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# Measuring Customer Satisfaction on Perceived Service Quality

Case: Mobile Telecommunications Service of Bouygues Telecom, France



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#### Abstract

The incessant development of service industries always predisposes customers to their new level of satisfaction. Gaining customer satisfaction is one of the key factors that help companies remain competitive and sustainable. Therefore, measuring customer satisfaction is a perpetual topic conducted by many marketers, as well as researchers from time to time.

The objectives of this thesis are to elucidate customers' perceptions regarding mobile telecommunication services in French mobile telecom market and whether customers are satisfied with the provided services. The thesis focuses on the customers of Bouygues Telecom in various regions of France.

Theoretical framework mainly discusses the two well-known models based on both American and European perspectives which are SERVQUAL model and Nordic model, respectively. These two models are utilized as the integral foundations for measuring customer satisfaction in this thesis. At the same time, the theoretical framework also discusses the related definitions such as service quality, customer expectation, zone of tolerance and customer satisfaction...etc, as well as their interrelations, which later support for the collected data. The research was conducted using based on quantitative approach. More specifically, the data was collected using questionnaire with both self-administrated approach and interviewer-administered approach.

In the empirical research, SERVQUAL model reveals that mobile network quality, responsiveness and reliability are the three most significant dimensions according to customers' perception. Accordingly, those three dimensions are also the most expectation dimensions. Of six measured dimensions, only half of which receive the sufficient level of customer satisfaction which are mobile network quality, tangibles and assurance, leaving the rest dissatisfied. However, the final result of SERVQUAL model discloses a positive relationship between mobile services of Bouygues Telecom and customer satisfaction. Likewise, Nordic model also reveals a positive relationship between the company's services and customer satisfaction in term of processes (functional quality) and final outcomes (technical quality), especially in mobile network quality. The homogeneous results between SERVQUAL model and Nordic model have confirmed the sufficient level of customer satisfaction regarding mobile services of Bouygues Telecom.

#### **KEYWORDS:**

Mobile telecommunication services, customer satisfaction, service quality, SERVQUAL model, Nordic model, France, Bouyques Telecom

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# 1. INTRODUCTION

Over the last decades, people have witnessed a rapid growth in technology. In 1983, the selling of first mobile phone from Motorola called DynaTAC 8000X triggered the development of the mobile phone industry (Foxnews, 2013). However, there was a need for a corresponding service which satisfied the demand of using this new high-tech product. Thus, the initial introduction of mobile telecommunication was made during 1980s in Europe and Finland was the first European country that adopted mobile cellular network, followed by Sweden, Norway and Denmark (ITU, 2009). It was only in 1986 that the first mobile network was launched in France by France Télécome (ITU, 2009). From that moment onwards, mobile telecommunication has become one of the most growing industries over the world. In 2002, the subscribers of mobile phone network remarkably increased to 1.2 billion people and for first time surpassed the numbers of fixed line subscribers (Gruber, 2005, 1). Nowadays, the number of subscribers to mobile telecommunication service has rocketed up to 7 billion people which represent approximately 95.5 percent of world population (ITU, 2014).

The strong development of mobile telecommunication services has generated the harsh technological competitions over the global market and French market is not an exception. The competition in French mobile telecommunication market was triggered when France Télécom lost its monopoly to SFR in 1987. SFR penetrated the market by acquiring an analogous GSM (Global System for Mobile Communication) license which authorized its operation on the French market; the competition became harsher when the tertiary telecom company entered into this market which was Bouygues (Ypsilanti & Bourassa, 2003, 11). To remain competitive, the service operators currently endeavor to enhance their service and keep it up to date so that they can both gain more market share and win upon the customers from the competitors. Indeed, perceived service quality, which is a conformance of service performance to customers' expectation (Radomir et al., 2012, 409), is a very important factor leading to customer satisfaction; in addition, customer satisfaction results in customer loyalty and customer retention

which is critical to the sustainability of a company (Berndt & Brink, 2008, 70). Measuring customer satisfaction is a research topic which is done periodically, especially in the domain of mobile telecommunication service since the rapid change of high technology products lead to new corresponding services. This means customer will have new expectations on new services and new levels of satisfaction are created as a result. Therefore, there were several previous researches about mobile telecommunication services such as measurement of the customer satisfaction with service quality in Macedonian mobile telecom market (Zekiri, 2011, 86-101) or in Jordannian telecom market (Al-Zoubi, 2013, 35-43). In this thesis, I would like to make a small contribution on the continuation of this topic; thus, I will carry out a study about measuring customer satisfaction on perceived service quality in France. Mobile telecommunication services of Bouygues Telecom will be selected as the subject for the research because of two reasons. The first reason originates from my curiosity to understand the perception of other customers regarding the mobile service quality of Bouyques Telecom - the company that I have been using its mobile service. The second is to understand whether customers are satisfied with the mobile phone service of Bouygues or not.

The goal of the thesis is to find out the answers to the following questions:

- What are customers' perceptions about mobile telecommunication service of Bouygues Telecom?
- Are customers satisfied with the mobile telecommunication service of Bouygues Telecom?

From the result, I will attempt to propose some possible recommendations in order to assist partially the company in bringing the optimal services for customers in France.

# 2. LITERATURE REVIEW

# 2.1 Service Quality

#### 2.1.1 Service

According to a definition of Gronroos developed in 1982, services are intangible processes which are described as activities rather than specific tangible products (Skålén, 2010, 83); thus it makes more difficult for customers to image and desires than tangible goods (Gopala et al., 2010, 71). However, service, together with products, is an indispensable part contributing to customers' satisfaction. Service can be an industry, a performance, an output or even a process (Johns, 1999, 954). According to Shridhara (2010, 639) "Service is a social act which takes place in direct contact between the customer and representatives of the service company"

Nowadays, customers appreciate the products with accompanied supporting services since "services are economic activities that create value and provide benefits for customers at specific times and places, as a result of bringing about a desired change in – or on behalf of – the recipient of the service" (Lovelock et al, 2004, 4). The current strategies of many companies also accentuate on service in order to increase the level of customer satisfaction (Lovelock et al, 2004, 14).

There are four attributes of service which are:

Intangibility: this is a primordial feature to differentiate a service from product. For example, in case of Bouygues Telecom, mobile network quality and customer services are "intangible products" of the company; the customers cannot touch or look them. Thus, intangibility creates the difficulties for customers to choose a service more than a tangible product.

Heterogeneity: this attribute refers to the variation in service quality. Because services are destined for specific products, situation and customers, services cannot be

produced in mass production like tangible products. Therefore, the consistency in quality of service will be feebler than the one of product.

Inseparability: Services are made and consumed simultaneously, thus, the process of producing and using services are inseparable. Therefore, a service quality is evaluated based on not only the outcomes of a service but also the process of delivering the service. For example, in mobile telecommunication service, the SIM cards are well prepared for customers before they can use the mobile service. In the process of using this service, the production and consumption of transmissive signal happen simultaneously.

Perishability: this attribute indicates that services cannot be stored for future use. Obviously, we can notice that mobile phone signal cannot be stored and transmit to customers' phones at later day. Therefore, services are easily perishable than tangible products.

(Pride & Ferrell, 2014, 420-421)

#### 2.1.2 Service Quality

Before introducing to service quality, it is necessary to understand some definitions of quality. According to a definition developed by Haider (2001, 8), quality is "the totality of features and characteristics in a product or service that bear upon its ability to satisfy needs". More recent definition, "quality refers to a product or service free of deficiencies or the characteristics of a product or service that satisfies customer needs" (Williams, 2011, 703). Quality is an important determinant in customer satisfaction. It depends on whether the companies sell products or services to customer, the evaluation of quality will be varied according to the different dimensions. There are two kinds of quality which are service quality and product quality. Service quality has five important dimensions which affect the customers' perception of quality. These are tangibility, reliability, responsiveness, assurance and empathy (Parasuraman et al., 1988, 23).

Service quality is a crucial factor to attract and retain customers (Kotler, 2006, 68) because "service quality is a measure of how well the service level delivered matches customer expectations" (Weitz & Wessley, 2002, 340). To supply a good service, a company needs to elaborate service quality in order to enhance the competitive advantages. Customers' perceptions about service quality are reflected from the previous level of satisfaction which they have experienced from the other services. (Gagliano & Hathcote, 1994, 60) and when service quality evaluation are high, customers are more likely to remain with the company; vice versa, when the service quality is low, the customers will defect to the other competitors (Schiffman et al., 2008, 194). Therefore, the enterprises gradually endeavor to minimize the gap between service quality and customers' expectation. Having a good service quality is a strategic approach to the success of the business. Apart of company's product, service quality is a key element to the company to compete with other rivals on the market (Ladhari, 2008, 172).

Likewise, there are other definitions regarding service quality which were developed by Parasuraman and his co-researchers throughout their works from 1985 to 1988. According to them, "service quality is the ability of an organization to meet or exceed customers' expectation; it is a function of difference between service expected and customers' perceptions of the actual service delivered". On the other hand, service quality is also considered as "a global judgment, relating to the superiority of the service". (Rai, 2013, 189)

Evidently, high-quality service will contribute to customer satisfaction. In order to achieve high quality, companies need not only to concentrate on elaborating their "intangible goods" which is mobile network quality in mobile telecommunication service, for instance, but also to emphasize on their customer services. Customer service can be described as the "totality of what organization does to add value to its products and services in the eyes of the customer" (Berndt, 2008, 48). As the competitions in mobile telecom market become more and more intense, superior customer care will be a great competitive advantage to acquire more customers. Excellent customer services can deliver knowledgeable and technical capacities, as well as friendliness and courtesy to

customers. This is because customers want to deal with whom they can trust (Cook, 2011, 2; 18). Thus, the courteous treatments and positive attitudes will impress customers and build the relationships between customers and company (Renee, 2005, 22-23). Additionally, giving individualized cares also helps companies enhance their customer service because customers concerns about the importance of their customs in the companies (Cook, 2011, 20). On the other hand, the way that companies treat employees also affects to service quality. It influences to employee's perception about their ability to serve customers. If the employees' motivations are insufficient, the service quality will be negatively influenced and it engendered low level of customer satisfaction as a result. (Williams, 2011, 705; Berndt, 2008, 88)

There are also three components of perceived service quality which were developed in Nordic model of Grönroos in 1984. Those are:

- Technical quality: this dimension refers to the outcome which customer will receive from service
- Functional quality: it is the interactional process between service-providers and the customers. Functional quality refers to the evaluation of every stage of the process where customers encounter with the services.
- Company image: this component is the perceived images of customers about the company which result from the technical and functional quality. As a consequence, the perceived images will lead to the perceived perception about the company's services.

(Khan et al., 2012, 203-204)

In sum, firstly, service quality is a measurement of how well customers' expectations meet their perceptions. The higher the customers' perception of quality is, the less tolerant they are for the shortcomings. In addition, these customers also consider the attributes of service (heterogeneity, inseparability) are pivotal. Secondly, the end results do not decide the total service quality; it also depends on the delivering process of services. Eventually, the outcomes and the processes are the criteria for customer to evaluate the service quality. (Douglas & Connor 2003, 165-166).

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#### 2.1.3 Quality in Mobile Telecommunication Service

Mobile telecommunication service is a strong emerging industry which is used by a lot of people. So, what is "mobile telecommunication service" exactly? According to a definition, mobile telecommunication service is the service that "carries out the process of sending, transmitting and receiving information over a distance with the purposes of communicating with assistance of some sort of mobile device, such as a mobile phone, tablet..." (Wisegeek, 2014). Its strong impact is also demonstrated on the economy. For example, based on a research by Gruber (2005,1), the periodical retardation in providing mobile telecommunication resulted in losses of US consumers' welfare which is about \$24-50 billion a year. Due to its strong and extensive impact, mobile telecommunications service providers try to pay more and more attention on how to enhance the service quality since customers' perception of service quality is a determinant for the success of services in the market, especially in the customers' satisfaction (Rai, 2013, 113).

As aforementioned, customers' perception about service quality is affected by five dimensions which are tangibility, reliability, responsiveness, empathy and assurance (Parasuraman et al., 1981, 23). However, these dimensions have a general application to all services; each type of service has different extra factors which influence the customers' perception about its quality. Beside five basic dimensions, there are some secondary factors that might affect customers' perception about quality in mobile telecommunication services.

