

Factors Influencing the Optimal Selection of Suppliers in the Telecommunication Sector in Ghana

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Abstract

The selection of an optimal supplier has a positive impact on business performance, help reduce costs and promote innovation. With few studies especially in the study of services on the selection of optimal suppliers in Ghana, this paper examines the determinants of vendor selection among the four largest telecommunication companies in Ghana. These companies are MTN, Tigo, Vodafone and Airtel. The paper applied quantitative and qualitative methods based on primary and secondary data. Purposive sampling technique was used in order to segment the study population. A descriptive analysis was performed to examine the factors and their impact on the choice of suppliers. The results indicated that the quality, experience, price, safety and time affect the selection of suppliers. The study recommends that if the cost element should be taken seriously, the quality should not be sacrificed for cost reduction.

Keywords: Telecommunication, Optimum, Selection, Sampling.

1.0 Introduction

According to Boohene and Agyapong (2011), there is no optimal supplier selection model in the services sector of Ghana. A major cause for this is the lack of knowledge of the determinants of optimal supplier selection. Another reason is that, supply chain has often been associated with the goods and physical products sector. These implies that despite intense competition in the telecommunication industry, most customers have complained frequently about poor customer service and call quality which is an antecedent of lack of defined optimal selection criteria. Indeed, Nimako (2012) suggest that, the type of service that is delivered by service providers are antecedents of the kind of relationship they have with their suppliers. Despite the growth of the telecommunication industry in Ghana, there are little or no studies on the supplier selection criteria and factors that enhance long lasting supplier relationships in the telecom sector of Ghana. Due to dearth of studies on supplier selection in Ghana, this paper seeks to examine the factors that influence optimal supplier selection decision in the telecommunication industry in Ghana.

1.1 Vendor Selection

The selection of suppliers is an important decision to an organization and is generally considered a five-phase process, according to Lee and Choy (2002). Realization of the need for a new supplier is the first phase. Determination and formulation of decision criteria is the second phase. The third phase is the design of pre-qualification standards and the fourth is the supplier selection against the features previously recognized. Supplier monitoring selected being the final phase.

Boer et al (2001) conducted a study on sourcing support methods. The study examined a four-step process for the selection of suppliers. The selection of a business provider varies from another. Price is considered in some companies as the most important evaluation and selection tool for suppliers while others may prefer time, quality and technology.

1.2 Supplier Selection

Boer et al (2001) suggest a four-step process for the selection of suppliers. While some may consider the price as the assessment tool and the largest selection process for providers, others prefer the quality, time and technology. This requires suppliers to upgrade whenever they are trying to build that relationship with partner or buyer companies.

There are four main phases in the selection of a supplier by Boer et al (2001). Formulation of the problem as the first step concerns the decision to acquire or not to acquire or to source from existing and new suppliers. Formulation of criteria being the second step as to supplier and the evaluation criteria. The third step is the qualification of potential suppliers and the final step is the analysis of quotation and the final selection of the best assessment of all elements in pairs. In terms of method, several practices have been used to examine the supplier selection criteria. This paper highlights the results on supplier selection criteria, which are not precise. Therefore, it provides a research opportunity to study the case of Ghana since to the best of the authors' ability; no study has been conducted on supplier requirements in the telecommunications industry in Ghana.

2.0 Methodology

This study aims to investigate factors that contribute to optimal selection of suppliers. Primary and secondary data were used. Academic journals, academic databases and publishing houses were consulted as secondary data. Primary data was collected with the interview and questionnaires guide. A method of self-assessment by which primary data was collected from the supply chain and procurement managers of telecommunication companies with questionnaires and interviews. A judgment sampling technique was used. The study population includes supply services of Vodafone, Tigo, MTN and Airtel. Purposive sampling as a non-probability sampling was used for the research technique.

Sampling techniques can be grouped into probability and non-probability sampling. The probability is favorable when the number of observations is known and can be obtained. As this is impossible in the case of this study, purposive sampling technique or judgment was passed. The sample size was made of 100 managers, 60 supervisors and 40 Junior Staff who work directly or indirectly with the supply unit. Questionnaires and interview guides were used to collect the primary data. Newspapers were also consulted for secondary data.

