. Another key finding of this study was that customer perceptions of interaction orientation influence behavioral intentions via satisfaction.

Moreover, technology deemed to have a considerable effect on customer satisfaction. Even though (DiJulius, 2003, p.156), technology can simplify things, deliver products and services more quickly and make us more productive, it will never give us the warm and fuzzy feeling that comes from sincerity, trust, and courtesy.

### 3.4.2 The relationship between customer satisfaction and service quality

Many scholars try to examine the relationship between customer satisfaction and service quality. Mhlanga, (2013, cited in Mhlanga, 2018, p.1), points out that, Restaurant service quality is influenced by various restaurant attributes such as the physical environment, employee services, ambiance, location, menu type and price and a proper combination of these vital attributes should result in guests' perceptions of high restaurant service quality, which in turn should enhance their satisfaction and loyalty. According to this statement, service quality also has a relationship between customer loyalty.

Also, try to put the casual order of the satisfaction-service quality relationship. And they have also mentioned the work of other authors who propose satisfaction is an antecedent of service quality. However, the analysis of their results indicates that this may not be the case. It provides empirical support for the notion that perceived service quality leads to satisfaction as proposed by (Parasuraman et al., 1985,1988, cited in Cronin & Taylor, 1992, p.64). Even though their result dictates the casual order of satisfaction and service quality, it at the same time shows that both constructs are related.

Another author called Leonard et al., (2016, p.34) try to examine the impact of service quality on customers' behavior by picking the tangible aspect of service quality. And they try to explore the causal relationship between tangible service quality and diner satisfaction. According to their result, three tangible service factors deemed to have a positive impact on diner satisfaction.

**Table 3: tangible service factors**

| | Service factors | descriptions |
|---|---|---|
| 1 | Table aesthetics | includes the comfort of the seats and tables, utensil setting and decor/arrangement on the table, has an easily readable menu and variety of choices on the list and verbiage of the menu is descriptive |
| 2 | Hygiene purity | includes cleanness of the dining room, bathroom, and the overall cleanness of the restaurant. |
| 3 | Vehicle convenience | includes easy access to the parking lot and the availability of valet parking. |

Another study was conducted by Sureshchandar et al., (2002, p.366-374), to examine the distinctiveness of customer satisfaction and service quality and the relation between them. They took a different approach and views customer satisfaction as a multi-dimensional construct. Still, the underlying factors/items of customer satisfaction are the same as the ones by which service quality is measured (i.e., SERVQUAL). In other

words, their work argues that customer satisfaction should be operationalized along the same dimension that constitutes service quality and by the same items that span the different dimensions. therefore, it was postulated that customer satisfaction also comprises of the following five factors:

**Table 4: factors that make up customer satisfaction**

| | Customer satisfaction | Description |
|---|---|---|
| 1 | Core service or service product | Implies the inseparability of service |
| 2 | Human element of service delivery | humans are involved in service delivery |
| 3 | Systematization of service delivery | Which is the non-human element |
| 4 | Tangibles of service | Servicescape/the physical environment |
| 5 | Social responsibility | Ethics involved in delivery of service |

In general, the study result reveals that service quality and customer satisfaction do exhibit independence and are indeed different constructs from the customer's point of view. They also found that these two constructs are closely related with respect to the five factors.

### 3.5 Service quality models

Service quality has earned a significant concern by many authors, business owners, and customers as well. And various scholars try to come up with many models to measure service quality and to see its impact on different constructs like customer satisfaction, loyalty, word of mouth, product quality, and so on. In the next section, I will present some of the models with their advantage and disadvantage.

#### 3.5.1 SERVICESCAPE

Inspired by Bakers' (1987) study, Bitner (1992) developed the SERVICESCAPE by grouping all the interior physical attributes of an establishment together. Bitner (1992) classified them into three dimensions: ambiance, spatial layout/functionality, and signs/symbols/artifacts. Even though these three dimensions are very similar to Baker's (1987) three categorizations, SERVICESCAPE was defined as the human-made physical surroundings as opposed to the natural environment. Thus, Bitner's (1992) research literally translated to physical attributes of the establishments as opposed to Baker's (1987) broader perspective of physical service quality (Bitner, 1992; Raajpoot, 2002; Ryu & Jang, 2008, cited in L. LEE, et al., 2016, p.24). Although Bitner's (1992) SERVICESCAPE categorization of the physical attributes have been backed by substantial empirical and theoretical findings, its inherent limitations are found in two areas: (1) it only pertains to the interior of an establishment, (2) the universal application of it also has its own limit for industry-specifics (L. LEE, et al., 2016, p.24).

### 3.5.2 Five Aspects Meal Model (FAMM)

As mentioned by Gustafsson et al., (2006, p.86), the starting point to describe the model is a restaurant visit. It starts with entering the restaurant, and this is the first aspect to be defined. The second aspect is the meeting, which refers to not only the encounter between waiters and customers but also interactions between customers as well as communications between service personnel. The third aspect is the product, which here refers to food and beverages and their preparation. The fourth aspect is the management control system, which refers to the economic issues, laws, and logistics when providing the whole meal.

However, this model has a disadvantage that cannot be amended in the short run. Sometimes it is impossible to create meals in line with the intention of the model. The room might be impossible to change according to the restaurant theme, at least in the short run. Staff may need more education to adhere to the service quality wanted, and it seems difficult to change that in the short term. The price of the dishes or the menu that guests are willing to pay may not meet the quality standards in accordance with the FAMM (Gustafsson et al., 2006, p.91).

### 3.5.3 SERVQUAL

The other widely known service quality model is SERVQUAL, which was developed by (Parasuraman et al., 1988). They define service quality as the discrepancy between consumers' perceptions of services offered by a particular firm and their expectations about firms offering such services (Parasuraman et al., 1988, p.14). During their study, they were able to identify five gaps that can affect the concept of service quality and factors affecting it. These gaps are (Parasuraman et al., 1995, p.44-46):

**Consumer expectation-management perception gap –** it is a discrepancy between executive perceptions and consumer expectations. In essence, service firm executives may not always understand what features connote high Quality to consumers in advance, what features a service must have in order to meet consumer needs, and what levels of performance on those features are needed to deliver high-quality Service.

**Management perception-service quality specification gap -** Apart from resource and market constraints, another reason for the gap between expectations and the actual set of specifications established for a service is the absence of total management commitment to service quality

**Service quality specifications-service delivery gap -** Even when guidelines exist for performing services well and treating consumers correctly, high-quality service performance may not be a certainty. One of the executive respondents describes the source service quality problem was "Everything involves a person - a repair person. It's so hard to maintain standardized quality".

**Service delivery-external communications gap -** Media advertising and other communications by a firm can affect consumer expectations. If expectations play a significant role in consumer perceptions of service quality (as the services literature contends), the firm must be certain not to promise more in communications than it can deliver in reality**.**

**Expected service-perceived service gap** – The key to ensuring excellent service quality is meeting or exceeding what consumers expect from the Service. And this study will focus on this gap to determine customers' perception of service quality. Since gap 5 is considered as the outcome of the other gaps (Wolniak & Skotnicka-Zasadzien, 2012, p.1243), measuring this area will bring a holistic result. However, this does not mean that the other gaps are not necessary. Moreover, their work briefly describes the development of a 22-item instrument (called SERVQUAL) for assessing customer perceptions of service quality in Service and retailing organizations. They identify ten potentially overlapping service quality dimensions (i.e., tangibles, reliability, responsiveness, communication, credibility, security, competence, courtesy, understanding/knowing the customer, and access), and This process resulted in the generation of 97 items. Consequently, they conducted a scale purification through a set of iterative sequences. They were able to identify 34 items within seven dimensions. and finally, they run the second phase of purification and end up with 22 items under five dimensions. these dimensions are:

**Reliability** - Ability to perform the promised Service dependably and accurately
**Assurance**- Knowledge, and courtesy of employees and their ability to convey trust and confidence
**Responsiveness** - Willingness to help customers and provide prompt Service
**Tangibles** - Physical facilities, equipment, and appearance of personnel
**Empathy** - Caring, individualized attention

As suggested by Cronin and Taylor (1992, cited in Nancy & Christina, 2011, p.22), different scale items may be more relevant than others in measuring service quality, depending upon the specific industry.

### 3.5.4 LODGESERV

LODGESERV, which is developed by, Knutson, et.al., (1990), becomes successful in the hotel segment of the hospitality industry. It is based on the five dimensions of service quality identified in SERVQUAL. Unlike SERVQUAL, this model has 26 lodging-specific items. By comparing its customers' perceptions of service' quality with consumers' expectations, a hotel company will be able to determine whether it is exceeding, meeting or falling below expectations and LODGSERV will enable managers to make these comparisons on each of the five service dimensions as well as from an overall perspective (Knutson et al., 1990, p.283). They have also proposed some valuable application like Segmenting consumers into groups (e.g., high, medium and low) based on their expectation scores, Grouping units/regions/districts based on customers' perceptions and Showing a Hotel/Hotel company how it compares with its competition on service quality (Knutson et al., 1990, p.283). In their study, they try to examine consumer expectations about economy, mid-price, and luxury hotels and found that the five dimensions had the same ranking in all three segments and that the higher the price category, the higher the consumer expectations of service quality and next they have translated LODGESERV into other languages and tested it (Stevens et al., 1995, p.57). Subsequently, they found that the instrument worked equally well in different cultures. And in the process, DINESERV was conceptualized by these authors to find an industry-specific tool to measure service quality.