Availability indicates the stability of mobile phone signal. If customers are undesirably out of service, they might consider that the service is of a poor quality .However; this factor is not traditionally considered as an indicator of service quality

Security refers to the protection on customer's privacy. The subscribers always expect the services providers to ensure the confidentiality not only the data on their phone, but also their personal information. The good security will contribute to reliability of the services

Flexibility indicates the ability of the service provider to respond to customers' demands. The customer might wish for the customization on their offered service; thus, the quality is measured by the responsiveness of service providers to customers' requests. It is also assessed by the ability to provide flexible choices which benefit the customers

Simplicity is an important factor which contributes to perceived service quality of customers since customers are likely to use a service without undergoing a complicated process. Simplicity assures the convenience for the customer in registering, installing and using the service.

(Davis et al., 1996, 26-29 adopted from Richters & Rvorak, 1988)

## 2.2 Customer Expectation

Depending on the context, customers have different perceptions about expectation. In term of satisfaction, expectation is the anticipated outcomes which are likely to happen in the purchase process. On the other hand, in term of service quality, expectation will emphasize more on the needs and desires of customers. Customers expect service-providers to offer what they need rather than offering what providers would have. (Parasuraman et al., 1988, 17)

Kotler (1999, 475) stated "expectations are based on the customer's past experiences, the opinions of friends and associates, and marketer and competitor information and promises" or in short, "customer expectation refers to what the customers think a company should provide" (Choi, 2013, 131). Customer expectations, however, are likely to be influenced by the following four factors. The first one is explicit service performances. This is the external information which the customers receive from advertisings, their friends or family, etc... informing about the performance of the

services. The information can be the promises from companies or the opinions of other people about the service. On the contrary, implicit service, as the second factor, performances refer to the underlying aspects which make customer infer about the upcoming received service. These latent aspects can be the general images of company, price of the services. The third factor is word of mouth. This is the information that customers receive from each other. This kind of information is the impartial endorsements from the previous-users about the service. The fourth factor is past experiences forming by the experiences which customers have had from using the other previous services. Thus, past experiences will incline customers to the predicted services that they expect to receive. (Shimomura & Kimita, 2012, 204)

Apart from previous experiences of customers, the expectation is also influenced by the kind of positioning strategies which are employed by the service-providers (Lovelock et al., 2007, 79). However, inconsistency is the trait of customers' expectations; that means they are changed periodically depending on the contemporary technologies, social tendency and the used services. Therefore, even though customers' expectation might be pretty difficult to interpret for marketers, it is vital to grasp the trends of these expectations in every period. This can help the company reduce the hazards to lose its customers to other competitors. (Zeithaml & Bitner 2003, 60)

In a nutshell, customers' expectations are influenced by explicit, implicit service performances, word or mouth, past experiences, as well as positioning strategies employed by service-providers. These factors will create the expected services in customers' minds. The discrepancies between the expected service and perceived service will reveal how customers perceive service quality. Before moving to the part "the relationship between customers' expectation and perceived service", we will discuss about customer satisfaction, as well as its theories and model.

#### 2.3 Customer Satisfaction

#### 2.3.1 Customer Satisfaction

Achieving customer satisfaction is always a desirable goal of all enterprises because the ones which can satisfy the higher level of customer satisfaction are more likely to retain more customers, increase the loyalty and earn more profits (Wicks & Roethlein 2009, 83). Customer satisfaction is not only a goal of the companies but also the controversial concept in service quality or marketing since there are numerous researches which were developed differently about this notion.

Customer satisfaction can be considered as an "attitude" on the series of interactions. It means on every point of interaction between customers and products/services providers, customers will have judgments about the quality of them and their satisfaction depends on the overall evaluation of service quality (Yi, 1990, 104). However, in many models of consumer behaviors, customer satisfaction is defined as the post-purchase evaluation which is the outcome of the services or products (Fornell 1992, 11; Lovelock et al., 2011, 323). In addition, customer satisfaction can also be created by the accumulation of positive service experiences (Jones & Suh, 2000, 147) and the positive experiences obviously increase the customer satisfaction. From these definitions, we can see that the services' outcomes and overall evaluation of services' process contribute to customer satisfaction. In short, customer satisfaction "is the consumers' fulfillment response. It is a judgment that a product/service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment" (Oliver, 2010, 8).

There are also many other definitions about customer satisfaction, as well as controversies about this problem such as consumers can or cannot satisfy with the same level of perceived satisfaction. Currently, with the increasing demands of being satisfied, the satisfaction at the present is assumed as dissatisfaction at a higher level of demand. To reason for this matter, expectation is affected by prior experience. If the prior experiences were already satisfied, the current expectation will be accustomed to the higher level of satisfaction (Vavra 1997, 40-41). Therefore, companies always find new approaches to satisfy the customers from time to time

Theoretically, customers will be satisfied when their expectations meet the delivered outcomes and processes of the service. However, there are some other emotional

factors which affect this perception of satisfaction. First is "emotional response". Customers' emotion will be likely to overwhelm how they perceive an offered service. This means that their satisfaction will incline positively or negatively depending on whether customers are happy or upset at that moment, for instance. There is another factor influencing to customer satisfaction which is called "attributions to service success or failure". In this scenario, customers ascribe subjectively and emotionally to the reasons leading to their satisfaction or dissatisfaction whether a service meets the customers' expectation or not. The last factor is "perception of equity or fairness". For instance, there are two customers paying for the same service; if one receives a superior service, he may have higher satisfaction while the other one will find it unfair and feel dissatisfied. (Brink & Berndt, 2008, 62)

The higher level of satisfaction, the higher possibility that customer will purchase the services or products again. This is important in achieving the loyalty of customers and moreover, it helps the companies increase the market share. (Thomas et al., 2008, 139)

#### 2.3.2 Theories of Customer Satisfaction

#### Assimilation Theory

Assimilation theory was developed from of Frestinger in 1957. According to him, in post-purchase stage, there will be some discrepancies between previous expectation and real product/service performance; customer, unfortunately, may have certain dissatisfaction about given services or products. In order to avoid dissonance, they will modify their current perception about real performance correspond to previous expectations. Otherwise, customers might alter their previous level of expectation so that they meet the current state of the products or services. By doing so, customers attempt to diminish the disconfirmation that they experienced. (Aigbavboa et al., 2013, 49-50)

#### **Contrast Theory**

While assimilation theory emphasizes the curtailment between customer expectation and real product performance, the contrast theory goes in the opposite direction by indicating that customers tend to aggrandize the gap between their expectation and performance of products. The idea was initially introduced by Hovland, Harvey and Sherif (1957). According to the concept of the theory, the customers can possibly experience a considerable dissatisfaction when the products are revealed differently with the advertisings (Raab et al., 2008, 72). However, the underestimation of products from the advertisings can lead to the correspondence between customer expectation and CS (Varra 1997, 45). Other researchers support for this theory (Oliver & Hamming 1994, 17) since it points out the customer's tendency of exaggerating between their expectation and product performance.

#### Assimilation-Contrast Theory

As its name reveals, assimilation-contrast theory is a mergence between two aforementioned theories. At first, the effect of assimilation and contract was discussed by Sherif and Hovland (1957), and then thanks to this notion, the assimilation-contrast theory was "born" in 1973 by Anderson. The idea of this theory is relatively comparable with zone of tolerance (Zeithaml et al., 2013). The failure of meeting customer expectation may happen, but if the deficiencies fall into zone of tolerance of customers, they still adopt the products or service, in this case, assimilation theory prevails (Lamb & Dunne, 2011, 207). Conversely, if the deficiencies are unacceptable, the gap between expectation and product performance will be exaggerated as a result (Vavra 1997, 45).

#### Kano Model

Introduced in 1996 by Noriaki Kano, the theory indicates that the sufficiency of product's attributes might not possibly lead to customer satisfaction; instead, the importance of product's attribute expected by the customers is more likely to satisfy them. This model is based on 3 attributes which are basic attribute, performance attribute and delight attribute. (Kano & Seraku, 1996)

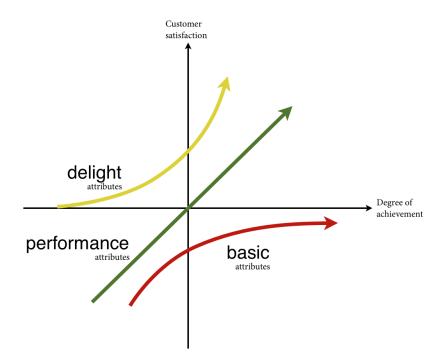


Figure 1. Kano Model (adopted from Holst, 2012)

As being showed in Figure 1, there are 3 different attributes in this model in which one of those must be available in order to satisfy customers:

Basic attributes are the compulsory requirements which are expected by customers. Without them, it may lead to the dissatisfaction of the customers. Otherwise, if these requirements are available, customers would rather see it as obviousness than increase their satisfaction.

Performance attributes represent for the desirable attributes of services from customers. The more these attributes are fulfilled, the more customers will satisfy.

Without delight attributes, customers still accept the provided products. However, if the delightful attributes associate with the products, it will amaze the customers and make them greatly satisfy.

(Bilgili & Ünal 2008, 31-46)

2.4 The Relationship between Expected Service, Perceived Service and Customer Satisfaction

Customers have various expectations based on their personal needs, past experience, as well as the interaction between them and external factors. Thus, the perceived service will change accordingly and perceived service quality will depend on the gap between the customers' expectation and perceived service. High perceived service quality will lead to high customer satisfaction (Saravana & Rao, 2007, 436) because service quality is the antecedent to satisfaction (Drummond & Yeoman, 2011, 147). Then, a positive effect on customer satisfaction will make customers patronize to the service (Fen & Lian, 2005, 60). This is the key factor to maintain the sustainability of an enterprise. At first, we will discuss about the relation between expected services and perceive service.

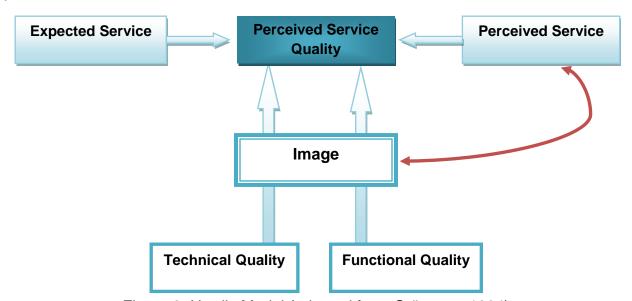


Figure 2. Nordic Model (adopted from Grönroos, 1984)

Developed by Grönroos (1984), the Nordic model presented in Figure 2 states that when the customers' expectation meets the perceived service, it will create perceived service quality. The high or low level of service quality depends on the discrepancy between expected service and perceived service. Perceived service comes from the evaluation of two factors including technical quality (outcome of the service) and functional quality (process of the service). These two factors create the image in customers' mind about the service. (Blythe, 2013, 329-330)

Nordic model, which demonstrates the relationship between expected service and perceived service, was applied in several recent researches. For example, the model was applied to a survey measuring the service quality on customer satisfaction which was conducted in Starbucks Coffee, Indonesia. The result revealed that both technical quality and functional quality had a positive influence on customer satisfaction (Sutawidjaya et al., 2012, 264-281). Another research was conducted by Boardman (2010) to measure customer perception of service quality in call center environment. This research revealed that the customers were more satisfied with quality of the service (technical quality) comparing to interaction during the service (functional quality) (Boardman, 2010, 86). Likewise, Nordic model also applied to a research to assess the quality of e-banking service for individual customers in Vietinbank in Da Nang, Vietnam. This research unveils that customers had positive perception on the interaction between them and Vietinbank (Vo & Ho, 2012).

Different customers' expectation will lead to various service qualities. Each customer will have different levels of satisfaction. Some customers are over-satisfied with the perceived service quality, some satisfy sufficiently while some are not. In this case, the level of satisfaction depends on "zone of tolerance". The theory "zone of tolerance" demonstrates the relationship between perceived service quality and customer satisfaction. Berry & Parasuraman (1991, 59) defined "the zone of tolerance is a range of service quality that a customer considers to be satisfactory. A performance below the tolerance zone will engender customer frustration and decrease customer loyalty. A performance level above the tolerance zone will pleasantly surprise customers and strengthen their loyalty". The zone of tolerance will be narrowed down or broadened out depending on desired level or adequate level of the services.

The first level is desired service which refers to "the level of service the customer hopes to receive" (Zeithaml et al., 2009, 77). At this level, the customers will expect their hopes and wishes about the products or services will be fulfilled but the failure to meet these requirements of customers will lead to disenchantment.