To improve the reliability of the data collection instrument and results, questionnaires and interview guides were pre-tested on 5% of respondents. This allowed the researchers to understand how respondents perceive issues and helped to make necessary corrections. In addition, the investigators who helped to collect the data were trained in administering the questionnaire and basic research. This was to prevent or minimize errors and non-response rate.

3.0 Findings

3.1 Factors that Influence Suppliers Selection in the Telecommunication Industry

Several factors influence the decision to select a particular supplier and many differ in terms of magnitude among companies. This study looked at some critical factors that affect the decision to select a particular supplier. The results analyzed indicate that almost the same factors influence the decision of the four telecommunications under consideration to select a particular supplier. These factors however differ in their magnitude of influence among the companies. These factors are the price, experience with similar assignment, quality, time of delivery, security and risk among others.

From the results obtained, it can be deduced that the telecommunication companies pay particular attention to the following factors in the selection of their suppliers. These are price, time of delivery, quality of the products and their relationship with the suppliers. Some other companies also give more consideration to factors such as security, risk and technological standards. The disparity in the extent of consideration of these factors can be attributed to the difference in market shares and customer base of this telecommunication companies. MTN as the market leader can benefit from economies of scale by spreading the cost across its huge customer base and would therefore not be interested so much in the price but the quality of the products to be delivered.

It should be noted that respondents had the chance to choose more than one factor as most influential hence the analysis was done on the total number of respondents. The charts in the appendix explain into detail the magnitude of differences in the factors among these companies and the reasons for these differences. Each of the factors is analyzed accordingly to allow for some comparison.

The researchers deem it necessary at this point to take a look at the factors that mostly influence the decision of the individual companies when taking decision concerning the selection of a supplier.

From figure 3 it can be seen for Vodafone, price is the most important factor they consider. This is followed by quality and the relationship they have with their supplier. Other important factors are the technology, level of understanding during similar engagement in the past and time.

From the chart in figure 4, it can be seen from the respondents that MTN considers Quality and Price as very important factors in selecting their suppliers. All (100%) the respondents consider these factors as very important. This is followed by Technology and level of understanding during similar engagement in the past. The company also considers risk and time. The result implies that MTN as the market leader has a large core group of customers. The company is therefore able to benefit from economies of scale and make enough returns. The company therefore focuses on delivering quality services to their customers by securing quality services.

From figure 5, it can be seen for TIGO, the price is the most important factor they consider. This is followed by technology, quality and the relationship they have with their supplier. Other important factors are the level of understanding during similar engagement in the past and time.

Airtel Ghana also considers price as the most influential factor in choosing their suppliers. This is seen in figure 6. This is followed by Quality, level of understanding during similar engagement in the past and Technology. The company also gives consideration to the relationship they have with their supplier and the timeliness of supply.

3.2 The outcomes of long-term relationship on corporate performance in the telecommunication sector

The short-run and long-run consequences of a customer's satisfaction and loyalty are mainly based on a long-lasting relationship. Relationship with suppliers as far as telecommunication in Ghana is concerned, plays a central

role and a dominant position when it comes to the selection of suppliers. Although it is not the most important among the factors that have been studied, it has been considered by the four telecommunication companies as a measured standard. Upon further studies, the researchers observed that a supplier can establish a good and long-lasting relationship with any of the four companies aforementioned. Continuously, the provision of quality service in terms of raw materials, equipment and so on has made a place for service provision. From the suppliers view point, there is that assurance that the business relationship would continue to thrive. The effects of this long-lasting relationship on business /company performance are as follows.

Long-lasting relationship helps the businesses to meet the requirements of their customers. Before that relationship is established by the supplier, the services delivered must be of great value and durable as mentioned earlier. This must continue to the approval of the company in question, when this is fulfilled, the company is able to deliver quality services from the suitable raw materials given. However, this helps the company meet its performance needs. A classic example from the data collated from the four selected telecommunication companies have enough confidence in the 'relationship with suppliers' as being one of the most significant factors that facilitates supplier selection while this is helping some to add up to their customer base (Tigo and Airtel), it supports others (MTN) maintain their existing clientele base.