### 3.5.5 DINESERV

Adapting the instrument SERVQUAL to the restaurant industry and using the lessons learned in developing and refining LODGESERV, they were able to draft DINESERV (Stevens et al., 1995, p.58). Like SERVQUAL, DINESERV is a gap theory model as it compares a service quality expectation index to a service quality perception index using the same 29 items, and it is a performance-based measure that measures the perceptions of service outcomes( Nancy & Christina, 2011, p.23). Before any purification, the instrument initially has 40 statements. Then, they have used confirmatory factor analysis, and they were able to reduce the number of items to 29. At this point, DINESERV was adapted to determine the Quality of Service in restaurants. Consequently, they have called that version "DINESERV.PER," and it is explicitly designed for continual assessment of customers' perceptions of restaurant Quality. The 29- item survey instrument includes (i.e., DINESERV) 10 items representing tangibles, 5 representing reliability, 3 for responsiveness, 5 for assurance, and 5 for empathy. The DINESERV.PER question items are:

1. ...has visually attractive parking areas and building exteriors.
2. ...has a visually attractive dining area.
3. ...has staff members who are clean, neat, and appropriately dressed.
4. ...has a décor in keeping with its image and price range.
5. ...has a menu that is easily readable.
6. ...has a visually attractive menu that reflects the restaurant's image.
7. ...has a dining area that is comfortable and easy to move around in.
8. ...has rest rooms that are thoroughly clean.
9. ...has dining areas that are thoroughly clean.
10. ...has comfortable seats in the dining room.
11. ...serves you in the time promised.
12. ...quickly corrects anything that is wrong.
13. ...is dependable and consistent.
14. ...provides an accurate guest check.
15. ...serves your food exactly as you ordered it.
16. ...during busy times, has employees shift to help each other maintain speed and Quality of Service.
17. ...provides prompt and quick Service.
18. ...gives extra effort to handle your special requests.
19. ...has employees who can answer your questions completely.
20. ...makes you feel comfortable and confident in your dealings with them.
21. ...has personnel who are both able and willing to give your information about menu items, their ingredients, and methods of preparation.
22. ...makes you feel personally safe.
23. ...has personnel who seem well trained, competent, and experienced.
24. ...seems to give employees support so that they can do their jobs well.
25. ...has employees who are sensitive to your individual needs and wants, rather than always relying on policies and procedures.
26. ...makes you feel special.
27. ...anticipates your individual needs and wants.
28. ...has employees who are sympathetic and reassuring if something is wrong.
29. ...seems to have the customers' best interests at heart.

**DINESERV.PER item numbers and corresponding DINSERV dimensions: 1–10, tangibles; 11–15, reliability; 16–18, responsiveness; 19–24, assurance; and 25–29, empathy (Stevens, et al., 1995)**.

According to Stevens, et al., (1990, p. 82), DINESERV is proposed as a reliable, relatively simple tool for determining how consumers view a restaurant's Quality. The 29-item DINESERV questionnaire comprises service-quality standards that fall into five categories: assurance, empathy, reliability, responsiveness, and tangibles and By administering the DINESERV questionnaire to guests, a restaurant operator can get a reading on how customers view the restaurant's Quality, identify problems, and get an inkling of how to resolve them. They have also mentioned that the instrument also provides restaurateurs with a quantified measure of what consumers expect in a restaurant, and those expectations are essential because unfulfilled expectations drive guests away.

However, just like all the aforementioned service quality models, DINESERV was criticized by some authors. Kivela, et.al, (1999; Raajpoot, 2002, cited in Jinsoo & Jinlin, 2010, p.96), for instance, mentioned that "although DINESERV included some items to measure the atmospherics quality, they missed the factor of food quality", which is one of the most important factors when assessing overall customer experience in the restaurant.

Moreover, Stevens et al., (1995, p.57-60), recommend that DINESERV would be helpful if used periodically. Every two or three months, administer DINESEP.PER by telephone to 50 to 100 recent customers, selected at random. Compute the mean for each of the dimensions and an overall score (the mean of the five means) and compare it with previous scores. And as a result, the users of DINESERV.PER determines whether a change in perceptions was the result of a change in normative expectations (i.e., an expectation of what should happen) or a change in the service quality delivered. However, with today's "NoCall lists," the suggested procedure might be difficult to implement (Nancy & Christina, 2011, p.23).

**Table 5: summary of service quality model**

| | Advantage | disadvantage |
|---|---|---|
| SERVICSCAPE | Is the most detailed instrument for measuring the physical attributes | Concentrate only on tangible aspect of service. |
| FAMM | Gives a greater emphasis for the atmosphere of the restaurant | Hardship to amend its flaws in the short run. |
| SERVQUAL | Is applicable in various industry | Skipped some useful aspects which can merit other industries. |
| LODGESERV | It is industry specific. | Limited to the hospitality industry. |
| DINESERV | It is industry specific. | Seeks periodical assessment (i.e., every two or three months. |

### 3.6 The conceptual framework

Winning Customers' interest has become the center of focus for companies around the world. Especially, making them satisfied is now managers day to day activity. However, satisfying them is not an easy task for so many reasons. Their behavior can be affected by factors like product quality, price, service quality, and so on. Besides, as I have discussed above, customer satisfaction can be determined by so many factors like technology, interaction orientation, and tangible aspects of Service. The gap between customers' expectations and perceptions also determines their satisfaction level. Moreover, knowing the reason for their satisfaction is a relief for managers and company owners as well. So, I endeavor to check whether the dimensions of service quality have a significant effect on customer satisfaction.

This study will investigate customer's perception and expectation of service quality in the restaurant business in the case of Pizza Hut, Sweden. The first service quality model that comes to my mind when thinking of measuring the gap between customers' expectations and perception of service quality was the "SERVQUAL" model. However, this model has skipped some attributes that can apply to restaurants when measuring service quality. Thus, I reviewed the literature for another suitable model (see table 1.3) that can answer the research question and help me in achieving the research objective. Then, I found that the "DINESERV" model is the right one for my research. As mentioned in the literature review, it is an adaptation of the SERVQUAL instrument specific to the restaurant industry, with 29 items that measure the five dimensions of service quality. Like SERVQUAL, DINESERV is a gap theory model as it compares a service quality expectation index to a service quality perception index using the same 29 items (Nancy and Christina, 2011, p.23). The reason why I choose this model is that it has added some attributes which are industryspecific (i.e., restaurant-specific).

In our increasingly globalized world, the external validity of marketing concepts (like DINESERV) has come into focus. In other words, do Western-based marketing concepts, and theories explain the same phenomena in different countries (Ursula-Sigrid & MengKeang, 2010, p.196)? And based on this, the authors conduct a research to check its applicability and recommend future research in other countries as well. Following the recomendations I have chosen the DINESERV instrument to measure customer's perception of service quality and to check its applicability in Sweden as well.

The DINESERV instrument dimension that I have used for this study are:
**Reliability -** Ability to perform the promised Service dependably and accurately,
**Assurance** - Knowledge, and courtesy of employees and their ability to convey trust and confidence,
**Responsiveness** - Willingness to help customers and provide prompt Service,
**Tangibles** - Physical facilities, equipment, and appearance of personnel,
**Empathy** - Caring, individualized attention.

In this thesis, I am going to check whether this dimension has a significant relationship with respect to the perception of Pizza Hut customers. Then the customers will be provided with the 29-item questionnaire, which was developed by Stevens et al., (1995). And the result implies that the higher the level of customer perception of service quality, the more satisfied they are, and the reverse is true. Besides, their response will notify whether the relation is negative or positive.

In general, this study will examine the relationship between many variables as follows:
H1: Is there a significant relationship between tangibility and customer satisfaction?
H2: Is there a significant relationship between reliability and customer satisfaction?
H3: Is there a significant relationship between responsiveness and customer satisfaction?
H4: Is there a significant relationship between assurance and customer satisfaction?
H5: Is there a significant relationship between empathy and customer satisfaction?

## CHAPTER FOUR: EMPIRICAL DESCRIPTIONS

The empirical description, which includes the sample, the collected data, the questionnaire, scale of measurement, the coded data, and their explanation will be presented in this chapter.

### 4. Pizza Hut (Uppsala)

This particular branch, which is located around Gränby, currently has more than 20 employees. This branch sells lunch buffet five days a week (Monday till Friday) and does made-to-order pizzas every day of the week just like any other Pizza Hut branches in Sweden. They are also known for their on-job employee training and creating a friendly environment for the trainees.

### 4.1 DINESERV Questionnaire

The pre-developed questionnaire from the DINESERV instrument was used to measure the gap between customer expectation and customer perception (P-E). The original DINESERV questionnaire was used without any modification since the aim of the research is to measure the customer perception of service quality. Besides, DINESERV was also initially conceptualized to measure the customer's perception of service quality. However, I did add three demographic questions to obtain the respondent's age, gender, and level of education. Because the information will be critical for marketing purposes.