The second level is adequate service (Zeithaml et al., 2009, 77) which indicates for the minimum level of service quality that customers will accept. The gap between adequate service and desired service is called "zone of tolerance". Customers tend to be more lenient for the shortcomings and this represents for the "minimum tolerance expectation" (Miller, 1997). For example, a customer pays for a basic package deal for a mobile phone service; he will be more tolerating for the occasional retardation of the signal or the failure of sending message. However, if the service quality drops below adequate service, it will evidently lead to customer dissatisfaction. Moreover, it also depends on the importance of services' attributes; customers' expectation can vary accordingly. The higher the level of expectation, the narrower the zone of tolerance is. This means that the customers stipulate higher level of adequate service and they are less tolerating for the deficiencies (Zeithaml et al., 2009, 81).

Another problem is whether expectation remains similar or varies to the different subcategories in a same industry. The answer is that desired services is relatively similar for subcategories and varies in different industries (Zeithaml et al., 2013, 57-58). Back to the previous example, a customer pays for a basic package deal for his phone, then, his "desired service" will be merely making a phone call and sending messages. However, when he pays for the premium package, his level of "desired service" will be upgraded, he will expect to use internet with more downloadable data or make video phone calls and so on. Meanwhile, expectation for adequate services changes differently towards sub-categories for the same industry.

The zone of tolerance is also fluctuated by other determinants. While desired service is affected by personal needs and lasting service intensifiers, adequate service is influenced by:

Temporary service intensifiers: This factor makes customers aware of the urgent needs for the service. The level of adequate service will be remarkably higher in order to satisfy the immediate demands.

Perceived service alternatives: the availability of increasing alternatives will lead to the higher level of adequate service, thus the zone of tolerance will narrow down. This means if there are a lot of available mobile phone services providers, the customers will have higher expectation for the minimum criteria to be satisfied.

Customer self-perceived service role: this indicates that the customers put their own roles in the services. They know exactly what they wish for. Customers communicate directly their expectations to the service providers. Therefore, the level of adequate service is higher comparing to the unspoken expectations

Situational factors: in this circumstance, the level of adequate service is lower since customers are more understandable for the undesired situations that happen to the enterprises.

Predicted service: predicted service means the anticipated outcomes and processes that the customers expect to be delivered from the service. For example, when a customer pays for an expensive service, they would expect for a special treatment and be less tolerating for its poor quality.

(Brink & Berndt, 2008, 57-58)

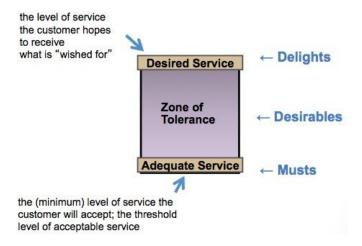


Figure 3. Zone of Tolerance (adopted from Berdigan, 2013)

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Based on Figure 3, we can see if the provided services are under adequate service, it will lead to dissatisfaction and vice versa, it will delight the customers if what they received is exceeding the desired service. Otherwise, if the provided products or services stay in the zone of tolerance, then it indicates that customers are satisfied with the provided services. However, in this circumstance, the level of satisfaction will vary depending on where actual performance of services falls within zone of tolerance. (Ferrell & Hartline, 2011, 372)

## 2.5 SERVQUAL-Conceptual Model of Service Quality.

#### 2.5.1 SERVQUAL Model

Because of the intangibility, service quality is an abstract concept which is hard to measure exactly, the intangibility increases the customers' sense of risk comparing to tangible goods (Moon, 2013, 91-92). Moreover, there is always needs for a proper instrument to evaluate systematically the service quality; thus, this is a recurrent topic which is done periodically by many researchers and many models, as well as hypotheses have been developed. Apart from aforementioned "perceived service quality model" of Grönroos. In this part, I will present another model of service quality-SERVQUAL model

In 1985, Parasuraman, Zeithamal and Berry developed a theory called SERVQUAL. Up till now, this model have been widely adopted and used globally to measure customer perception of service quality in a spectrum of service industries (Mauri et al., 2013, 139). This model is a multi-item scale which is also used to measure the customers' perception about service quality; moreover, it demonstrated the practicality in assessing the gap between expected service and perceived service (gap 5).

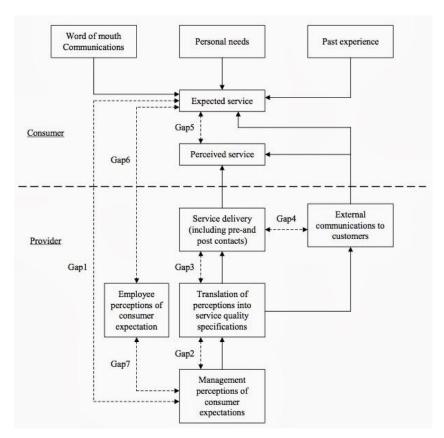


Figure 4. SERVQUAL model (Grajeda, 2011 adopted from Parasuraman et al., 1985)

According to this model, there are 5 gaps which were identified by Parasuraman and his co-researchers in 1985.

Gap 1: This gap represents the disparity between understanding about customers' expectation of company and real customers' expectation. The possible reasons could be lack of interaction with customers. The company may result in manufacturing the undesired services for customers and this affects the customers' perception about service quality

Gap 2: The companies might grasp the customers' expectation but fail to build transform these expectations into an appropriate service. The paucity of available initiatives or resources could be the causes to this problem.

Gap 3: The gap means the company has already succeeded in designing the services; however, it meets the failure in delivering a good service to the customers.

Gap 4: The gap presents the disregards of company in communicating with customers which means the company might not inform the processes of service so that customers can follow up or the delivered services do not correspond with what customers have been introduced.

Gap 5: This final gap refers to the disparity between customers' expectation and perceived service since the overall evaluation of service from customers does not meet their expectations.

(Lamb et al., 2012, 301-302)

Initially, SERVQUAL model had 97 attributes which were identified by Parasuraman in 1985. However, after undergoing two purifications, 97 assessing attribute for service quality were simplified to 10 dimensions and 5 dimensions respectively afterwards. The initial purification refined from 97 attributes to 10 dimensions which are tangibles, reliability, responsiveness, competence, courtesy, credibility, security, communication, understanding and access. In the second stage, these ten dimensions had been abridged to 5 dimensions which are tangibility, reliability, responsiveness, assurance and empathy. (Parasuraman et al., 1985, 18-23)

First Purification	Second Purification
Tangibles ——	Tangibility
Reliability	Reliability
Responsiveness	Responsiveness
Competence Courtesy Credibility Security	Assurance
Communication Understanding Access	Empathy

Table 1. The relationship between first purification and second purification (adopted from Parasuraman et al., 1985, 23)

Reliability represents the capacity of a company that can provide the services as it promised. It means the company can provide the products which correspond to its advertising; its delivery service arrives punctually and so on for instance. Of five dimensions, reliability is considered to be the most important one in determining customer perception about service quality (Shridhara, 2010, 649).

<u>Responsiveness</u> means the companies can response quickly and willingly to the customer's problems, they ready to serve customers and provide express services.

<u>Empathy</u> indicates considerate cares for customer's problems and understanding their desires. Understanding specific needs of customers and their value helps to build the relationships between the company and customers. The essence of empathy is indicating the importance of customers through personalized and customized services.

<u>Assurance</u> is demonstrated by professional manner of sellers which is capable of creating beliefs, trust and confidence for customers

<u>Tangibility</u> relates to infrastructures, uniforms or facilities of the company. These are the physical surroundings when customers encounter with services

(Pride and Ferrell, 2014, 431 adopted from Parasuraman, 1985)

# 2.5.2 The Application of SERVQUAL model

SERVQUAL model measures the discrepancy between expected service and perceived service (gap 5). Thus, customers' expectation and customers' perception of service quality will be assessed based on 5 SERVQUAL's dimensions

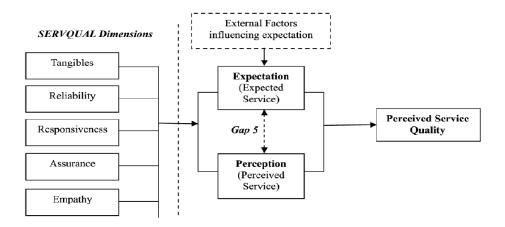


Figure 5. Measuring Service Quality Using SERVQUAL model (Modified from Parasuraman et al., 1988)

In the very beginning, SERQUAL model had been tested by applying 5 dimensions (tangibility, reliability, responsiveness, assurance and empathy) to measure the quality of five different services before being widely disseminated. The results were positive since there were low levels of correlation among the dimensions which partially proved the reliability of the dimensions. Then, the validity of the model was tested; the first prerequisites were satisfying reliabilities and internal consistence which had been proved. However, they were not sufficient for the validity; the conceptual and empirical criteria were also tested. At first, the model satisfied with the thoroughness of the scaled construct and domain, as well as areas which the scale items represented. Then, a

survey was conducted to make a comparison between SERVQUAL scores and score received by the respondents to the questions regarding service quality. The further empirical data also revealed to confirm for SERVQUAL's validity. (Parasuraman et al., 1988, 24-30)

However, there were several drawbacks regarding theoretical and operational aspects of SERVQUAL model. Some notable criticisms had been suggested by Buttle (1996, 10-11). The first one mentions that SERVQUAL only focuses on the processes of the service, which ignores its outcomes. Secondly, the high level of correlation among five dimensions of the model will degrade the accuracy of the final results. Thirdly, there were still limited evidences that service quality was measured based on the gaps between customers' expectations and their perceptions. (Buttle, 1996, 10-11)

Even though this model received some criticisms and there are also many obstacles in assessing the reliability or validity of a model, it is still widely adopted to measure service quality and customer satisfaction. For example:

In airlines industry, SERVQUAL model had been applied on a research about Turkish Airlines for measuring the customer satisfaction. SERVQUAL model was combined with SKYTRAX criteria in order to measure the gap between Turkish Airlines' services and 5-stars services. The result concluded that the dimensions pertaining to image, meal and passenger transferring services had the strongest effects on the level of customer satisfaction. (Degirmenci et al., 2012, 294)

The one of the most recent studies using SERVQUAL model was applied on service quality of commercial bank of Ceylon PLC Trincomalee District in Sir Lanka. In this research, 56 customers were selected randomly in Trincomalee District in order to measure their level of satisfaction on the service quality of local commercial banks. The research concluded that empathy and tangibility were the major determinant to customer satisfaction and there was a strong relationship between service quality and customer satisfaction. (Navaratnaseelan & Elangkumaran, 2014, 359-363).

In healthcare service, SERVQUAL was used to assess the quality of healthcare services provided by Shahid Elmi Hospital in Iran. 100 patients were chosen randomly in the hospital for the research. In the result, it showed that they perceived service quality higher than what they had expected. (Ajam et al., 2014, 273)

In hotel industry, the employees' perception of service quality was assessed in Namibian hotel and this researched also applied SERVQUAL model. The data was collected from 77 employees working for two large hotels in Windhoek. The collected data reveals that the employees had lower perception than expectation of service quality. (Musaba et al., 2014, 533-544)

In the domain of telecommunication, SERVQUAL model was utilized for the research conducting in Jordanian Telecom sector in 2013. This study measures the effect of service quality on customer loyalty in the Jordanian mobile telecom market. The results revealed a relatively high level of loyalty of Jordanian customers. Likewise, three dimensions which are responsiveness, empathy and reliability affect the most to customer loyalty. (Al-Zoubi, 2013, 35-43).

Another example of SERVQUAL model's application in the domain of telecommunication is to measure the customer satisfaction with service quality in Macedonian mobile telecom market. In this research, reliability and responsiveness are the most significant dimensions for customer satisfaction. However, the results showed that the customers were not satisfied with the provided mobile services from mobile operators. (Zekiri, 2011, 86-101)

In the most recent research which was conducted in August, 2014, SERVQUAL model was applied to measure the service quality and customer loyalty in Sri Lankan mobile telecommunication sector. This research was conducted on 300 customers, which later revealed that dimensions of responsiveness and empathy influenced significantly to

customer loyalty. The final results confirmed the positive relationships between service quality and customer loyalty in Sri Lankan mobile market. (Karunaratna, 2014, 20-26)

From several aforementioned examples, we can see that the application of SERVQUAL model is widely implemented for many service-industries in order to assess the service quality. Thus, the rigor of this model in measuring service quality has been partially proven. For that reason, SERVQUAL model will be one of the main instruments that I utilize to measure the service quality of Bouygues' mobile telecommunication service. However, five dimensions of this model need to be modified from the original depending on each domain of service industry; another dimension can be supplemented such as price or products so that it can enhance the accuracy of the collected data and final result.