It also aids companies to deliver services to their customers as and when necessary. Consequently, the element of time is a key factor if a company seeks to grow. Their long-lasting relationship with suppliers allows the companies to get the required assistance at anytime. MTN and Vodafone have their suppliers readily available at all times due to the rapport that they have built. It allows them to satisfy their clients, thus boosting market performance. On several occasions, some of these companies in the telecommunication industry are allowed by some suppliers to purchase their services on credit and be paid later. This only occurs when the supplier has a long-lasting relationship with the company such that an element of trust exists. It also helps most of the companies attend to the desires of their clients even when they are sound financially. Elements of numerous negotiations are limited and the cost for maximum returns is reduced. Requesting for a new supplier every now and then requires thinking strategically and making clear decisions which necessarily, is time consuming.

If a consensus is not reached earlier enough, the likelihood that some customers who lack patience and cannot stand bad network, would change quickly to another. In dealing with old suppliers in the market, there is no need for prolonged negotiations since most of the processes have been met already. All the four companies (MTN, Tigo, Vodafone and Airtel) studied, have a list of suppliers they call on when the need arises. In a case where suppliers are unable to meet the requirements of the various companies are immediately removed from the list. When such a situation occurs, the long-lasting relationship in existence dissolves. In relation to cost, there are quite a number of existing suppliers in the industry, giving regular discounts for some projects. This tends to create a long-lasting relationship with the telecommunication industry. However, this serves as a catalyst that speeds up the company's efforts towards meeting the required performance standards of customers and as well helps the companies pay less for services offered.

3.3 Factors which account for a long-lasting relationship

Long lasting relationships are built on the quality of service, timely delivery and competitive cost. (T.E Choi, J.L. Hartley 1996). According to (Sharland et al, 2003) it was argued out that competitive price alone does not serve as a dominant factor during the supplier selection process even though it serves as a contributing factor. However, this explains the more reason why companies in the industry cannot consider price as a major determinant during supplier selection. Factors such as quality and technological standards of suppliers are taken into account the more than price since it's a service industry. There are several categories of clients at the disposal of the companies, first considering the quality of the services being delivered before subscribing. The failure of the company to provide quality services would cause most clients to switchover to another service provider. Telecommunication companies are forced to obtain the best of raw materials and equipment for operations in order to serve their clients well. The company's capacity to find cost effective suppliers is a beneficial but not the most prevailing factor during the selection procedure. Most especially, companies like MTN has built a huge customer database enabling it to spread cost among its customers in order to decrease production and operational cost. However, it would have to continue providing quality services to its clientele to avoid them from switching over to other service providers. Companies like Airtel which does not house a huge customer base uses the element of existing long lasting relationships to cut-down cost while at the same time gets quality raw materials for production.

Therefore considering the relationship Airtel has with its suppliers, they allow them to acquire some discounts during the selection process, and this happens during purchasing, instead of considering a new supplier where discounts are hardly possible due to the growing capacity of the industry. The conclusion that was drawn from the analysis done in section 3 of this study was based on the data collected. On the other hand, information collated from Tigo and Vodafone especially suggests that supplier punctuality in terms of delivery is imperative. Respondents from these companies specified that a supplier's ability to gradually deliver on time helps the planning and implementation team to meet service dates as required by clients. The part of a reasonable and short

delivery lead time also helps to increase inventory turnover during operations. Most companies prefer its suppliers to be readily available as and when they are wanted. As the industry grows, some of the companies are forced to bring on board new services (thus novelty) to retain its clients. For this reason, suppliers are advised to also be current and acquire modern technologies and services which meet the needed demand. Long lasting relationships are simply established when suppliers are able to meet this duties frequently.

In conclusion, the chapter analyses the data collected for the research. It summarises the findings of the study and gives comprehensive answers to the research questions stated in chapter one. It also highlights the critical factors influencing supplier selection and supplier relationship in the telecommunication industry in Ghana so as to meet the objectives of this study.