Furthermore, I decided to translate the question-items into the Swedish version because the official language is Swedish. Besides, it will create clarity and convenience for the respondents. The translation was done by the manager of Pizza Hut (Uppsala restaurant). The questionnaire has three sections in total. The first section concerns the respondent's demographic information. The second and third sections of the questionnaire aimed at collecting the participant's expectation and perception of service quality in the case of Pizza Hut. But before, the distribution, I have done a pilot study to check the clarity of the questionnaire. So, I picked ten employees from Pizza Hut, and they express the questions as catchy, understandable, and on point.

### 4.2 Scale of measurement

Likert scales are commonly used to measure attitude, providing a range of responses to a given question or statement (Jamieson, 2004, p.1217). A five-point Likert scale was used to measure the customer's expectation and perception of the restaurant's service quality. The choices have two edges that stretch from "strongly disagree" to "strongly agree". It can be elaborated as follows,

- Strongly disagree,
- Disagree,
- Neutral,
- Agree,
- Strongly agree.

The responses will be used as an input for analyzing the data in the SPSS software along with the service quality dimensions. And after computing the mean for both perception and expectation as suggested by Stevens, et al., (1995, p.59), the gap score will be obtained.

### 4.3 DINESERV dimensions and the question items

The study has used the pre-established DINESERV 29 question item and the five dimensions of service quality that were identified by Parasuraman et al., (1988). As it was pre-determined by Stevens et al., (1995, p.59), the five dimensions were distributed to represent the 29 question-item to measure service quality of restaurants. The first ten items are about tangibles items,10-15 relate with reliability, 16-18 corresponds to responsiveness, 19-24 associate with assurance and 25-29 relates with empathy.

### 4.4 Questionnaire distribution

Before distributing the questionnaire, deciding on the location is a paramount concern. So, I decided to distribute it in Uppsala Pizza Hut. The reason why I prefer to distribute the questionnaire inside of the restaurant is to get the respondent's right on the spot experience. In this way, I believe they will express their honest feeling about what they expect and what they perceive after experiencing the service delivered to them. Besides, it is quite convenient for me since I have a time limitation. So, the waitress, the shift leader, and the manager helped me in putting the questionnaire in the restaurant's empty tables. And as soon the guest arrives and places an order, the employees at the same time tell the guests about the purpose of the study and convince them to fill in the questionnaire. And I did also take part in convincing the guests by explaining the purpose of the research.

Although the plan was to get 350 response from the respondents, I managed to get 299 fully completed answers from the respondents and 15 uncompleted responses. It almost took one month to get this result, and I believe it is satisfactory to get this amount of completed responses.

### 4.5 Coding

Before computing the data at hand in the SPSS, the variables were first given a code. Because it will enable one to enter the data quickly with no error, and it also makes subsequent analysis, in particular, those that require re-coding of data to create new variables, more straightforward (Saunders et al., 2009, p.422). The five dimensions of the DINESERV instrument with respect to the question under each dimension were coded accordingly. And the demographic variable was also coded for further analysis. The coding of variables was labeled as follows:

**Tangibles (TA)**

**TA1**- Pizza Hut has visually attractive parking areas and building exteriors.
**TA2**- Pizza Hut has a visually attractive dining area.
**TA3**- Pizza Hut has staff members who are clean, neat, and appropriately dressed.
**TA4**- Pizza Hut has a décor in keeping with its image and price range.
**TA5**- Pizza Hut has a menu that is easily readable.
**TA6**- Pizza Hut has a visually attractive menu that reflects the restaurant's image.
**TA7**- Pizza Hut has a dining area that is comfortable and easy to move around in.
**TA8**- Pizza Hut has rest rooms that are thoroughly clean.
**TA9**- Pizza Hut has dining areas that are thoroughly clean.
**TA10**- Pizza Hut has comfortable seats in the dining room.

**Reliability (RL)**

**RL1**- Pizza Hut serves you in the time promised.
**RL2**- Pizza Hut quickly corrects anything that is wrong.
**RL3**- Pizza Hut is dependable and consistent.

**RL4**- Pizza Hut provides an accurate guest check.
**RL5**- Pizza Hut serves your food exactly as you ordered it.

**Responsiveness (RN)**
**RN1**- Pizza Hut during busy times, has employees shift to help each other maintain speed and quality of service.
**RN2**- Pizza Hut provides prompt and quick service.
**RN3**- Pizza Hut gives extra effort to handle your special requests.

**Assurance (AS)**
**AS1**- Pizza Hut has employees who can answer your questions completely.
**AS2**- Pizza Hut makes you feel comfortable and confident in your dealings with them.
**AS3**- Pizza Hut has personnel who are both able and willing to give you information about menu items, their ingredients, and methods of preparation.
**AS4**- Pizza Hut makes you feel personally safe.
**AS5**- Pizza Hut has personnel who seem well trained, competent, and experienced.
**AS6**- Pizza Hut seems to give employees support so that they can do their jobs well.

**Empathy (EM)**
**EM1**- Pizza Hut has employees who are sensitive to your individual needs and wants, rather than always relying on policies and procedures.
**EM2**- Pizza Hut makes you feel special.
**EM3**- Pizza Hut anticipates your individual needs and wants.
**EM4**- Pizza Hut has employees who are sympathetic and reassuring if something is wrong. **EM5**- Pizza Hut seems to have the customers' best interests at heart.

**Demographics**
AGE
GENDER
EDUL

**Recoding**
**TA**- Average gap score for tangible items = [TA1 +TA2 +TA3+TA4+TA5+TA6+TA7+TA8+TA9+TA10] /10

**RL**- Average gap score for reliability items = [RL1+RL2+RL3+RL4+RL5]/5

**RN**- Average gap score for responsiveness items = [RN1+RN2+RN3]/3

**AS**- Average gap score for assurance items = [AS1+AS2+AS3+AS4+AS5+AS6]/6

**EM**- Average gap score for empathy items = [EM1+EM2+EM3+EM4+EM5]/5

**OSQ**- Overall service quality = (TA+RL+RN+AS+EM)/5

## CHAPTER 5: EMPERICAL RESULTS AND ANALYSIS

This section will deal with the presentation of the empirical data and the analysis of the data based on the theoretical concepts. The analysed data will then lead to the answer to the research question that was proposed in the introduction chapter ( see section 1.5).

The main purpose of this chapter is to present the primary data collected through the questionnaire. The means for the perception and expectation of the respondents will be summarized through Descriptive statics. This can be calculated by subtracting the mean value of the expectation from the perception mean value (P-E). The perception-expectation mean of the diners will be computed for each of the five dimensions alone and in total as well.

Moreover, validity test was computed, which is concerned with the integrity of the conclusions that are generated from a piece of research (Bryman & Bell, 2011, p.42). For this reason, factor analysis was employed to check the applicability of the DINESERV instrument in Sweden's cultural context as well. Besides, the reliability test using Cronbach's alpha was computed to check whether the results of a study are repeatable or not.

**Table 6: Characteristics of the respondents**

| **Variables** | **Characteristics** | **Frequency** | **Percentage** |
|---|---|---|---|
| **Gender** | Male | 158 | 53 |
| | Female | 132 | 44 |
| | Prefer not to say | 9 | 3 |
| **Age** | Younger than 18 | 10 | 3 |
| | 18–36 | 154 | 52 |
| | 37–53 | 92 | 31 |
| | 54–69 | 34 | 11 |
| | 70 and older | 9 | 3.0 |
| **Educational background** | None | 10 | 3 |
| | Under graduate | 123 | 41 |
| | Bachelor’s degree | 78 | 26 |
| | Master’s degree | 61 | 21 |
| | Doctorate degree | 27 | 9 |

## 5. Demographic characteristics of the participants

According to the respondent's gender characteristics, males take the largest portion among all, with a percentage of 52.8%. Females take the second place by 44.1%, and the rest of the participants who chose the "prefer not say" option were only 3%. The age category with the highest number falls under the "18-36" age group, which counts for 51.5%. the next higher age group is the mid-aged respondents, which is categorized under 37-53 with a percentage of 30.8%, and those respondents under 54-69 age group hold the third place with 11.4%. the rest of the respondents fall under the age >18 & <70 has a percentage of 3.3% & 3% respectively. Most of the respondents were under graduated with a percentage of 41.1%, and those participants with a bachelor's degree hold second place with 26.09%. Respondents who have a master's degree has 20.4% and are the third largest among all. The rest percentage goes to the ones with a doctorate degree which counts 9.03% and those who choose "none" has the smallest percentage (i.e., 3.3%).

### 5.1 Gap score analysis

As I mentioned in the distribution of the questionnaire section, my plan was to collect 350 fully completed questionnaires, and I was able to receive 299 fully completed responses from the participants. Although the sampling method used (i.e., convenience sampling) seeks a large sample size, the collected size was satisfactory for this study.