# 3. BOUYGUES TELECOM

# 3.1 Introduction to Bouygues Telecom

French market is ranked as the third position among the biggest telecom markets in Europe and fifth position in OECD countries. By the end of 2012, France had 70,5 million of mobile phone service subscribers (Ypsilanti & Bourassa 2003, 11). This big mobile telecommunication market is currently shared by four companies which are Orange, SFR, Bouygues and Free. Bouygues was originally founded in 1952 under the name of Entreprise Francis Bouygues (EFB). In the beginning, the company focuses on civil engineering and public works activities in France. Until 1972, EFB has been officially renamed to Bouygues. In 1986, Bouygues was the world largest construction firm. It was also the time when the first French mobile network was launched by France Télécom who had a monopoly position in telecommunication. One year later, Bouyques became the largest shareholders of TF1 which is the leading mainstream TV channel in France. Until 1994, Martin Bouygues- CEO of Bouygues decided to diversify its activities in telecommunication by creating Bouygues Telecom. Bouygues officially participated in the harsh competition in French telecommunication market; it has been licensed with GSM standard which authorized Bouygues' operation as the tertiary mobile phone network in France after Orange and SFR. Then, in 2008 and 2011, Bouygues had floated fixed-line services, as well as B&YOU (a web-only mobile telephony services) respectively. By the end of 2012, Bouygues Telecom had affirmed its position in French mobile telecommunication market by possessing 17% of the market share with 11.143 million subscribers and exceeded 4 billion euro in turnover. In the first guarter of 2014, Top Employers Institute has awarded Bouygues Telecom with "Top Employer" label. The company has honorably received this label for five years consecutively (Bouygues Telecom Website 2014). (Bouygues' Corporation, 2012, 6)

Bouygues Telecom focuses its operation on French market with 9,092 employees (Bouygues Telecom Website 2014). In mobile telecommunication service, Bouygues' mission is to enhance the digital experience for its customers. The company always keeps the innovativeness so that it can add more values to its products and services (Bouygues' Corporation 2012). The company built its image by placing the quality of its

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services and the customer relationship at the heart of its strategy. Moreover, Bouygues Telecom also concerns about its social responsibilities. The company has launched a campaign to encourage the recycle of used mobile phone in 2013. Bouygues Telecom also acts according to ISO 50001 certification processes to reduce energy consumption in the company (Bouygues Telecom Website 2014).

#### 3.2 Mobile Telecommunication Service of Bouygues

From its flotation in French mobile telecommunication market, Bouygues Telecom always demonstrates its innovativeness. Bouygues is the first company which accessed the market by inventing paying by plan instead of paying per minute and that first unlimited plan was launched in 1999 (Tranchard et al., 2006). In 2011, Bouygues launched its digitalization strategy by introducing B&YOU which is a plan allowing customers to have unlimited calls or use mobile internet with a lower cost. Up till now, B&YOU is one of the cheapest plans in French mobile telecommunication market which offers unlimited call, SMS for 9.99 euro per month. However, in 2012, Bouyques' competitor-SFR introduced to the market with the latest technology which was 4G LTE (Long Term Evolution). SFR had temporarily covered entire Île-de-France region with its 4G network (ZDNet, 2013). 4G network of Bouygues Telecom, unfortunately, arrived relatively late in the market in 1<sup>st</sup> of October, 2013 with 5 plans ranging from 15 euro to 65 euro. However, currently, by July of 2014, coverage of Bouygues' 4G network is the most extensive comparing to the others (Sanyas, 2014). 4G network is included in all Bouygues' mobile phone plan so that the customers can enjoy the high performance of the service. Bouyques Telecome is also flexible in offering the mobile plans for customers who travel outside of France with no hidden costs. (Bouygues' Corporation 2012); (Bouygues Telecom Website, 2014)

Customer service is also an important part of overall mobile telecommunication service of Bouygues Telecom. The company arranged about 2000 advisers at call centers and 2500 sale advisors in stores so that they can help with customers' problems. In addition; customers can order company's service or products on internet and pick up at the nearest store. The investment on multichannel customer care has represented Bouygues' special concern to customers' benefits. (Bouygues Telecom Website, 2014)

# 4. METHODOLOGY

The previous chapters have presented the theoretical background for this study. In this chapter, I will present the selected research approaches, the design of questionnaire, sampling, the chosen model of measurement as well as the measurement method for empirical research of customer satisfaction in order to answer for the main following questions:

- What are customers' perceptions about mobile telecommunication service of Bouygues Telecom?
- Are customers satisfied with the mobile telecommunication service of Bouygues Telecom?

## 4.1 Choice of Research Methodology

At first, this study will measure the customer satisfaction of mobile telecommunication service which means, it will assess the customers' expectation and their perception about a service quality. Since this study requires collecting the data on a wider scope of Bouygues' customers in order to make the realistic and valid conclusions, the quantitative method will be selected to gain insights from customer's point of view. Quantitative entails a large amount of involved respondents in order to yield the sufficient data for generating practical statistics (Saunders et al., 2009, 151). The basic element of this structural method is numerical data (Saunders et al., 2009, 151). The qualitative data will be more informative but more biased comparing to numerical data and the number of subjects in qualitative research will also be more limited compare to quantitative (Saunders et al., 2009, 151). Moreover, quantitative method can reduce the partiality and increase the objectiveness of the accumulated data. Additionally, the collection of data is performed via a survey. Survey allows researchers to have more controls over the research process, and it generates the data of representative respondents from the whole population which is highly economical (Saunders et al., 2009, 144). This is another reason why quantitative is considered as a methodological choice.

Secondly, as the methodological choice for this study is quantitative method, there are two types of quantitative studies which are descriptive study and experimental study. According to Teddlie & Tashakkori (2009, 23) "descriptive research is conducted with the goal of exploring the attributes of a phenomenon or the possible relationship between variables"; likewise, "the descriptive research approach is a basic research method that examines the situation, as it exists in its current state" (Williams, 2007, 66); meanwhile, experimental study describes the "cause and effect" scenario, that means the researchers will explore the casual effect of the dependent variables when they change an independent variables (Williams, 2007, 66). Since this study only "examines the situation as it exists in its current state" which is to measure customer satisfaction based on service quality, the descriptive study will be more appropriate than experimental studies. Thus, we will choose descriptive study to measure customer satisfaction in mobile telecommunication service of Bouygues Telecom.

Lastly, this study utilizes both primary data and secondary data. Primary data can be obtained directly through the survey which destine for the main purpose of the study. Meanwhile, secondary data are acquired from various sources such as Emerald, documentary, books, and journals...and were used for the theoretical background of service quality and customer satisfaction. (Saunders et al., 2009, 256-259)

#### 4.2 Method of Measurement

SERVQUAL will be one of the main instruments, which was used to measure the perceived service quality in this study. There are several reasons why I chose SERVQUAL as the measurement method. First, as being aforementioned (see Chapter 2.5.2), SERVQUAL is widely adopted in many researches pertaining to mobile telecommunication services. Secondly, "customer satisfaction is based upon level of service quality that is provided by the service providers" (Saravana & Rao, 2007, 436). Likewise, perceived service quality leads customer satisfaction (Ziethaml et al., 2006, 106-107), it is the antecedent to satisfaction (Drummond & Yeoman, 2011, 147). Thirdly, SERVQUAL model was more succinct and easier to use comparing to the other models such as multilevel model (Dabholkar et al., 1996) or hierarchical model (Brady & Cronin, 2001) which comprise many dimensions and sub-dimensions. Thus, this model

has stronger generality and flexibility and the researchers can add more dimension which destine for their studies. In addition, SERVQUAL model was exerted more universally by many researchers than the other models as aforementioned demonstrations. Therefore, SERVQUAL will be appropriate for measuring the customer satisfaction of mobile telecommunication service.

The customer satisfaction will be measured via perceived service quality. The perceived service quality is measured by collecting the average gap score of the SERVQUAL dimensions (tangibility, reliability, responsiveness, assurance and empathy) between customers' expectation and perceived service. I will add one more dimension which is "mobile phone network". This dimension is relevant to the case and helps to enhance the accuracy of the result. The respondents will be asked to give the score on their previous expectation and their current perception about the mobile telecommunication service of Bouygues based on Likert scale. The scale is developed by Rensis Likert in 1932 which includes 5 points from 1 (strongly disagree) to 5 (strongly agree) (Best practices, 2007). This scale has been also verified for its reliability and widely adopted my many researchers in their surveys.

The disparity between expected variables and perceived variables will be calculated. Based on these data, the overall service quality score can be computed and we can conclude about the customer satisfaction:

Service quality (Gap Score) = Perceived Service (P) – Expectation Scores (E)

The average gap score of each dimension will be calculated by:

 Average gap score of each dimension = Total score of each dimension / Number of each dimension's items

Then, the overall score of service quality will be calculated by:

 Overall service quality score = Total average gap score of all dimensions / 6 (dimensions) The overall score of service quality will reveal whether customers satisfy with the service quality of Bouygues or not. If the result is positive, it means that customers satisfy with the service quality; otherwise, if the result is negative, it means that customers do not really appreciate the service quality. Based on the results, we can also scrutinize on which dimension needs to be improved.

Perceived service quality model (Nordic model) of Grönroos (1984) will also be utilized as the second main instrument to measure customer satisfaction. While American perspective of service quality is based on SERVQUAL model, European perspective is more likely based on Nordic model (Kang & James, 2004, 268). Even though Nordic model is not disseminated as widely as SERVQUAL, it also demonstrated its effectiveness in many recent researchers (see sub-chapter 2.4). Thus, apart from SERVQUAL model, Nordic model will be applied in my study. The customer satisfaction in this model will be measured based on the perceived service image of the company and that image results from technical quality (outcome) and functional quality (process) of the service (Khan et al., 2012, 203). Therefore, the technical quality and functional quality will be measured in order to know about the satisfaction of customers using Bouygues Telecom's service.

#### 4.3 Question Design

As the study uses quantitative as the research method, the data needs to be collected from a large amount of respondents. Thus, semi-structured interview will not be suitable in this research since they contain open-ended questions which collect the data from fewer amount of subject and destine for qualitative data (Saunders et al., 2009, 362). Therefore, I will select questionnaire using both self-administrated approach (internet questionnaire, postal questionnaire, delivery/collection questionnaire) and interviewer-administered approach (structured interview). These two approaches help with maximizing the amount of respondents in a large scope. The purpose of questionnaire is to collect primary data that is needed for analyzing about customer satisfaction. This technique is cost-effective since this study has some limitations regarding financial support. All closed questions are prepared beforehand. Closed questions in the

questionnaire "provides a number of alternative answers from which the respondent is instructed to choose" (Saunders et al., 2009, 588, 362).

The questionnaire was divided into five parts.

At first, the questionnaire begins with demography which asks the respondents about their gender, age.... This part aims to collect the personal information of the respondents.

In the second part, the respondents were asked to rank 6 dimensions related to SERVQUAL model according to their level of importance. This part aims to scrutinize how important of each dimension in customers' perceptions and whether these degrees of importance affect to their expectations. In other words, we can see whether the level of importance influences to customers' "zone of tolerance".

Then, third and fourth part aims to measure the customers' expectation and their perception about the mobile telecommunication service of Bouygues in France. The questionnaire mainly comprises 23 statements (see Appendix) which are rephrased and supplemented based on 22 original statements according to 5 dimensions of SERVQUAL model and one added dimension. This adjustment aims to ensure the suitability of the context and validity of the research. The 22 original statements are:

"Tangibles (TA)

TA1: XYZ has modern-looking equipment

TA2: XYZ's physical facilities are visually appealing

TA3: XYZ's employees are neat-appearing

TA4: Materials associated with the service are visually appealing at XYZ

Reliability (RN)

RN1: When XYZ promises to do something by a certain time, it does so

RN2: When you have a problem, XYZ shows a sincere interest in solving it

RN3: XYZ performs the service right the first time

RN4: XYZ provides its services at the time it promises to do so

RN5: XYZ insists on error-free records

Responsiveness (RS)

RS1: Employees of XYZ tell you exactly when services will be performed

RS2: Employees of XYZ give you prompt service

RS3: Employees of XYZ are always willing to help you

RS4: Employees of XYZ are never too busy to respond to your requests

Assurance (AS)

AS1: The behavior of employees of XYZ instills confidence in customers

AS2: You feel safe in your transactions with XYZ

AS3: Employees of XYZ are consistently courteous with you

AS4: Employees of XYZ have the knowledge to answer your questions.