4.0 Discussions and Conclusions

The study found out that the four telecommunication companies consider similar factors in selecting their suppliers. Specifically Tigo, Vodafone and Airtel all consider price to be the most influential factor followed by quality. On the other hand, MTN considers the quality of the products or services to be rendered in selecting their preferred supplier. These suggest that the quality of services provided is determines the price is very vital when selecting a supplier. The timeliness of deliver was also considered as another influential factor. This implies that supplying quality products at an affordable price and on a timely basis is key for the four telecommunication companies in promoting the existing supplier relationship.

The process of selecting a supplier begins with identifying the need to procure a new delivery. The projects office and the department of logistics normally facilitate this process. Management is then furnished with a brief of the new items to be procured for a decision to be taken. After a decision is made, a call for tender is made to enable select potential suppliers to submit their quotes of evaluation. This process can last for several days as several factors are considered. Relationship with supplier, experience, pace and cost are examples of some of the factors to be considered.

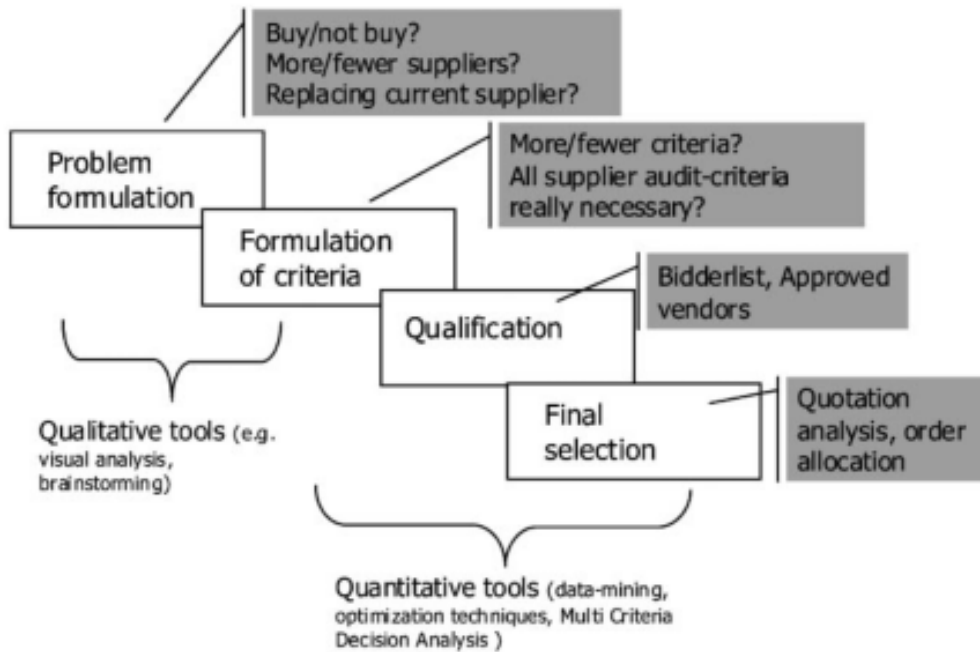
A deal is agreed upon by the management. This normally includes the details of the products. The deal is then sent to the finance department for payment. This starts the network process and enhances lasting relationship.

The study discovered diverse factors that affect the decision to select a supplier by telecommunication compani4es in Ghana. Key among them are experience, fast service, cost, conformance, durability, security and existing relationship with supplier are relevant. These factors however vary in their order of importance and magnitude. Establishing long lasting relationship is key in boosting the performance of the companies. This can be achieved through delivery of quality products at competitive prices and on a timely manner.

5.0 References

- Boohene, R., & Agyapong, G. K. (2011). Analysis of the antecedents of customer loyalty of telecommunication industry in Ghana: The case of Vodafone (Ghana). *International Business Research*, 4(1), 229.
- Bryman, A., & Bell, E. (2015). *Business research methods*. Oxford University Press, USA.
- Choi, T. Y., & Hartley, J. L. (1996). An exploration of supplier selection practices across the supply chain. *Journal of operations management*, 14(4), 333-343.
- Choy KL, Lee WB., on the development of a case based supplier management tool for multinational manufacturers. *Measuring Business Excellence* 2002; 6(1):pp.15–22, 2002
- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches*. Sage.
- De Boer, L., Labro, E., & Morlacchi, P. (2001). A review of methods supporting supplier selection. *European Journal of Purchasing & Supply Management*, 7(2), 75-89.
- Nimako, S. G. (2012). Linking quality, satisfaction and behaviour intentions in Ghana's mobile telecommunication industry. *Eur. J. Bus. Manag.*, 4(7), 1-17.
- Stanley, L. L., & Wisner, J. D. (2001). Service quality along the supply chain: implications for purchasing. *Journal of operations management*, 19(3), 287-306.
- Stuart, F. I., & McCutcheon, D. (1995). Problem sources in establishing strategic supplier alliances. *Journal of Supply Chain Management*, 31(1), 3.