**Table 7. The Overall Service Quality as Perceived by diners**

| Dimension | Statement | Mean Perception Score (P) | Mean Expectation score (E) | Gap Score (P-E) | Perception Mean | Expectation Mean | Overall Mean Gap Score |
|---|---|---|---|---|---|---|---|
| Tangibility | TA1 | 4.12 | 3.60 | 0.52 | 4.13 | 3.9 | **0.23** |
| | TA2 | 4.36 | 4.02 | 0.34 | | | |
| | TA3 | 4.05 | 3.82 | 0.23 | | | |
| | TA4 | 4.13 | 4.01 | 0.12 | | | |
| | TA5 | 4.16 | 3.85 | 0.31 | | | |
| | TA6 | 4.12 | 4.02 | 0.1 | | | |
| | TA7 | 4.05 | 3.95 | 0.1 | | | |
| | TA8 | 4.13 | 3.94 | 0.19 | | | |
| | TA9 | 4.11 | 3.97 | 0.14 | | | |
| | TA10 | 4.08 | 3.96 | 0.12 | | | |
| Reliability | RL1 | 2.20 | 4.46 | -2.26 | 2.29 | 4.52 | **-2.23** |
| | RL2 | 2.21 | 4.65 | -2.44 | | | |
| | RL3 | 2.28 | 4.50 | -2.22 | | | |
| | RL4 | 2.39 | 4.49 | -2.1 | | | |
| | RL5 | 2.37 | 4.50 | -2.13 | | | |
| Responsiveness | RN1 | 2.24 | 4.51 | -2.27 | 2.33 | 4.32 | **-1.99** |
| | RN2 | 2.35 | 4.17 | -1.82 | | | |
| | RN3 | 2.40 | 4.28 | -1.88 | | | |
| Assurance | AS1 | 4.08 | 3.48 | 0.6 | 4.095 | 3.81 | **0.285** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | AS2 | 4.15 | 4.09 | 0.06 | | | |
| | AS3 | 4.12 | 4.02 | 0.1 | | | |
| | AS4 | 4.08 | 3.96 | 0.12 | | | |
| | AS5 | 4.06 | 3.94 | 0.12 | | | |
| | AS6 | 4.08 | 3.39 | 0.69 | | | |
| Empathy | EM1 | 4.11 | 4.02 | 0.09 | 4.074 | 3.92 | **0.154** |
| | EM2 | 4.01 | 3.95 | 0.06 | | | |
| | EM3 | 4.15 | 4.09 | 0.06 | | | |
| | EM4 | 4.02 | 3.48 | 0.54 | | | |
| | EM5 | 4.19 | 4.06 | 0.13 | | | |
| **OSQ** | | | | | 3.38 | 4.094 | **-0.714** |

**5.2 Diners satisfaction**

DINESERV is a gap theory model as it compares a service quality expectation index to a service quality perception index using the same 29 items (Nancy & Christina, 2011, p.23). Therefore, the gap between these two constructs (i.e., expectation & perception) will determine customer satisfaction and dissatisfaction. If the diner's expectations from pizza hut service quality exceed what they have perceived, then, this will result in diner's dissatisfaction and vice versa. In other words, the negative and positive result generated from the diners' response indicates their dissatisfaction and satisfaction, respectively. According to the gap calculation (P-E), The tangibility dimension holds the highest score per question item. That is "TA1," which concern with the attractiveness of Pizza hut parking areas and building exteriors with a score of 0.52. It implies that diners are satisfied with Pizza Hut's external attractiveness. And the least score per question item came from the reliability dimension. This was "RL2," which relates to the question "Pizza Hut quickly corrects anything that is wrong," and the score is -2.44. In this case, the diners are dissatisfied because their expectations were high on the reliability dimension, particularly on the question item 2.

**5.3 Reliability test**

To measure the internal reliability and to check the study whether the study is repeatable or not, I have computed Cronbach's alpha coefficient. This will help to check the internal consistency of the scale used.

**Table 8.1 Reliability statistics**

| Cronbach's Alpha | No of Items |
|---|---|
| .842 | 29 |

The reliability statics presented in table 3 shows that a coefficient of Cronbach's alpha is .842. The pre-determined acceptable standard takes this as a good result implying that there exists high internal consistency between items involved. It, in other words, means that the 29 items involved in this study have a high correlation since reliability coefficient alpha is considered acceptable if it exceeds 0.7.

Furthermore, the coefficient value mentioned above implies that 84% of the variance in the score is a reliable variance. For that reason, the rest 16% is the error variance. To further elaborate the reliability of the items, the Cronbach's Alpha for all the dimensions is presented below.

**Table 8.2 reliability statistics of the dimensions**

| Dimensions | No of items | Cronbach's Alpha |
|---|---|---|
| Tangibility | 10 | .702 |
| Reliability | 5 | .934 |
| Responsiveness | 3 | .921 |
| Assurance | 6 | .728 |
| Empathy | 5 | .725 |

The above table clearly shows that the coefficient of Cronbach's Alpha ranges from .702 to .934. And as mentioned earlier, all the items are considered acceptable for this study. Reliability and responsiveness have the highest value, which is .934 & .921, respectively. In addition, the other three dimensions have a value, which indicates that they are reliable. All in all, the items listed above are considered acceptable since they are above the threshold. So, it can be concluded that all the dimensions of DINESERV are verified to have good internal consistency (Check appendix III).

**5.4 Factor analysis of the gap scores between customers expectation and perception**

Factor analysis is a technique that is used to reduce a large number of variables into fewer numbers of factors, and it extracts maximum common variance from all variables and puts them into a common score (Statistics solution, 2019). This analysis is classified into two as exploratory and confirmatory analysis. Exploratory factor analysis (EFA) enables the researcher to investigate the underlying structure in the pattern of correlations between a number of variables (often referred to as “items”). If we have a large number of variables, we can thus investigate if these variables represent a smaller number of factors – or “dimensions” (Almquist et al., 2019, p.148). Confirmatory factor analysis (CFA) is a multivariate statistical procedure that is used to test how well the measured variables represent the number of constructs (statistics solution, 2013). Since the author is interested in validating the applicability of the DINESERV model and the relationship between variables, exploratory factor analysis was preferred. I choose EFA to explore which variables represent DINESERV dimensions since it enables the researcher to investigate the underlying pattern of correlation between a number of variables. To put it in a simpler form, EFA enables the researcher to determine which particular variables are loaded in each component and which of them are overlapped each other. But before conducting the EFA, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) value and the significance level should be checked. besides, The KMO value reflects the sum of the partial correlation relative to the sum of the correlation.

**Table 9.1: KMO & Bartlett’s test**

| KMO and Bartlett's Test | Sampling | |
|---|---|---|

| | |
|---|---|
| Kaiser-Meyer-Olkin Measure of Adequacy. | .865 |
| Bartlett's Test of Sphericity — Approx. Chi-Square | 3561.695 |
| Bartlett's Test of Sphericity — df | 406 |
| Sig. | .000 |

The table above shows the KMO value of .865, which is appropriate for further factor analysis. Because the KMO value varies between 0 and 1, and if the value is closer to 0, then conducting the EFA will not be appropriate, and the reverse holds true for values closer to 1.

Besides, the significance level shown in table 3 is less than the alpha value, which is .005, and it indicates that the factor analysis is useful for the data I have. So, since the above two conditions are met, the information is ready for further analysis. Thus, the next task will be computing the total variance to filter the components. This step will filter the factors necessary for further analysis.

**Table 9.2: Total variance explained**

| Total Variance Explained | | | | | | |
|---|---|---|---|---|---|---|
| Component | Initial Eigenvalues | | | Rotation Sums of Squared Loadings | | |
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 6.494 | 30.592 | 30.592 | 6.494 | 30.592 | 30.592 |
| 2 | 3.243 | 15.481 | 46.073 | 3.243 | 15.481 | 46.073 |
| 3 | 1.839 | 10.543 | 56.616 | 1.839 | 10.543 | 56.616 |
| 4 | 1.627 | 8.809 | 65.425 | 1.627 | 8.809 | 65.425 |
| 5 | 1.383 | 4.775 | 70.200 | 1.383 | 4.775 | 70.200 |
| 6 | .998 | 3.231 | 73.431 | | | |
| 7 | .991 | 2.982 | 76.413 | | | |
| 8 | .984 | 2.678 | 79.091 | | | |
| 9 | .971 | 1.987 | 81.078 | | | |
| 10 | .924 | 1.637 | 82.715 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 11 | .915 | 1.537 | 84.252 | | | |
| 12 | .804 | 1.339 | 85.591 | | | |
| 13 | .775 | 1.278 | 86.869 | | | |
| 14 | .752 | 1.048 | 87.917 | | | |
| 15 | .672 | 0.989 | 88.906 | | | |
| 16 | .651 | 0.981 | 89.887 | | | |
| 17 | .620 | 0.978 | 90.865 | | | |
| 18 | .571 | 0.976 | 91.841 | | | |
| 19 | .534 | 0.975 | 92.816 | | | |
| 20 | .516 | 0.971 | 93.787 | | | |
| 21 | .489 | 0.899 | 94.686 | | | |
| 22 | .445 | 0.867 | 95.553 | | | |
| 23 | .358 | 0.855 | 96.408 | | | |
| 24 | .262 | 0.786 | 97.194 | | | |
| 25 | .237 | 0.753 | 97.947 | | | |
| 26 | .193 | 0.667 | 98.614 | | | |
| 27 | .165 | 0.569 | 99.183 | | | |
| 28 | .129 | 0.446 | 99.629 | | | |
| 29 | .107 | 0.371 | 100.000 | | | |
| Extraction Method: Principal Component Analysis. | | | | | | |

The Eigenvalues are the indicators of the variance explained by the factor, and the rule dictates that this value should be higher than one. And the reason behind this rule is that a factor should account at least as much variance as any single variable (Almquist et al., 2019, p.151). Thus, the result displayed in the above table indicates that there are five factors filtered from the total variance since their Eigenvalues value is more than 1.