Empathy (EM)

EM1: XYZ gives you individual attention

EM2: XYZ has operating hours convenient to all its customers

EM3: XYZ has employees who give you personal attention

EM4: XYZ has your best interests at heart

EM5: Employees of XYZ understand your specific needs"

(Parasuraman et al., 1991, 448-449)

The last part aims to measure the process (functional quality) and outcomes (technical quality) of the mobile phone service of Bouygues Telecom. Since "there is no underlying latent variable associated with a technical quality" (Kang & James, 2004, 268), I will develop two questions in this parts in order to measure about the overall outcome of the mobile phone network service and the outcome of customer service. In addition, because functional quality represents for the overall process of service (Khan et al., 2012, 204), the statements will be made to measure the using process of service; the respondents are asked to rate on their level of satisfaction during the utilization of the service. Four statements will be made based on four factors affecting customers'

perception about quality in mobile telecommunication services which are availability, security, flexibility and simplicity (Davis et al., 1996, 26-29)

### 4.4 Sampling & Data Collection

This research focuses on the users of Bouguyes's mobile phone service, or to the ones who have used mobile phone service of this operator. As the data cannot be collected from the entire population in this circumstance and the list of specific Bouygues' customers remains unknown, non-probability sampling will be applied on this research (Saunders et al., 2009, 213). Besides, because the implementation of the survey is limited on time frame and financial resources, the convenience technique will be appropriate for this study. This technique is going to be conducted by asking the subjects to participate haphazardly (Saunders et al., 2009, 241). Although likelihood of sample being representative is not as high as quota sampling technique, the homogeneity of the samples in this research, which are customers who have used the Bouygues' mobile phone service, can increase the likelihood for the samples.

The invitations for survey are going to be delivered to all the potential participants via emails and Facebook network. The invitation is attached with an internet link leading to the website where all of the questions are displayed. The questionnaire will be dispatched haphazardly through my contacts. Crucially, the information of recipients is from France; thus the questionnaire will be delivered in both French and English version. Regardless of respondent's ages, nationalities, jobs....as long as the respondents have already used the Bouygues' mobile phone service, then the collected data are legitimate. The content of the questionnaire and invitational letter can be found in Appendix.

#### 4.5 Reliability and Validity of the Research

Reliability indicates for the consistency of the findings' results (Jackson, 2014, 443). There are four types of common threats to the reliability of a research, namely, subject or participant error, observer error, subject or participant bias and observer bias. In this research, the highest possible threat is subject or participant error since the survey might be conducted at the inopportune time for the respondents. That means the questionnaire will be sent or asked at the respondents' inconvenience and the

respondents will not concentrate answering the questionnaire, which will influence to the results. To minimize this risk, I attempt to reach the largest possible amount of respondent by sending emails or messages on Facebook in the beginning of the research so that they will have time to answer the questionnaire within eight days. Likewise, in term of structured interview, I will be flexible and patient so that the respondents can answer to the questionnaire upon their convenience. In addition, I will also analyze the collected data considerately and justly in order to avoid of deviating the actual results (observer error) or being partial in interpreting the results (observer bias). Furthermore, even though partiality from participants cannot be avoided completely, the closed questions in the questionnaire will hopefully minimize this risk since the respondents do not have to answer the questionnaire by their own words like openedend questions. (Saunders et al., 2009, 156)

Validity is described the relevance of the study to what it intends to measure. If the results are considered to be invalid, then they cannot be used to answer for the research questions (Saunders et al., 2009, 157). Similar to reliability, there are several threats of validity to this research including history, testing, instrumentation, mortality, maturation and ambiguity about causal direction (Jackson, 2012, 230-233). Of these threats, instrumentation poses the highest possible threat to this study. Since the research uses two different models to measure customer satisfaction, there might be some errors in using different instruments. The collected data may yield different results from two models. In order to adhere to the validity, the design of each question is considered rigorously so that respondents will not misunderstand the meaning of the question. If one model reveals a contradictory result comparing to another, then the data is invalid. However, a small disparity is still acceptable.

#### 4.6. Generalization of the Research

Generalization refers external validity which the research's application is dispersed equally in other circumstances (Saunders et al., 2009, 158). The geographic coverage of this research is in various region of France. However, because of the limited time frame, the research, perhaps, will not disperse equally in every region of France. In the other words, the geographical coverage will be influenced by the location where I or my

friends reside for instance. Thus, the results might only represent emphatically the opinions of customers from a specific region. Moreover, the generalization in this thesis may not apply since customer satisfaction is only measured at Bouygues Telecom without considering to three other competitors such as Orange, SFR and Free. Therefore, it is only applicable to Bouygues Telecom.

## 5. DATA ANALYSIS

This fifth Chapter will present the results from the collected data (see Appendix). The following sub-chapters will cover the general information of respondents, the results from both SERVQUAL model and Nordic model. The theories in Chapter 2 not only describe the models which help to find out the results for this research, but also support in explaining the received results throughout this chapter.

### 5.1 General Data of the Sample

The survey was carried out in many regions in France, especially in Île-de-France region. The questionnaire was sent through the contact list of me and a friend of mine on Facebook and by email. At the same time, the questionnaire forms were made to collect the data through both arranged interviews and random ones which were taken place at some central places in Paris. The website "esurv.org" was used as the main tool for recording the data from the respondents. The survey was conducted within eight days from 4<sup>th</sup> to 11<sup>th</sup> of November. The survey can be answered in either French or English.

In total, there were 732 sent questionnaires, as well as interviewed ones; however, I only received 575 responses. Unfortunately, out of 575 responses, 434 people revealed that they were using mobile services from other services operators or they were pretty occupied for the time being to answer the questionnaire. Only 141 responses are acceptable; among those, there were 2 responses answer "No" to the first question which asks whether they have used mobile service from Bouygues Telecom before but they still completed the questionnaire. Thus, I eliminated those responses from the questionnaire in order to ensure the accuracy of the result. All the questions were set up as "required response"; therefore, no skipped answer was found. Finally, 139 responses are qualified which represents 24.2% of the received responses and 18.9% of the total respondents.

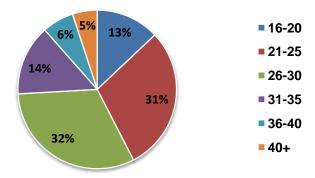


Figure 6. The age groups of respondents

There were 81 female respondents, leaving 58 males. 31.65% of the total respondents were aged from 26-30 which represent the biggest number of respondents. The next was 29.5% people aged from 21-25%; hence, we can notice that there are large amount of young people using mobile services of Bouygues Telecom. The least was people aged over 40 which only occupied for 5.04%.

#### 5.2 Main Results from SERVQUAL model

The following parts were designed to gain insights about the customers' perception about service quality of Bouygues Telecom and their level of satisfaction. At first, there is a question which aims to measure the importance of the SERVQUAL's dimensions (1988) according to customers' perception. The results of this question can later reveal the information about customers' "zone of tolerance"

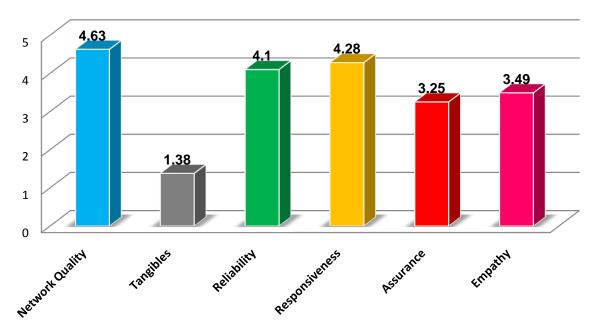


Figure 7. Importance level of each dimension.

The respondents were asked to rank the level of importance of each dimensions on the scale from 1 (least important) to 6 (most important). According to the result, most of respondents evaluated mobile network quality as the highest dimensions with the average score is 4.63. Responsiveness and reliability represent for the second and third important factors with 4.28 and 4.1 points respectively. This result shows a small difference with a theory which mentions that reliability is the most important dimension of five original SERVQUAL's dimensions (Shridhara, 2010, 649; Pride & Ferrell, 2014, 431). However, since I have added mobile network quality as a supplemented dimension; thus the result may have certain deviations from the theory. Additionally, the importance of dimension also depends on the type of service industry, as well as factors that influence customer's perceptions such as explicit and implicit service performances, word or mouth, past experiences (Shimomura & Kimita, 2012, 204).

The least important factor is tangibles which indicates for the appearance of Bouygues's representative stores and their infrastructures. This result might derive from the fact that customers only come to the representative stores when they take SIM cards and sign the contracts with the operator in the beginning. However, during the utilization of mobile phone services, customers do not frequently come to the stores, even the

malfunctions happen with their network, they tend to call for the service operator rather than coming to the stores.

The next part will analyze the expectation and perception of respondents on each dimension. The respondents were asked to rate their expectation and their perception of the service quality of Bouygues Telecom on the scale from 1 (totally disagree) to 5 (totally agree). The average gap score between expectations and perceptions will reveal level of customer satisfaction on each dimension.

The first dimensions in the analysis is network quality

Mobile Phone Network Quality	Expectation Mean Score	Perception Mean Score	Gap Score
Transmission of mobile phone signal is strong and stable	4.33	4.36	+0.03
Transmission of mobile data (3G & 4G) is strong and stable	4.3	4.31	+0.01
The coverage of mobile phone signal network is extensive	4.26	4.28	+0.02
Total Mean Score	4.29	4.32	+0.02

Table 2. Expectation and perception regarding Mobile Phone Network Quality

As being considered the most important factor, customers expect a lot on this dimension. Mobile phone network is an "intangible goods" which plays an indispensable role during the using process of customers. Bouygues Telecom has done a good job in producing these "intangible products" for customers; even though customers expect pretty high for each statement, all of their perceptions have surpassed their expectation on this dimension. The highest is the transmission of mobile phone signal with the average gap score is 0.03. The followings are transmission of mobile data and coverage of mobile phone network with the same points (0.01). As being mentioned in subchapter 3.2, the coverage of Bouygues' 4G network is the most extensive comparing to the other competitors (Sanyas, 2014), this might explain for the reason why customers are satisfied with this dimension.

The second dimension is tangibles. These are the physical surroundings when customers encounter with services (Pride and Ferrell, 2014, 431). In this case, tangibles

are the appearance of Bouygues Telecom's representative stores, its infrastructure, as well as the appearance of its employees.

Tangibles	Expectation Mean Score	Perception Mean Score	Gap Score
The representative stores' appearances are clean and attractive	3.89	4.21	+0.3
Physical facilities of the representative stores are modern and visually appealing	3.88	4.2	+0.31
Employees appear neatly and well-dressed	3.91	4.35	+0.44
Total Mean Score	3.89	4.25	+0.35

Table 3. Expectation and perception regarding Tangibles

The expectation of customers meets quite well with the service quality. It presents the remarkably positive gap score. Out of 3 statements, customers seem to be satisfied the most with the appearance of employees. Indeed, Bouygues' representative stores are kept quite clean and have modern outlooks. The statement "employees appear neatly and well-dressed" has the highest perception mean score with 4.35 and its gap score is 0.44. Noticeably, the expectation scores are relatively low for all three statements. Based on the result, of 5 dimensions, tangibles gain the least average expectation score but it has the second highest perception score. As a result, the total mean score of this dimension is +0.35 which indicates that Bouygues Telecom is doing a great job in maintaining its physical appearances.

The next dimension is reliability which represents the capacity of a company can provide the services as it promised. It means the company can provide the products which correspond to its advertising; its delivery service arrives punctually and so on for instance. (Pride and Ferrell, 2014, 431)

Reliability	Expectation Mean Score	Perception Mean Score	Gap Score
When the service operator promise to do something by a certain time, they do it	4.3	4.19	-0.1
When a customer has a problem, the service operator shows a sincere interest in solving it	4.28	4.11	-0.16
The mobile phone service is performed right the first time	4.09	4.61	+0.51
The received service's benefits are	4.33	4.07	-0.25

correct as being mentioned in the contract.			
Price of mobile phone service is correct as being mentioned in the contract	4.34	4.17	-0.16
Price of each package deal is reasonable and affordable	4.48	3.88	-0.59
Total Mean Score	4.3	4.17	-0.12

Table 4. Expectation and perception regarding Reliability

Among the statements used to measure reliability dimension, the highest one is "price of each package deal is reasonable and affordable"; however, this statement also presents the most negative gap score between expectation and perception which is -0.59 point. Therefore, the company should give more attention on this foible. Even though the prices of Bouygues Telecom's package deal is not the highest one in the current market comparing to Orange or SFR, the flotation of Free in 2012 has slashed the normal price to the cheapest one and it has become a redoubtable competitor regarding pricing matters (Cuny, 2013). This can explain why customers expect more on the price of package deals. The perception scores are relatively high in most of statement but they cannot prevent the overall score of reliability from having a negative result. The problem can lay in "under promise" (Phiri & Mcwabe, 2013, 100). They might not receive the benefits or price which have been advertised or promised before; or they receive some additional charges from the services. Therefore, as being shown in Table 4, the statement measures whether customer received the benefits or prices as being mentioned in the contracts receive the negative score with -0.25 and -0.16 respectively. This connects to the contract theory of Hovland, Harvey and Sherif (1957) which suggested that customers could be strongly dissatisfied when the products or services turn out to be contradictory with the previous promises or advertisings. Nevertheless, the statement "the mobile phone service is performed right at the first time" receives the most satisfied opinions with +0.51 point in the gap score. Unfortunately, the overall customers' perception regarding reliability is under-satisfied with -0.12 as the total average score. Since "reliability and service quality go hand-in-hand and are complementary for each other" (Mishra & Sandilya, 2009, 6), the company should have

better concerns on this insufficient dimension in order to enhance the quality of provided services.