APPENDIX



Source: Boer et al (2001)
 Figure 1: Supplier selection process

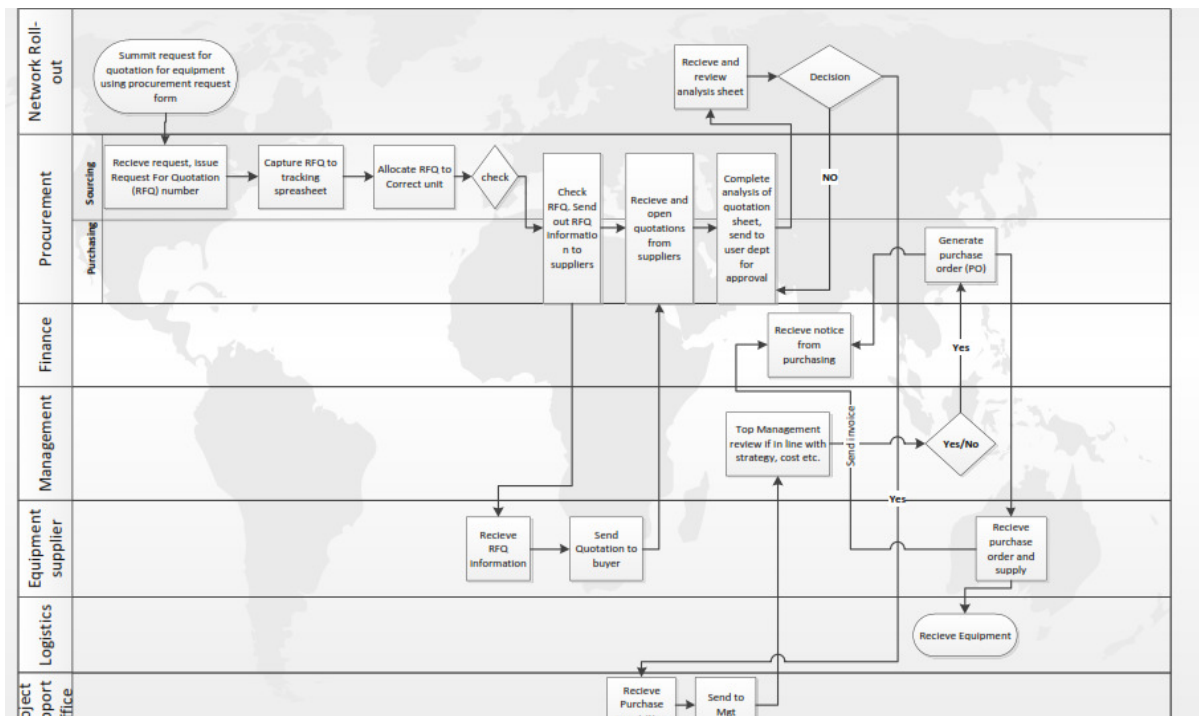


Figure 2: Adapted supplier selection process for the four Telecommunication companies