Furthermore, the cumulative percentage of variance is 70.2%, and it implies that the distribution of each DINESERV dimension in the factors filtered. Thus, the next step will be concerned with generating a rotated component matrix to show the variables loaded

within each factor or component. And the Factor loadings are part of the outcome from factor analysis, which serves as a data reduction method designed to explain the correlations between observed variables using a smaller number of factors (Salkind, 2010, p.2). Then, this correlation is the key to determine the validity of the DINESERV model in Sweden.

**Table 9.3: Rotated component matrix**

| | | **Component** | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| TA1 | .462 | | | | |
| TA2 | .459 | | | | |
| TA3 | .586 | | | | |
| TA4 | .699 | | | | |
| TA5 | .636 | | | | |
| TA6 | .594 | | | | |
| TA7 | .566 | | | | |
| TA8 | .455 | | | | |
| TA9 | .670 | | | | |
| TA10 | .712 | | | | |
| AS1 | | .610 | | | |
| AS2 | | .731 | | | |
| AS3 | | .634 | | | |
| AS4 | | .687 | | | |
| AS5 | | .637 | | | |
| AS6 | | .601 | | | |
| EM1 | | | .606 | | |
| EM2 | | | .543 | | |
| EM3 | | | .771 | | |

| | | | | | |
|---|---|---|---|---|---|
| EM4 | | | .527 | | |
| EM5 | | | .470 | | |
| RL1 | | | | .899 | |
| RL2 | | | | .904 | |
| RL3 | | | | .909 | |
| RL4 | | | | .817 | |
| RL5 | | | | .856 | |
| RN1 | | | | | .921 |
| RN2 | | | | | .897 |
| RN3 | | | | | .873 |

**Extraction Method: Principal Component Analysis.**
**Rotation Method: Varimax with Kaiser Normalization.**

The above table shows that the loading of each DINESERV variables in each of the components. In other words, each of the DINESERV items corresponds to distinct components. Thus, it can be concluded that the factors are reasonably correlated with the DINESERV items because it is crystal clear that similar items are loaded under similar factors without overlapping with each other. For example, the items labeled with "RN" fall under component one, items with "TA" label fall under component 2. This implies that the factors are measuring the right item.

### 5.5 Testing the hypothesis

The relation between DINESERV dimensions and customer satisfaction is tested using a non-parametric test, which is called Spearman's rho. I choose this test because it is designed for the use of pairs of ordinal variables and can also be used when one variable is ordinal, and the other is interval/ratio (Bryman & Bell, 2011, p.349). Plus, it indicates the strength and the direction variables relationship. The spearman value varies between 0 and 1, and it can be positive or negative. If the value is closer to one, it means there is a strong relationship among variables and vice versa. The sign, on the other hand, indicates the direction of the relationship. Moreover, the output from this correlation analysis enables the researcher whether to reject or accept the null hypothesis. This is done by only comparing the p-value with the alpha value. The null hypothesis will be accepted when the P-value is higher than .005 and vice versa.

**H1: is there a significant relationship between tangibility and customer satisfaction?**

Ho: there is no significant relationship between tangibility and customer satisfaction (P>.005).

Ha: there is a significant relationship between tangibility and customer satisfaction (P<.005).

Where,

**Table 10.1: spearman's rho Correlation Coefficient for tangibility dimension**

| | TA |
|---|---|
| Correlation Coefficient | .679** |
| Sig. (2-tailed) | .001 |
| N | 299 |

** Correlation is significant at the 0.05 level (2-tailed).

As it is shown in the table above, the spearman's coefficient value is .679, which implies a strong relationship, and the P-value is less than 0.05. Thus, the null hypothesis is rejected. So, it can be concluded that the tangible dimension has a significant relationship with customer satisfaction.

**H2: is there a significant relationship between reliability and customer satisfaction?**

Ho: there is no significant relationship between reliability and customer satisfaction (P>.005).

Ha: there is a significant relationship between reliability and customer satisfaction (P<.005).

**Table 10.2: spearman's rho Correlation Coefficient for reliability dimension**

| | RL |
|---|---|
| Correlation Coefficient | -.761** |
| Sig. (2-tailed) | .000 |
| N | 299 |

** Correlation is significant at the 0.05 level (2-tailed).

The spearman value (ρ) for reliability also indicates a strong correlation but negative. And the null hypothesis will be rejected since it is less than the alpha value. Thus, reliability has a significant relationship with customer satisfaction.

**H3: is there a significant relationship between responsiveness and customer satisfaction?**

Ho: there is no significant relationship between responsiveness and customer satisfaction (P>.005).

Ha: there is a significant relationship between responsiveness and customer satisfaction (P<.005).

**Table 10.3: spearman's rho Correlation Coefficient for responsiveness dimension**

| | RN |
|---|---|
| Correlation Coefficient | -.716** |
| Sig. (2-tailed) | .003 |
| N | 299 |

** Correlation is significant at the 0.05 level (2-tailed).

The ρ here is -.716 implying that the relationship significant, strong, and negative. Because the p-value is .003, and it is less than the alpha value. For this reason, the alternative hypothesis (Ho) is accepted.

**H4: is there a significant relationship between assurance and customer satisfaction?**
Ho: there is no significant relationship between assurance and customer satisfaction (P>.005).
Ha: there is a significant relationship between assurance and customer satisfaction (P<.005).

| **Table 10.4: spearman's rho Correlation Coefficient for assurance dimension** | AS |
|---|---|
| Correlation Coefficient | .857** |
| Sig. (2-tailed) | .000 |
| N | 299 |

** Correlation is significant at the 0.05 level (2-tailed).

The table above displays the highest ρ value, which is .857. The relation, in this case relatively strong, and it is statistically significant because of the p-value. Therefore, it can be concluded that assurance has a significant relationship with customer satisfaction.

**H5: is there a significant relationship between empathy and customer satisfaction?**
Ho: there is no significant relationship between empathy and customer satisfaction (P>.005).
Ha: there is a significant relationship between empathy and customer satisfaction (P<.005).

| **Table 10.5: spearman's rho Correlation Coefficient for empathy dimension** | EM |
|---|---|
| Correlation Coefficient | .608** |
| Sig. (2-tailed) | .000 |
| N | 299 |

** Correlation is significant at the 0.05 level (2-tailed).

The last dimension (i.e., empathy) has a moderate ρ value meaning there is a moderately strong relationship between variables. And here also the alpha value is higher than the pvalue. Thus, the null hypothesis is rejected.

**Table 11: Summary of results**

| | description |
|---|---|

| | |
|---|---|
| Gap score (P-E) | The OSQ is negative (i.e. -.714) which entails customers expectation of pizza hut service quality was high. |
| Reliability test | The Cronbach's alpha value which is .842 proves that the DINESERV instrument is internally consistent. |
| Validity test | The Factor analysis used in this study ensures that DINESERV is valid in Sweden. |
| Correlation between variables | The result from Spearman rho shows that there is a moderate correlation between service quality dimensions and customer satisfaction. |

**5.6 Summary of findings**

According to Euromonitor international report (2018), chained companies have gained such a strong position in fast food by being well established and, in many cases introducing some of the fast-food concepts to Sweden. They also benefit from strong and international brand names that are recognizable throughout the country, and by visitors, they govern a vast network of outlets in prime locations, and with their size, they can offer their foodservice at very competitive prices. So, in this study, I have examined the relationship between service quality and customer satisfaction in the case of one chain restaurant (i.e., Pizza Hut). The study has also validated the applicability of DINESERV in Sweden. In addition, the internal consistency of the data was scrutinized through a reliability test.

Furthermore, the customer's demographic characteristics were also identified through self-administered questionnaires. As can be seen in Table 1.4, the demographic distribution is not evenly distributed. Males, for instance, counts for 52.8% of the total sample, and the female category holds the second place. The age group also indicates that pizza hut has a lot of young diners (18-36), and they represent more than half of the sample size. Those categorized at the age group between 37-53 are the second largest with a percentage of 30.8. Also, the educational background of the respondents dictates that 41.1% fall under the "undergraduate" category. Those labeled with the bachelor's and master's degree has a percentage of 26.09 and 20.4, respectively.