The fourth dimension is responsiveness. This dimension means the companies can respond quickly and willingly to the customer's problems, they are ready to serve customers and provide express services. (Pride and Ferrell, 2014, 431)

Responsiveness	Expectation Mean Score	Perception Mean Score	Gap Score
Employees give you prompt technical assistance	4.41	4.2	-0.2
Employees are willing to help you	4.42	4.19	-0.23
Employees are never too busy to respond to your requests	4.24	4.17	-0.07
Total Mean Score	4.35	4.19	-0.16

Table 5. Expectation and perception regarding Responsiveness

Even though responsiveness is considered as the second importance by the most of respondents, it has the highest average expectation score among six dimensions with 4.35 point. As the customers set higher criteria for the fulfillment of the service, the "adequate service" will increase which consequently curtails the zone of tolerance (Zeithaml et al., 2009, 77). In this scenario, it will be more challenging to conquer customer satisfaction. Despite the fact that all three statements have the negative gap scores, it is hard to conclude that customer are not satisfied with this dimension because of one possibility. As the customers increase the "adequate service", their "desired service" will also increase; this expectation score might represent for their "desired service" which means the service that they hope or wish for. Thus, their perception still remains in zone of tolerance but have not reached to the level of "desired service". In the other words, according to Kano model, the customers could have been satisfied with basic attributes and even performance attributes, but their perceptions have not arrived at delight attributes (Bilgili & Unal 2008, 31-46). Nevertheless, if the average expectation score represents for customers' "adequate service", then Bouyques Telecom has not genuinely satisfied most of customers' demands. It is possible that the company might focus on hard skills training pertaining to service knowledge, technical skills or administrations while disregarding the employees'

attitude in the way they deal with customers (Cook, 2011, 19). Likewise, if the employees do not feel motivated adequately in their works, this problem may affect the provided services which remarkably influences to customer satisfaction (Williams, 2011, 705).

The fifth dimension is assurance. It is demonstrated by professional manner of sellers which is capable of creating beliefs, trust and confidence for customers. (Pride and Ferrell, 2014, 431)

Assurance	Expectation Mean Score	Perception Mean Score	Gap Score
The behavior of employees instills confidence in customers	4.31	4.16	-0.15
You feel safe in your transactions with Bouygues Telecom	4.12	4.41	+0.28
Employees are consistently courteous with you	4.1	4.32	+0.22
Employees have the knowledge to answer your questions	4.13	4.31	+0.18
Total Mean Score	4.17	4.3	+0.13

Table 6. Expectation and perception regarding Assurance

The assurance dimension was measured by four statements relating to customers' transaction, behaviors, courtesy and knowledge of employees. Three of which have the positive gap scores; noticeably, most of respondents felt that they received sufficient assurances in transaction with Bouygues Telecom with +0.28 point. It is also important that employees are knowledgeable, technically able and courteous to the customers since they want to deal with whom they can trust (Cook, 2011, 18). The courteous treatments, positive attitudes promote a positive first impression and help to built a strong customer service foundation (Renee, 2005, 22-23). The result shows that technical knowledge and courtesy of Bouygues Telecom's employees also well meet with customers' expectations. Although, customer expectations slightly exceed their perception regarding employee's behaviors instilling customers' confidence. However, with the total mean score is +0.13, customers are pretty satisfied with the overall assurance aspect of the company.

The last dimension is empathy. Empathy indicates considerate cares for customer's problems and understanding their desires. (Pride and Ferrell, 2014, 431)

Empathy	Expectation Mean Score	Perception Mean Score	Gap Score
The service operator gives you individual			
attention	4.02	3.95	-0.06
Employees understand your specific			
needs	4.09	4.02	-0.07
Bouygues Telecom respects the			
customers' benefits	4.12	4.11	-0.01
Bouygues Telecom takes into account			
your opinions or complaints	4.16	3.88	-0.28
Total Mean Score	4.1	3.99	-0.1

Table 7. Expectation and perception regarding Empathy

Customer want to be valued and treated individually, they want to see the importance of their customs in the enterprises (Cook, 2011, 20). Thus, the failure of caring individually could lead customers to dissatisfaction. Bouygues Telecom, however, should give more attentions on this aspect since all four statements receive a negative gap score between customer expectation and their perception. Even though most of the respondents felt that their benefits are being respected with a trivial gap score is -0.01, the company should care more about the specific benefits of individual customer. Understanding specific needs of customers and their value helps to build the relationships between the company and customers. This empathy engenders trust and contributes to long-term success of the company (Pride & Ferrell, 2014, 16). As a whole, the dissatisfaction of customers on empathy dimension has resulted in -0.1 as the total mean score

Dimension	Expectation Mean Score	Perception Mean Score	Service Quality Gap Score
Mobile Network Quality	4.29	4.32	+0.02
Tangibles	3.89	4.25	+0.35
Reliability	4.3	4.17	-0.12
Responsiveness	4.35	4.19	-0.16
Assurance	4.17	4.3	+0.13
Empathy	4.1	3.99	-0.11
Total Mean Score	4.18	4.2	+0.02

Table 8. Average score of expectation and perception of all dimensions

Overall, the results in SERVQUAL model divulge that responsiveness receives the highest expectation from most of respondents; unfortunately, it also has the most negative gap score (-0.16) among dimensions. The followings are reliability and mobile network quality, respectively. These dimensions correspond to three most important dimensions according to customer perception (see Figure 9). In addition, the average expectation score does not display the remarkable disparities among those three dimensions. Therefore, the result supports for the theory that customer expectation will vary according to the importance of services' attribute. The more important an attribute, the higher level of expectation will be; which will predispose to the contraction of customer's zone of tolerance (Zeithaml et al., 2009, 81); and then, the high level of expectation will make customers less tolerate about the shortcomings of the provided services (Douglas & Connor, 2003, 165-166) which results in high negative scores of responsiveness (-0.16) and reliability (-0.12) dimension. In another aspect, as customers have high level of expectation on a certain dimension, they might be more tolerating for the shortcomings of the service. That means they would distort their current perception of the services so that it meets their previous expectation. This assimilation theory of Frestinger (1957) might explain for why the average perception score of mobile network quality can exceed its high average expectation score. However, it is undeniable that Bouyques Telecom has offered a good mobile network quality which necessarily leads to the satisfaction of its customers on this dimension.

Among all dimensions, mobile network quality is the most satisfied dimensions by most of respondents with the highest average perception score (4.32), followed by assurance (4.3) and tangibles (4.25). The average gap score shows that customers are not fully satisfied with half of the dimensions which are reliability, responsiveness and empathy. However, with the positive average gap score in total (+0.02), we can conclude that customers' expectations have met their perceptions and overall, they have positive perceptions regarding mobile service quality of Bouygues Telecom according to SERVQUAL model.

#### 5.3 Result from Nordic Model

The last part will reveal the result about customer satisfaction based on Nordic model. This model measures perceived service quality of customers based on technical quality and functional quality. Technical quality refers to the outcome which customer will receive from service while functional quality is the interactional process between service-providers and the customers (Khan et al., 2012, 203-204). These two components will shape customers' perception about image of company's service quality and thus, we can see whether customers are satisfied with the provided services or not.

At first, the respondents are asked to rate their level of satisfaction during the utilization of Bouygues Telecom Mobile Service. There are four statements were made based on four factors (availability, security, flexibility and simplicity) suggested by Richters & Rvorak (1988) which aim to measure "functional quality" in mobile telecommunication service.

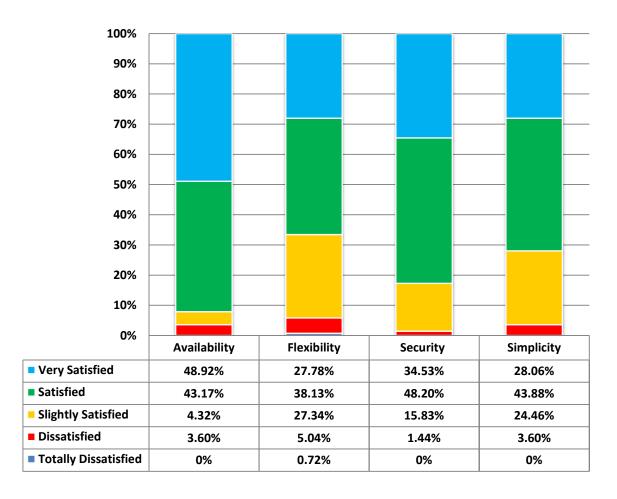


Figure 8. Level of customer satisfaction regarding Functional Quality of Bouygues

Telecom's mobile services

When the respondents were asked about their level of satisfaction about the availability of mobile network, most of them gave a "very satisfied" level for this factor which represents for 48.92%, leaving 43.17% for "satisfied" and no one has rated "totally dissatisfied" for this factor. This result relatively corresponds to the results which measured the mobile network quality using SERVQUAL model (see Appendix). No one seems to totally disagree about the network quality of Bouygues Telecom. Additionally, only 3,6% of customers are dissatisfied with the network quality and 4.32% are slightly satisfied with it. This proves that most of customers rarely experience "out of service" situations. However, since the majority of respondents are using mobile services in central region (Île-de-France) they will have less chance to experience the undesirable situations with their mobile network. Therefore, the result might contain the partiality.

Flexibility indicates the ability of service providers to response customers' requests (Davis et al., 1996, 28). Customers seem to be less satisfied with this factor since 27.34% answers "slightly satisfied" and there is one respondent who answered "totally dissatisfied" with the service. This factor has close relationship with "empathy dimension" of SERVQUAL, which also revealed an overall negative result on this dimension. Thus, we can see that customer service of Bouygues Telecom have not been invested as much as its "intangible product" which is mobile network quality.

In the two last factors, the respondents were asked whether all of their personal information is strictly secured and the subscribing procedures to the mobile service are quick and convenient. Most of them give "satisfied" level for both security and simplicity factor which occupies 48.20% and 43.88% respectively. However, customers seem to be more satisfied with security than simplicity since the respondents, who answered "very satisfied", occupy high percentage with 34.53%. Therefore, the result demonstrates that Bouygues Telecom currently holds the good simplicity and high security in its mobile service. It means that the company currently has a good protection on customers' privacy; at the same time, customers are using service without undergoing complicated processes (Davis et al., 1996, 27-29).

Finally, the customers are asked to rate their level of satisfaction on the overall outcome of the service

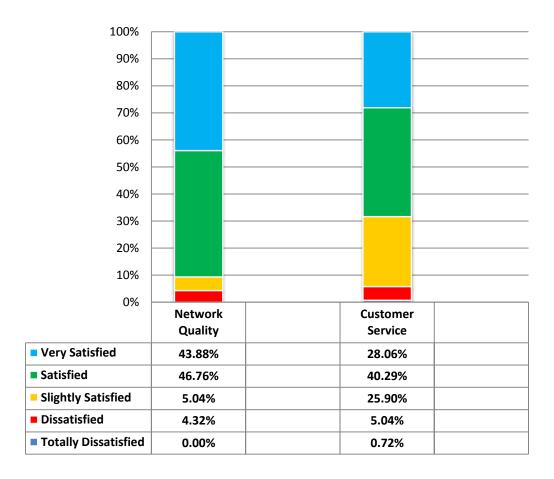


Figure 9. Level of customer satisfaction regarding Technical Quality of Bouygues

Telecom's mobile services

When being asked about the final outcomes which respondents received from the services, the most of respondent rate "satisfied" as their level of satisfaction for both network quality and customer service with 46.76% and 40.29% respectively. Meanwhile, percentage of respondents who are only slightly satisfied with the customer service is still noticeably higher than network quality with 20,86% difference. There are still a remarkable amount of "slightly satisfied", "dissatisfied" and "totally dissatisfied" customers which represents for 31.66% in total.

Regarding the final perceived outcome of network quality, it shares the same similarities with functional quality when availability factor gains a relatively similar amount of customer in each level of satisfaction; at the same time, it has a higher satisfactory level comparing to the other factors (see Figure 10). Therefore, customers are really satisfied with mobile network quality throughout their using processes and the final outcomes of the services. This supports for the theory regarding attribute of the service mentioned in sub-chapter 2.1.1 which is inseparability. Services are made and consumed simultaneously; thus, if the customer satisfied with the process of services, they would also be very likely satisfied with the outcome of the service (Pride & Ferrell, 2014, 421).

## 6. CONCLUSION

The objectives of this thesis are to elucidate customers' perceptions regarding mobile services of Bouygues Telecom and whether customers are satisfied with the received services. This chapter will present the final answers for these matters; at the same time, some managerial recommendations will be proposed from the answers.

#### 6.1 Main findings

# What are customers' perceptions about mobile telecommunication service of Bouygues Telecom?

Customers perceive the quality depending on how well the provided services meet their expectation (Weitz & Wessley, 2002, 340). Thus, SERVQUAL model was exerted to assess perceived service quality of customers regarding this respect. The model measures the gap between customer expectation and customer perception. According to their perceptions, mobile network quality, responsiveness and reliability are three most important dimensions when considering the quality of the service. Accordingly, three most important dimensions are in turn the most expected dimensions; this finding corresponds to the theory "zone of tolerance" of Berry & Parasuraman (1991). Even though customers are satisfied with the mobile services in general, they do not actually have positive perceptions with half of the dimensions (responsiveness, reliability and empathy) which are related to the aspect of customer service. Meanwhile, they have the highest appreciation for mobile network quality of the company. Overall, the final result from SERVQUAL model reveals that customers have positive perceptions towards the provided services; in addition, a high perceived service quality will necessarily leads to customer satisfaction (Ziethaml et al., 2006, 106-107). Therefore, we can conclude that customers are satisfied with the mobile services of Bouygues Telecom.

# Are customers satisfied with the mobile telecommunication service of Bouygues Telecom?

In another facet, customer satisfaction is based on the evaluation of the interactive processes between customers and services providers (Yi, 1990, 104), as well as the TURKU UNIVERSITY OF APPLIED SCIENCES| Thien Phuc Nguyen

post-purchase evaluation which is the outcomes of the services (Fornell, 1992, 11; Lovelock et al., 2011, 323). The Nordic model of Grönroos (1984) has encompassed all these respects and it is utilized to support the result of SERVQUAL model. The results in Nordic model reveal that customers are satisfied with functional quality and technical quality of Bouygues Telecom's mobile services. In the other words, both using processes and final outcomes have had positive influences on customer satisfaction. This is demonstrated by the amount of customers who have their level of satisfaction at "satisfied" and "very satisfied" has prevailed the ones who are only "slightly satisfied", " dissatisfied" and "totally dissatisfied" for all statements; in addition, mobile network quality has gained higher level of satisfaction comparing to customer service in both technical quality and functional quality (availability). This result is relatively similar to the one in SERVQUAL model which shows that the majority of customers are satisfied with the mobile service quality of Bouygues Telecom, especially with mobile network quality dimension. Despite the fact that when customers evaluate the quality of services, emotional factors can overwhelm how they perceive the real offered services (Berndt, 2008, 22), the homogeneity of the results from two models have confirmed that most of customers, altogether, are satisfied with mobile services of Bouygues Telecom.

### 6.2 Managerial Recommendations.

This thesis is served as an update to the recurrent topic which is measuring customer satisfaction, especially in the domain of mobile telecommunication service. The study has yielded the information pertaining to customers' perception and their level of satisfaction about mobile service of Bouygues Telecom. The specialized departments of Bouygues Telecom could consider this paper to a certain degree as a supportive research to enhance the satisfaction of their customers.

The findings imply that customer service sector needs to be ameliorated. In the harsh competition where service operators hardly hold a proprietary technology in the mobile telecom market, enhancing customer service is a pivotal strategy to preempt customer satisfaction against the other competitors. This can help the company not only win upon more customers but also gain more market share. Bouygues Telecom has done a great job in providing mobile network with high quality that satisfied majority of customers;

however, there is still a remarkable amount of customers who are not really satisfied or dissatisfied with the customer service. Three dimensions which are responsiveness, reliability and empathy in SERVQUAL model have not met customers' expectation; beside, over 30% of respondents have not been sufficiently satisfied in the way that how Bouygues Telecom offered them the desired services in Nordic model.

To improve these issues, at first, the company should emphasize more on soft skills training for the staff force which deals directly with the customers. Their skills of promotion, communication, negotiation should instill the confidence in customers. The employees should flexibly tackle the customers' problem without having customers waiting so long and giving an unsatisfactory response. The relationships among the departments in the company needs to be connected firmly so that employees do not confront any dilemmas in resolving customer's problems and those problems can be resolved absolutely. Furthermore, more employees need to be arranged in customer service sector so that customer's issues can be tackled in succession and in the earliest time.

Moreover, the company should try to moderate the information conveying to the customers beforehand. That means they should not over-promise the benefits which customers will receive in advertisings or other communicational channels. The company needs to act accordingly with the contracts or what they have promised in order to ensure the reliability from the customers.

Customers expect to be individually attentive. Thus, Bouygues Telecom needs to understand the specific desires or requests of customers and responses to them effectively. In order to achieve this, the company should invest on a large research investigating about customers' demands according to each segment. Each target group has the definite requirements for their desired services; by understanding these desires, the company can provide the services accordingly. The employees' performances should also be monitored in order to assure that there is no mistake in dealing with each customer's circumstance. Furthermore, when the company receives the complaints from customers, they need to responses them the precise and satisfactory answers or

actions, those answers or actions should not be equivocal which can cause the confusion for customers.

Even though most of customers have been satisfied with the mobile network quality, the appearance of the store, the simplicity or security of the service, etc... the company should not disregard these factors. Without their supportive roles, the service quality of the company could have been resulted in dissatisfactions. Those dimensions should also have better elaboration in order to ensure a long-term loyalty of customer towards the company.

#### 6.3 Limitation and Possibilities for Further Researches

Since the research has some limitations concerning time frame and financial resources, the result cannot cover every regions of France. At the same time, comparing to the population of France, the number of respondent is still pretty limited. Therefore, the result inevitably has some partialities. If the disposition of respondents was distributed equally entire France with larger volumes, the result would be more accurate. This drawback should be considered for further researches of Bouygues Telecom or whoever studies on the same topic.

Additionally, both SERVQUAL model and Nordic model which were developed long time ago were applied to this study to measure customer satisfaction. Although they are practical and widely adopted in many researches from time to time, these models were developed based on perspectives from more than 20 years ago, thus they are somewhat obsolete. Moreover, customer satisfaction is nondescript and changeable, especially in the domain of technology like mobile telecommunication. Therefore, there is a need for a new model which is originally developed in recent times for further researches.

Due to the rapid change of technology and customer satisfaction, any further researches pertaining to customer satisfaction are worth of receiving high consideration in order to have deeper understandings about this perpetual topic.

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# **APPENDIX 1**

# **Questionnaire Result:**

## **Level of Importance of Each Dimension**

Dimensions	1	2	3	4	5	6
Mobile Phone Network Quality	0	8	15	35	43	38
Í	0%	5.76%	10.79%	25.18%	30.94%	27.34%
Tangibles	111	12	7	9	0	0
	79.86%	8.63%	5.04%	6.47%	0%	0%
Reliability	3	25	17	32	33	29
	2.16%	17.99%	12.23%	23.02%	23.74%	20.86%
Responsiveness	6	21	28	19	24	41
	4.32%	15.11%	20.14%	13.67%	17.27%	29.50%
Assurance	12	39	37	17	21	13
	8.63%	28.06%	26.62%	12.23%	15.11%	9.35%
Empathy	7	34	35	27	18	18
	5.04%	24.63%	25.18%	19.42%	12.59%	12.95%

# **Level of Customer Expectation**

Statements	Totally Disagree	Disagre e	Neutral	Agree	Totally Agree
1.Transmission of mobile phone signal is strong and	0	0	11	71	57
stable	0%	0%	7.91%	51.08%	41.01%
2.Transmission of mobile data (3G & 4G) is strong and	0	0	17	63	59
stable	0%	0%	12.23%	45.32%	42.45%
3. The coverage of mobile phone signal network is	0	0	14	74	51
extensive	0%	0%	10.07%	53.24%	36.69%
4. The representative stores' appearances are clean	0	1	59	33	46
and attractive	0%	0.72%	42.45%	23.74%	33.09%
5. Physical facilities of the representative stores are	0	2	52	45	40
modern and visually appealing	0%	1.44%	37.41%	32.37%	28.78%
6.Employees appear neatly and well-dressed	0	2	47	51	39
	0%	1.44%	33.81%	36.69%	28.06%
7. When the service operator promise to do something	0		25	47	67
by a certain time, they do it	0%	0%	17.99%	33.81%	48.20%
8.When a customer has a problem, the service	0		19	62	58
operator shows a sincere interest in solving it	0%	0%	13.67%	44.60%	41.73%
9. The mobile phone service is performed right the first			29	68	42
time	0%	0%	20.86%	48.92%	30.22%
10. The received service's benefits are correct as being			23	46	70
mentioned in the contract.	0%	0%	16.55%	33.09%	50.36%
11. Price of mobile phone service is correct as being			18	55	66
mentioned in the contract	0%	0%	12.95%	39.57%	47.48%

12. Price of each package deal is reasonable and			4	64	71
affordable	0%	0%	2.88%	46.04%	51.08%
13. Employees give you prompt technical assistance			25	32	82
	0%	0%	7.99%	23.02%	58.99%
14. Employees are always willing to help you			12	56	71
	0%	0%	8.63%	40.29%	51.08%
15. Employees are never too busy to respond to your			28	40	68
requests	0%	2.16%	20.14%	28.78%	48.92%
16. The behavior of employees instills confidence in			21	53	65
customers	0%	0%	15.11%	38.13%	46.76%
17. You feel safe in your transactions with Bouygues			31	59	49
Telecom	0%	0%	22.30%	42.45%	35.25%
18. Employees are consistently courteous with you			27	71	41
	0%	0%	19.42%	51.08%	29.50%
19. Employees have the knowledge to answer your		3	29	59	50
questions	0%	0.72%	20.86%	42.45%	35.97%
20. The service operator gives you individual attention			30	76	33
	0%	0%	21.58%	54.68%	23.74%
21. Employees understand your specific needs			26	74	39
	0%	0%	18.71%	53.24%	28.06%
22. Bouygues Telecom respects the customers'			24	73	42
benefits	0%	0%	17.27%	52.52%	30.22%
	0 78	0 78	17.27 /0	JZ.JZ /6	30.22 /0
23. Bouygues Telecom takes into account your			29	58	52
opinions or complaints	0%	0%	20.86%	41.73%	37.41%

# **Level of Customer Perception**

Statements	Totally Disagree	Disagree	Neutral	Agree	Totally Agree
1.Transmission of mobile phone signal is strong and	0	8	3	58	70
stable	0%	5.76%	2.16%	41.73%	50.36%
2.Transmission of mobile data (3G & 4G) is strong and	0	7	4	66	62
stable	0%	5.04%	2.88%	47.48%	44.60%
3. The coverage of mobile phone signal network is	0	8	4	68	59
extensive	0%	5.76%	2.88%	48.92%	42.45%
4. The representative stores' appearances are clean	0	2	27	51	59
and attractive	0%	1.44%	19.42%	36.69%	42.45%
5. Physical facilities of the representative stores are	0	2	30	45	62
modern and visually appealing	0%	1.44%	21.58%	32.37%	44.60%
6.Employees appear neatly and well-dressed	0	3	13	54	69
	0%	2.16%	9.35%	38.85%	49.64%
7. When the service operator promise to do something	0	4	8	84	43
by a certain time, they do it	0%	2.88%	5.76%	60.43%	30.94%
8. When a customer has a problem, the service	1	6	28	45	59
operator shows a sincere interest in solving it	0.72%	4.32%	20.14%	32.37%	42.45%
9. The mobile phone service is performed right the first	0	0	7	40	92
time	0%	0%	5.04%	28.78%	66.19%