This study has examined the gap between customer expectation and perception of service quality in the case of pizza hut. As mentioned by Stevens et al., (1995, p.59), the gap score can be maintained after calculating the mean for each dimension. The highest and lowest mean difference spotted on table 1.5 were AS6, AS2, EM2, and EM3 attributes, respectively. The former dimension gets a mean score of 0.69, and the latter three subdimensions get a similar score, which is 0.06.

According to Parasuraman et,al., (1988, p.46), the gap score (P-E) generated from the means can determine customers satisfaction because it is the outcome of the other four gaps. If customers, for instance, perceive the restaurant service quality more than they have expected, then this results in customer satisfaction and vice versa.

Moreover, the tangibility dimension in this study gets a positive score meaning that customers perceive pizza hut tangible features more than they expected. The P-E score for this dimension was 0.23, and this indicates that the customers were excited about the

physical attributes of the restaurant. However, two sub-dimensions, which deals with the visually attractive menu and the comfort of the dining area, get a lower mean score of 0.1. So, the manager must give a great emphasis on these dimensions in order to obtain an even more positive rating from their customers.

The reliability and responsiveness dimension were perceived as low by diners, and it was even negative. Their gap score is –2.23 and –1.99, respectively. It means that the customers perceive the employee's willingness to help them and provide prompt service as inferior. Also, the ability to perform the promised service dependably and accurately were highly expected by the diners. Therefore, it negatively affects the customer's perception meaning the diners have expected this dimension to be high, but they perceived them as low.

The other two dimensions (i.e., assurance and empathy) were rated as good by the diners. It means that the diners get a caring and individualized attention from pizza hut employees. In addition, the knowledge and courtesy of the staff were perceived highly by the customers. In general, the overall service quality of pizza hut perceived as inferior in which the mean score was negative (-.714). It implies that the diner's overall normative or what should happen expectations were high, and the service quality they have perceived while dining is a bit low. Thus, the manager must focus on improving this two-dimensions score since, the higher the score, the more likely it is that the customer will return and will recommend the restaurant to others (Stevens et al., 1995, p.60).

Furthermore, this study has scrutinized the internal consistency of the data using Cronbach's alpha reliability measure. And the result generated, which is $\alpha$=.842 was consistent with the acceptable standard (see appendix 1). In addition, the reliability test for DINESERV data is also consistent with other studies which were conducted by Bougoure & Neu, (2010 & Kim et al., 2003). Thus, the result has proved that the DINESERV instrument is internally consistent.

The other main motive behind this research was to check the validity of the DINESERV instrument as it is mentioned by Bougoure & neu, (2010, p.195), Most studies have focused on developed, Western countries. For the record, the DINESERV model was also developed in New York, USA. Only a few researchers check its validity in various cultural settings, Although the model is valid, reliable, and cost-effective (Stevens et al., 1995, p.60). Since culture affects societies, dining habits, the model has to scrutinized in different nations around the globe to measure their perception of service quality. However, in this study, a validity test was conducted using factor analysis, and the result indicates that DINESERV is a valid measurement of the restaurant (i.e., Pizza Hut) service quality in Sweden. Its validity was also proven in the Malaysian and Korean context by Bougoure & Neu, (2010) & Kim et al., (2003). furthermore, Spearman's correlation used to test the proposed hypothesis in this study. Subsequently, the result from such a measure accepts all of the premises and proves that they are significant, and it also agrees with the gap score result shown in table 1.5.

## CHAPTER SIX: DISCUSSION, IMPLICATIONS AND SUGGESTIONS

In this section, the study result will be discussed and concluded, and the implications they have will be presented. In the end, the limitation encountered and the author's recommendation for further research will be presented.

### 6. Discussion

This study aimed to find out whether the customers of Pizza Hut are satisfied or not with the quality of service obtained while dining. Additionally, the study aimed at determining which service quality dimensions affect Pizza Hut's customer satisfaction and see if there exists a relationship between these two constructs. Moreover, the DINESERV validity in Sweden context was also another aim of this study.

As mentioned in section 1.3 two pieces of research have been conducted to check the validity of DINESERV in the Malaysian and Korean contexts respectively. The study conducted by Ursula-Sigrid & Meng-Keang, (2010) has approved that the DINESERV model is externally valid to measure service quality in the Malaysian restaurants (I.e. KFC, Pizza Hut & McDonald's). They have conducted a factor analysis to check whether the question items involved are loaded in the right variable (dimension) or not. And the result from their study shows that the items involved are loaded under the right DINESERV dimension meaning that the model is measuring the right item and though it is a valid instrument. This agrees with my study in terms of assuring the validity of DINESERV outside of the western culture (USA). Because the factors loaded in my study shows that they are measuring the right item. Furthermore, a study by Hyun et al., (2003) did also tries to examine the validity of DINESERV in foreign-brand casual dining restaurants in the Korean cultural setting. However, they found that DINESERV is not a valid instrument in the Korean context. It was encountered that the model has a dimensionality problem. The first problem was a creation of subdimensions in the tangibles factor and Parasuraman et al., (1991) found that this factor, which was unidimensional in the original SERVQUAL, was divided into two subdimensions. In their study though, it has produced three subdimensions which are the appearance of physical facilities and staff, the menu of the restaurant, and the comfortableness and cleanness of the facilities. And the second dimensionality problem involved the responsiveness factor. In their research, responsiveness never successfully represented its own dimension after all trials of different factor solutions. In my study, however, the factor loading shows that all the dimensions measure the right item and prove the validity of DINESERV in the Sweden cultural setting.

Moreover, this study found that responsiveness has a negative result (i.e. -1.99) which agrees with the study of Sigrid & Meng-Keang, (2010) result. This dimension has also a negative result on various studies that uses the SERVQUAL model to measure service quality. A study made by Edith, (2013), & Nde & Paul, (2010) for instance, has found a negative gap score on the responsiveness dimension. This implies that the customers hold the highest expectation before dining on this particular dimension and for this reason, their perception will be affected easily if not treated properly. Therefore, the manager should give a greater emphasis on this dimension and tell all the staff to act accordingly. Especially during busy times, the employees must shift swiftly to help each other in order to improve the speed and quality of service.

Additionally, the above studies have confirmed that reliability has a negative score which agrees with my result. Especially the second question item on the reliability dimension has the highest negative score implying that the diners hold big expectations. So, the manager should be alert to correct anything that is wrong as quickly as possible. The staffs should also be notified to amend anything which goes wrong especially during busy times. This will as a result raise the customer perception of service quality and result in higher satisfaction level.

The other critical issue adressed in this study was the relationship between customer satisfaction and service quality dimensions. Various authours try to examine these two constructs to check their relationship and they did found a relationship between them (see section 3.5.2). even though the result generated from thier study is similar, the model and technique used to examine these relationship is totally different from one authour to the other. in this study for instance, DINESERV were used to mesure the customers perception of service quality and spearman's rho were used to determine the correlation between these two constructs. consequently, this study found that there exist a relationship between diners satisfaction and service qualtiy of Pizza Hut.

### 6.1 Conclusion

This particular study aims at finding the relationship between service quality and customer satisfaction based on the perception-expectation gap. Moreover, the tool that was used two uncover the underlying relationship between these two constructs was the DINESERV model. The author's intention to choose this model stems from two critical reasons. Unlike the SERVQUAL model, DINESERV was conceptualized by Stevens et al., (1995) to measure the service quality in the case of restaurants. Secondly, two studies conducted in Malaysia and Korea by Bougoure & Neu, (2010) & Kim, et al., (2003), leads my interest in using this service quality model. Their study has examined the validity of DINESERV outside of the western cultural setting. Consequently, this study has examined the validity of the DINESERV instrument in the Sweden context.

Furthermore, factor analysis was employed to test the validity of DINESERV in Sweden, and the result dictates that the factors did measure similar items. It, in other words, means that the factor loading displays similar items in each component. At this point, the study answers one of my research questions by validating the applicability of DINESERV in Sweden restaurants (Pizza Hut). In the process, the internal consistency of the instrument or scale used was tested by the so-called Cronbach's alpha, and the result was satisfactory (i.e., $\alpha$=.842). Thus, it can be concluded that DINESERV is a valid and reliable model to measure the service quality of restaurants in the case of Sweden.

This study has also examined the relationship between customer satisfaction and DINESERV service quality dimension. The gap score clearly shows the level of customer's perception of service quality, and the overall service quality (OSQ) has a negative score. However, in order to test this relationship statistically, a Spearman's correlation rho was employed, and the result proves that there is a negative and positive relationship among these two constructs. Responsiveness and reliability have a negative correlation with customer satisfaction. It implies that their expectations before experiencing the service were high on these dimensions, but their actual perception was low. Tangibility, empathy, and assurance, on the other hand, has a strong correlation meaning that the actual perception of the service was higher than their expectation. Since

customer's perception is affected by the DINESERV dimensions, it can be concluded that there is a significant relationship between them.

Finally, the result shows that the overall service quality of Pizza Hut was perceived as weak by the respondents. Especially, the responsiveness and reliability dimension need a greater emphasis and continuous improvement by the manager. However, the customers were extremely excited on the other dimensions (i.e., tangibility, assurance and empathy).