10. The received service's benefits are correct as being	0	7	17	73	42
mentioned in the contract.	0%	5.04%	12.23%	52.52%	30.22%
11. Price of mobile phone service is correct as being	0	5	21	57	56
mentioned in the contract	0%	3.60%	15.11%	41.01%	40.29%
12. Price of each package deal is reasonable and	0	13	27	62	37
affordable	0%	9.35%	19.42%	44.60%	26.62%
13. Employees give you prompt technical assistance	1	6	26	36	70
	0.72%	4.32%	18.71%	25.90%	50.36%
14. Employees are always willing to help you	1	6	30	30	72
	0.72%	4.32%	21.58%	21.58%	51.80%
15. Employees are never too busy to respond to your	0	4	32	39	64
requests	0%	2.88%	23.02%	28.06%	46.04%
16. The behavior of employees instills confidence in	0	5	26	49	59
customers	0%	3.60%	18.71%	35.25%	42.45%
17. You feel safe in your transactions with Bouygues	0	2	16	44	77
Telecom	0%	1.44%	11.51%	31.65%	55.40%
18. Employees are consistently courteous with you	0	3	17	51	68
	0%	2.16%	12.23%	36.69%	48.92%
19. Employees have the knowledge to answer your	0	4	20	43	72
questions	0%	2.88%	14.39%	30.94%	51.80%
20. The service operator gives you individual attention	1	6	33	57	42
	0.72%	4.32%	23.74%	41.01%	30.22%
21. Employees understand your specific needs	1	5	31	55	47
	0.72%	3.60%	22.30%	39.57%	33.81%
22. Bouygues Telecom respects the customers'	0	5	26	56	52
benefits	0%	_	26 18.71%	40.29%	37.41%
	0%	3.60%	10./ 1%	40.29%	37.41%
23. Bouygues Telecom takes into account your	1	7	41	48	42
opinions or complaints	0.72%	5.04%	29.50%	34.53%	30.22%

## **Process of Using Mobile Services (Functional Quality)**

Statements	Totally Dissatisfied	Dissatisfied	Slightly Satisfied	Satisfied	Very Satisfied
The mobile network is stable during the process of	0	5	6	60	68
using service	0%	3.6%	4.32%	43.17%	48.92%
Service providers can satisfy your desires, as well as your specific requests.	1	7	38	53	40
, ,	0,72%	5.04%	27.34%	38.13%	27.78%
All of your personal information is strictly secured	0	2	22	67	48
	0%	1.44%	15.83%	48.20%	34.53%
The subscribing procedure to mobile phone	0	5	34	61	39
service is quick and convenient	0%	3.6%	24.46%	43.88%	28.06%

## **Outcomes of Using Mobile Services (Technical Quality)**

Overall, do you satisfy with the mobile phone network quality of Bouygues Telecom?

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Totally Dissatisfied	Dissatisfied	Slightly Satisfied	Satisfied	Very Satisfied
0	6	7	65	61
0%	4.32%	5.04%	46.76%	43.88%

## And what's about the customers' service of Bouygues Telecom?

Totally Dissatisfied	Dissatisfied	Slightly Satisfied	Satisfied	Very Satisfied
1	7	36	56	39
0.72%	5.04%	25.90%	40.29%	28.06%

# Link of the Survey's Result in **French** is available at

< https://esurv.org/results-overview.php?surveyID=LIOMLN\_ea266bea&mode=4>

### **APPENDIX 2**

## La Lettre d'Invitation

Cher participant,

Je me prénomme Thien Phuc Nguyen. Je suis actuellement étudiant en commerce international à *Turku University of Applied Sciences* en Finlande. J'ai élaboré ce questionnaire qui a pour objectif d'évaluer la satisfaction du client concernant les services de l'opérateur mobile Bouygues Telecom. Remplir ce questionnaire fais de simple questions devrait vous prendre environ 10 minutes. Celui-ci sera accessible du 4 au 11 Novembre

Votre participation me sera d'une aide précieuse afin de compléter mon Mémoire. Je vous serai reconnaissant de me transmettre vos réponses et vous assure que celles-ci resteront confidentielles et anonymes. Je vous remercie d'avance pour votre contribution.

Cordialement,

Thien.

# L'Enquête d'Opinion

_		
Pа	rtıe	1

1. Avez-vo □ Oui	ous déjà souscr	it à un service Non	de téléphonie	mobile de Bouyç	gues Telecom ?	1
(Si vous ré	épondez « Non	» à cette ques	tion, le questio	nnaire s'achève	ici. Merci)	
2. Vous êt	tes de sexe :					
☐ masculi	in	☐ fém	ninin			
3. Dans q	uelle tranche d'	âge vous situe	z vous?			
□ 16-20	□ 21-25	□ 26-30	□ 31-35	□ 36-40	□ 40+	

#### Partie 2

4. Merci de classifier de 1 (le moins important) à 6 (le plus important) le niveau d'importance que vous accordez à chacun de ses aspects concernant la qualité du service de Bouygues Telecom.

Rang	Aspects
	La qualité du réseau de téléphonie mobile de Bouygues Telecom
	Concret : L'apparence des boutiques représentatives de Bouygues Telecom et de ses infrastructures.
	Fiabilité : La capacité à pouvoir effectuer précisément les services annoncés.
	Réactivité : La volonté d'assister les utilisateurs et de leur apporter un service rapidement.
	Assurance: Les connaissances et compétences pour transmettre une certaine confiance chez l'utilisateur.
	Empathie : L'attention particulière et personnalisée apportée à chaque utilisateur.

## Partie 3

5. Sur une échelle de 1 (désapprouve totalement) à 5 (approuve totalement), merci d'estimer pour chacune des affirmations suivantes votre niveau d'attente avant d'avoir utilisé les services de télécommunications mobiles de Bouygues Telecom.

Affirmations	Désapprouve totalement	Désapprouve	Neutre	Approuve	Approuve totalement
1. Le niveau de transmission du signal de votre réseau mobile est élevé et stable.	1	2	3	4	5
2. Le niveau de transmission du signal de votre réseau de données (3G/4G) est élevé et stable.	1	2	3	4	5
3. La couverture du signal de votre réseau mobile est étendue.	1	2	3	4	5
4. Les boutiques de l'opérateur ont une apparence propre et attirante.	1	2	3	4	5
<ol><li>Les infrastructures des boutiques sont modernes et visuellement attrayantes.</li></ol>	1	2	3	4	5
6. Les employés sont soignés et portent une tenue vestimentaire appropriée.	1	2	3	4	5
7. L'opérateur téléphonique tient ses engagements dans les délais annoncés.	1	2	3	4	5
8. Quand un client présente un problème, l'opérateur montre un intérêt sincère à le résoudre.	1	2	3	4	5
9. Le service de téléphonie mobile fonctionne directement lors de sa première utilisation.	1	2	3	4	5
10. Les bénéfices reçus par le service de téléphonie mobile sont corrects et tels	1	2	3	4	5

qu'énoncés dans le contrat.			1	1	1
qu'enonces dans le contrat.					
11. Le prix du service de téléphonie	1	2	3	4	5
mobile est correct et correspond au prix					
mentionné dans le contrat.					
12. Le prix des différents forfaits est	1	2	3	4	5
raisonnable et abordable.					
13. Les employés vous offre un service	1	2	3	4	5
d'assistance technique rapide et efficace.					
14. Les employés sont volontaires pour	1	2	3	4	5
vous assister.					
15. Les employés ne sont jamais trop	1	2	3	4	5
occupés pour pouvoir répondre à vos					
requêtes.					
16. L'attitude des employés vous inspire	1	2	3	4	5
confiance.					
17. Vous ressentez une certaine sécurité	1	2	3	4	5
lors de vos transactions avec Bouygues					
Telecom.					
18. Les employés agissent de façon	1	2	3	4	5
courtoise avec vous.					
19. Les employés ont les connaissances	1	2	3	4	5
suffisantes pour répondre à vos questions.					
20. L'opérateur téléphonique vous offre	1	2	3	4	5
une attention particulière et personnalisée.					
21. Les employés comprennent vos	1	2	3	4	5
besoins spécifiques.					
22. Bouygues Telecom respecte vos	1	2	3	4	5
avantages.					
23. Bouygues Telecom prend compte de	1	2	3	4	5
votre opinion ainsi que de vos remarques					
ou réclamations.					

## Partie 4

1. Sur une échelle de 1 (désapprouve totalement) à 5 (approuve totalement), merci d'estimer pour chacune des affirmations suivantes votre niveau de perception concernant votre utilisation des services de télécommunications mobiles de Bouygues Telecom.

Affirmations	Désapprouve totalement	Désapprouve	Neutre	Approuve	Approuve totalement
1. Le niveau de transmission du signal de votre réseau mobile est élevé et stable.	1	2	3	4	5
2. Le niveau de transmission du signal de votre réseau de données (3G/4G) est élevé et stable.	1	2	3	4	5

3. La couverture du signal de votre réseau mobile est étendue.	1	2	3	4	5
4. Les boutiques de l'opérateur ont une	1	2	3	4	5
apparence propre et attirante.	1		3	4	3
5. Les infrastructures des boutiques sont	1	2	3	4	5
modernes et visuellement attrayantes.	Į.		3	4	5
	1	2	3	4	5
6. Les employés sont soignés et portent	ı		3	4	5
une tenue vestimentaire appropriée.	1	2	3	4	5
7. L'opérateur téléphonique tient ses	I	2	3	4	5
engagements dans les délais annoncés.	4	0	2	4	
8. Quand un client présente un problème,	1	2	3	4	5
l'opérateur montre un intérêt sincère à le					
résoudre.	4	0	2	4	
9. Le service de téléphonie mobile	1	2	3	4	5
fonctionne directement lors de sa					
première utilisation.					_
10. Les bénéfices reçus par le service de	1	2	3	4	5
téléphonie mobile sont corrects et tels					
qu'énoncés dans le contrat.					
11. Le prix du service de téléphonie	1	2	3	4	5
mobile est correct et correspond au prix					
mentionné dans le contrat.					
12. Le prix des différents forfaits est	1	2	3	4	5
raisonnable et abordable.					
13. Les employés vous offre un service	1	2	3	4	5
d'assistance technique rapide et efficace.					
14. Les employés sont volontaires pour	1	2	3	4	5
vous assister.					
15. Les employés ne sont jamais trop	1	2	3	4	5
occupés pour pouvoir répondre à vos					
requêtes.					
16. L'attitude des employés vous inspire	1	2	3	4	5
confiance.					
17. Vous ressentez une certaine sécurité	1	2	3	4	5
lors de vos transactions avec Bouygues					
Telecom.					
18. Les employés agissent de façon	1	2	3	4	5
courtoise avec vous.					
19. Les employés ont les connaissances	1	2	3	4	5
suffisantes pour répondre à vos questions.	-			-	
20. L'opérateur téléphonique vous offre	1	2	3	4	5
une attention particulière et personnalisée.	•	_		·	
21. Les employés comprennent vos	1	2	3	4	5
besoins spécifiques.	•	_		·	
22. Bouygues Telecom respecte vos	1	2	3	4	5
avantages.	•	_			
23. Bouygues Telecom prend compte de	1	2	3	4	5
votre opinion ainsi que de vos remarques	'	_		-τ	
ou réclamations.					
ou rodiamations.					

### Partie 5

2. Sur une échelle de 1 (totalement insatisfait) à 5 (très satisfait), merci d'estimer pour chacune des situations suivantes votre niveau de satisfaction concernant votre utilisation des services de télécommunications mobiles de Bouygues Telecom.

Situations	Totalement Insatisfait	Insatisfait	Légèrement Satisfait	Satisfait	Très satisfait
La stabilité du signal lors de l'utilisation du service de téléphonie mobile.	1	2	3	4	5
L'opérateur de services mobiles est en mesure de satisfaire vos exigences ainsi que vos différentes requêtes.	1	2	3	4	5
Toutes vos informations personnelles sont strictement sécurisées.	1	2	3	4	5
La procédure de souscription à un service de téléphonie mobile est rapide et pratique.	1	2	3	4	5

3. Dans sa globalité, êtes-vous satisfait de la qualité du service du réseau de téléphonie mobile de Bouygues Telecom?
☐ Totalement insatisfait ☐ Insatisfait ☐ Légèrement satisfait ☐ Satisfait ☐ Très Satisfait
Et qu'en est-il du service client de Bouygues Telecom?
☐ Totalement insatisfait ☐ Insatisfait ☐ Légèrement satisfait ☐ Satisfait ☐ Très Satisfait
Je vous remercie beaucoup d'avoir pris le temps de compléter mon questionnaire et de m'avoi soutenu pour mon Mémoire. Toutes vos réponses seront maintenues strictement confidentielle et anonymes.