### 6.2 Implication

The demographic characteristics of this research show that most of the respondents fall under the younger age group (i.e.,18-36), and I believe it is useful information for the manager and the marketing department. The company can use this information for marketing purposes (like promotion and strategy formulation). Thus, when designing a stra-tegy, for instance, Pizza hut needs to tailor and target most of its resources towards this age group. Since, this age group did enjoy eating outside particularly in pizza hut then, giving them discounts or bonus points like the airline industry will be a critical decision to make. The managers need to pay all the necessary attention and effort on this segment because it can cost five times more to attract a new customer than it does to retain an existing one (Jia Wertz, 2018). Besides, capitalizing on those dimensions which were perceived low (i.e. reliability and responsiveness) will be a key to satisfy this customer segment. Furthermore, it will also increase the restaurant's return on investment because the information from the demographic data minimizes the manager's effort in directing their resources and towards this segment. In other words, the managers will not waste their time and resources in finding the right strategy to reach their customers since the age group which buys most of their offering is identified.

According to the gap score result, three of the DINESERV dimensions were perceived as extremely good, implying that the restaurant performance was satisfactory. However, the responsiveness and reliability dimensions have shown a low score. So, this information enables the manager to target their strategy towards improving this dimension. Additionally, this information must be communicated to other staff members for a better result. As suggested by Stevens et al., (1995, p.60), they can also use the DINESERV.PER to measure the customer's perception promptly every two-three months and compare the scores for further improvement.

The result proved that DINESERV is a valid and reliable instrument in the case of Sweden, and this can serve as a cornerstone for future researchers who are interested in examining this vast industry by accompanying DINESERV and other attributes. It will undoubtedly add some useful insight into the literature

### 6.3 Societal implication

As it is mentioned in the literature review (see section 3.5.5), DINESERV is a crucial instrument to determine the service quality of restaurants. Besides, its validity results in different outcomes in different cultural settings. However, this study approves its validity using factor analysis. This result will enable restaurants (in Sweden) to employ this instrument to measure their service quality periodically every two or three months (see section 3.5.5). it will, as a result, give the restauranteurs a chance to spot all the possible

gaps between the customer perception and expectation of the service quality. As a result, the restauranteurs will take the necessary amendments needed to improve their service quality. This scenario will bring a mutual benefit for the customers and the restaurants. On one hand, it will bring a higher return on investment (ROI) for the restaurant. Because all the improvements made after their periodic assessment of the customer perception will result in more satisfied customers. on the other hand, the customers will also get quality service for the price and time they have invested while dining outside.

### 6.4 Limitation

Resources are scarce, and one of the most precious of all is "time." Since I am doing a oneyear master's thesis (which is two and a half months), I was limited to conduct the research only on one location, which is Uppsala, Pizza Hut. Plus, it would have been better if I were able to manage to interview the employees, including those at a higher level just to make the research stretch till the edge and bring many new insights. However, time become scarce for me to go further. The sampling technique employed was a non-probability sampling (i.e., convenience sampling). For this reason, the research cannot be generalized. This is due to a shortage of time, absence of sampling frame, and the cost of doing is a bit expensive.

### 6.5 Recommendation for further research

The restaurant industry is growing at an increasing rate and exploring the impact of service quality on customer satisfaction has become a motive for many scholars. This study has also examined the relationship between these two constructs in the case of Sweden. In addition, the DINESERV was also proved as a valid and reliable instrument. However, there exist numerous factors (like price, technology, product and so on) that can affect customer satisfaction. Thus, future researchers can accompany these attributes with the DINESERV instrument to bring new insight to the literature .

Furthermore, this research has used non-probability sampling, meaning that it cannot be generalized for the whole population. Therefore, I recommend that future researchers employ probability sampling in their studies. Additionally, it will be beneficial if they can manage to assess the impact of service quality in various restaurant types (i.e., upscale, fine dining, casual dining, and so on) .

## CHAPTER SEVEN : QUALITY CRITERIA

This section will outline the different measures that were used to approve the quality of this study.

### 7. Reliability

The internal reliability of the instrument was tested using the so-called Cronbach's alpha. According to Bryman & Bell, (2011, p.159), a computed alpha coefficient will vary between 1 (denoting perfect internal reliability) and 0 (denoting no internal reliability) and the figure 0.80 is typically employed as a rule of thumb to denote an acceptable level of internal reliability. Thus, in this study, the average Cronbach's alpha was ".842" implying that the scale within the DINESERV instrument is internally consistent.

### 7.1 Validity

According to Bryman & Bell, (2011, p.159), Validity refers to the issue of whether or not an indicator (or set of indicators) that is devised to gauge a concept really measures that concept. In this study, factor analysis was employed to check the validity of the DINESERV instrument in Sweden restaurants (i.e. Pizza Hut). As a result, the items under each dimension were loaded in their respective factor. Therefore, it can be concluded that DINESERV is a valid instrument to measure the service quality of Pizza Hut (Sweden, Uppsala).

### 7.2 Replicability

Bryman & Bell, (2011, p.41) has mentioned that, if a researcher does not spell out his or her procedures in great detail, replication is impossible. Conversely, this study has depicted all the necessary procedures more clearly and the methodological choices were strong enough to guide the study till the end. Additionally, the questionnaire was a pre-developed one by Stevens, et al., (1990), which comprises service-quality standards that fall into five categories and it has also strengthen the quality of the data collected. Therefore, this research is replicable if the same procedure is followed and customer's expectations stay static.

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**Appendix I. DINESERV MODEL QUESTION ITEMS**

Based on your experience as a customer, please rank your expectations and your perceptions of the service provided by Pizza Hut. Given below is a list of statements rating on a scale of 1 to 5 and you can circle the number that reflects your feeling.

**Where:** Strongly Disagree (SD) =**1** Disagree (D) = **2**

Neutral (N) = **3** Agree(A)=**4** & Strongly Agree (SA)=**5**

| **DINESERV Statements** | | What is your expectation of Pizza Hut service? (your Expectations) | | | | | | How do you actually found/feel with Pizza Hut services provisioning (Your Perception)? | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Tangibility (TA)** | | **SD** | **D** | **N** | **A** | **SA** | | **SD** | **D** | **N** | **A** | **SA** |
| TA1 | Pizza Hut has visually attractive parking areas and building exteriors. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| TA2 | Pizza Hut has a visually attractive dining area | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| TA3 | Pizza Hut has staff members who are clean, neat, and appropriately dressed. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| TA4 | Pizza Hut has a décor in keeping with its image and price range | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| TA5 | Pizza Hut has a menu that is easily readable. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| TA6 | Pizza Hut has a visually attractive menu that reflects the restaurant's image | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| TA7 | Pizza Hut has a dining area that is comfortable and easy to move around in. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| TA8 | Pizza Hut has rest rooms that are thoroughly clean | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| TA9 | Pizza Hut has dining areas that are thoroughly clean. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| TA10 | Pizza Hut has comfortable seats in the dining room. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |

| Reliability (RL) | | SD | D | N | A | SA | | SD | D | N | A | SA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RL1 | Pizza Hut serves you in the time promised. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| RL2 | Pizza Hut quickly corrects anything that is wrong. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| RL3 | Pizza Hut is dependable and consistent. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| RL4 | Pizza Hut provides an accurate guest check. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| RL5 | Pizza Hut serves your food exactly as you ordered it. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| **Responsiveness (RN)** | | **SD** | **D** | **N** | **A** | **SA** | | **SD** | **D** | **N** | **A** | **SA** |
| RN1 | Pizza Hut during busy times, has employees shift to help each other maintain speed and quality of service | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| RN2 | Pizza Hut provides prompt and quick service. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| RN3 | Pizza Hut gives extra effort to handle your special requests. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| **Assurance (RN)** | | **SD** | **D** | **N** | **A** | **SA** | | **SD** | **D** | **N** | **A** | **SA** |
| AS1 | Pizza Hut has employees who can answer your questions completely. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| AS2 | Pizza Hut makes you feel comfortable and confident in your dealings with them. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| AS3 | Pizza Hut has personnel who are both able and willing to give you information about menu items, their ingredients, and methods of preparation. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| AS4 | Pizza Hut makes you feel personally safe. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| AS5 | Pizza Hut has personnel who seem well trained, competent, and experienced. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AS6 | Pizza Hut seems to give employees support so that they can do their jobs well. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| **Emphathy (EM)** | | **SD** | **D** | **N** | **A** | **SA** | | **SD** | **D** | **N** | **A** | **SA** |
| EM1 | Pizza Hut has employees who are sensitive to your individual needs and wants, rather than always relying on policies and procedures. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| EM2 | Pizza Hut makes you feel special. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| EM3 | Pizza Hut anticipates your individual needs and wants. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| EM4 | Pizza Hut has employees who are sympathetic and reassuring if something is wrong. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |
| EM5 | Pizza Hut seems to have the customers' best interests at heart. | 1 | 2 | 3 | 4 | 5 | | 1 | 2 | 3 | 4 | 5 |

**Appendix II: Demographic questions**

| | |
|---|---|
| **Age** | • **Younger than 18**<br>• **18-36**<br>• **37-53**<br>• **54-69**<br>• **70 and older** |
| **Gender** | • **Female**<br>• **Male**<br>• **Prefer not to say** |
| **Education** | • **Undergraduate**<br>• **Bachelor's degree**<br>• **Master's degree**<br>• **Doctorate degree**<br>• **None** |

**Appendix III: Cronbach's alpha**

| Cronbach's alpha | Internal consistency |
|---|---|
| $\alpha \geq 0.9$ | Excellent |
| $0.9 > \alpha \geq 0.8$ | Good |
| $0.8 > \alpha \geq 0.7$ | Acceptable |
| $0.7 > \alpha \geq 0.6$ | Questionable |
| $0.6 > \alpha \geq 0.5$ | Poor |
| $0.5 > \alpha$ | Unacceptable |

**Appendix IV: Pie chart presentation of respondent's demographic characteristics**

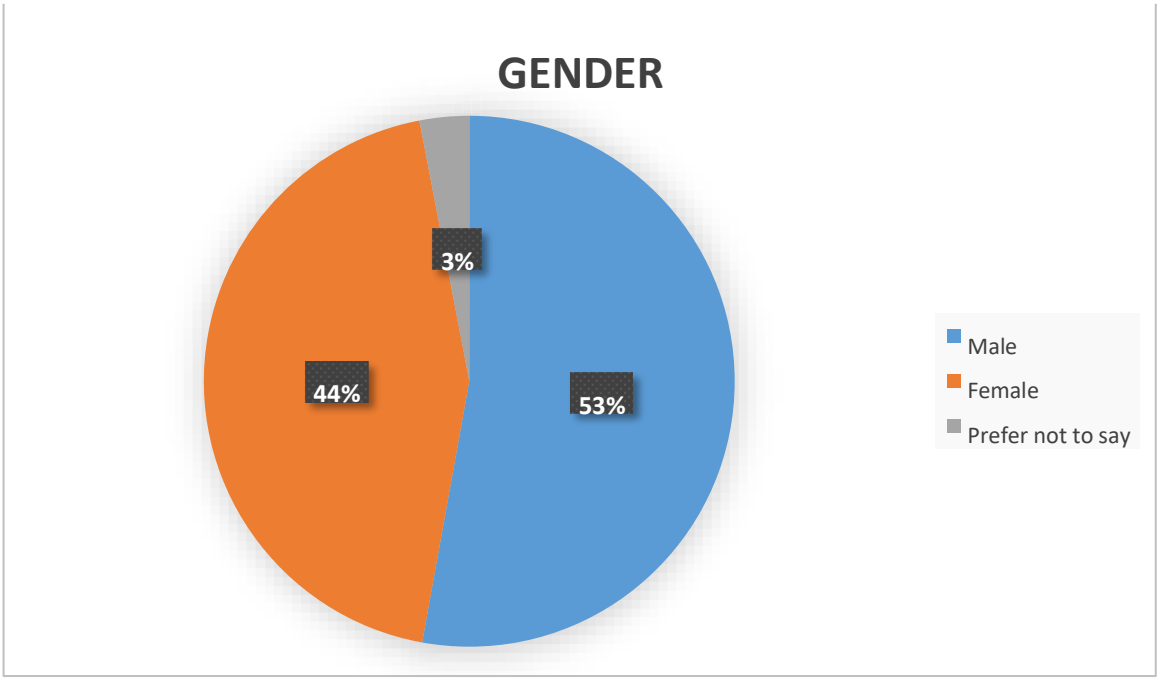


**Figure 1: respondent's gender**

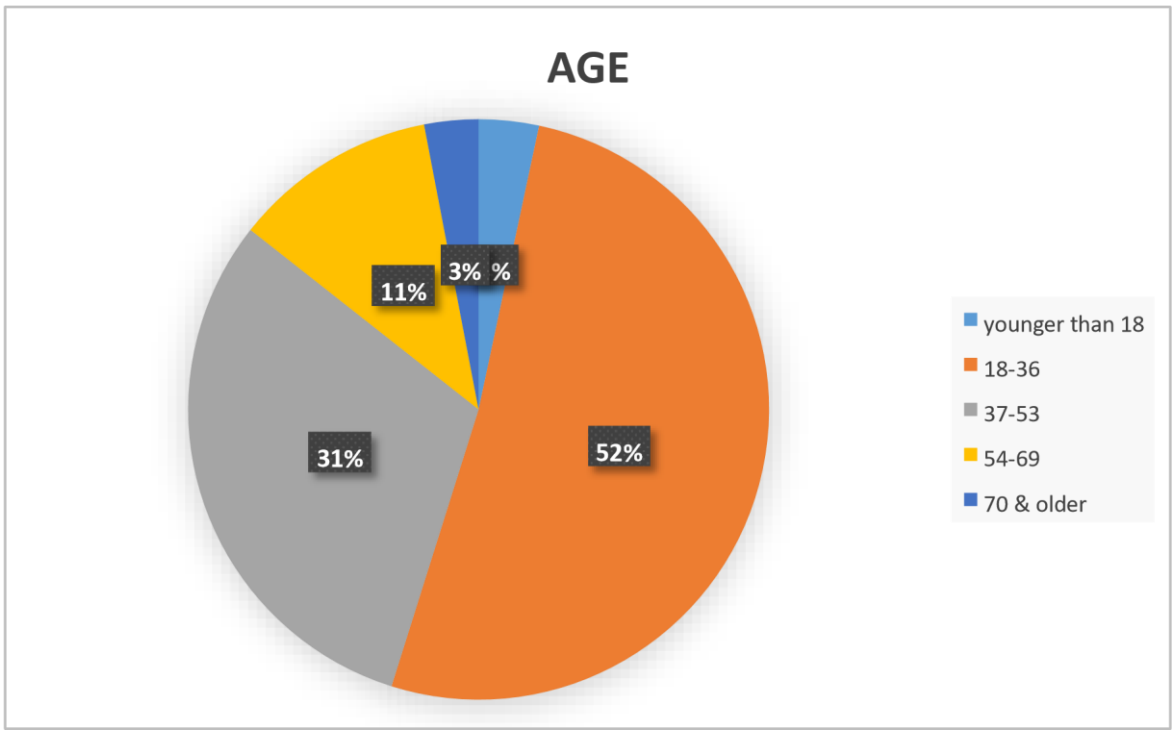


**Figure 2: Respondent's Age**

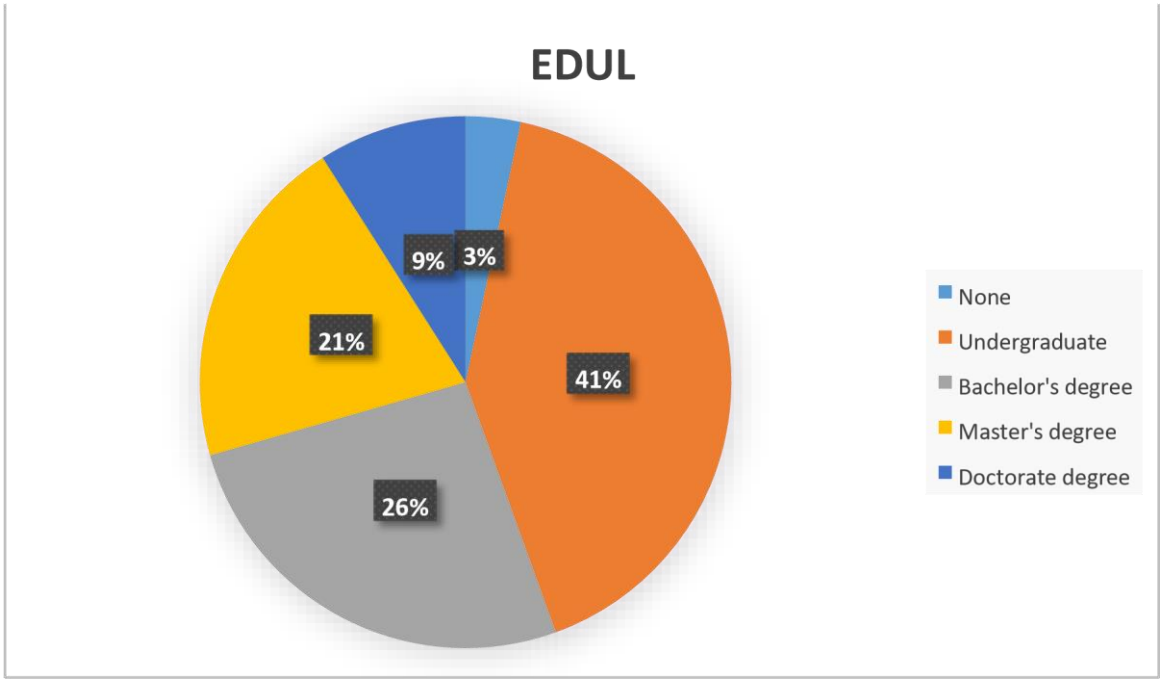


**Figure 3: Respondent's educational background**

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