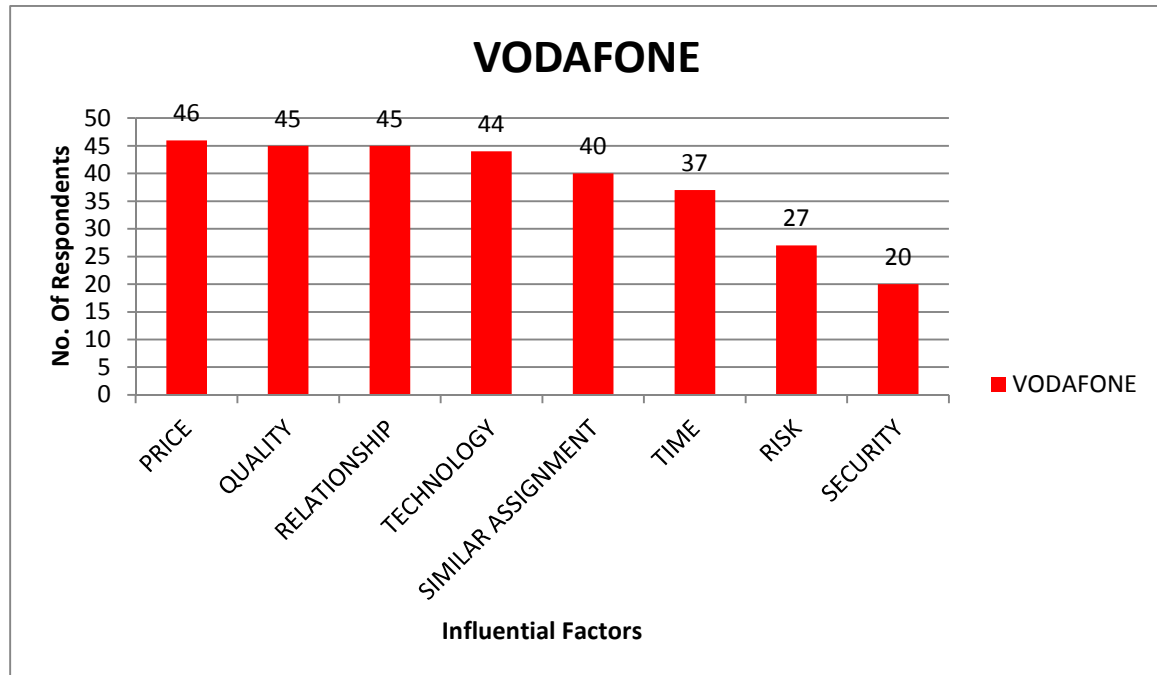


Figure 3: Graphical representation of most influential factors of Vodafone
Source: Field Research, 2016

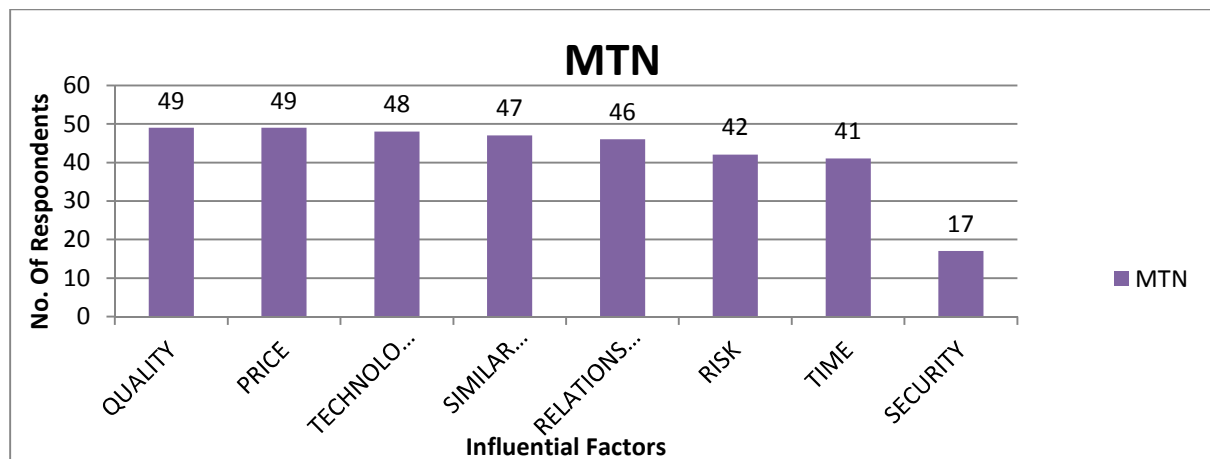


Figure 4: Graphical representation of most influential factors of MTN.
Source: Field Research, 2016

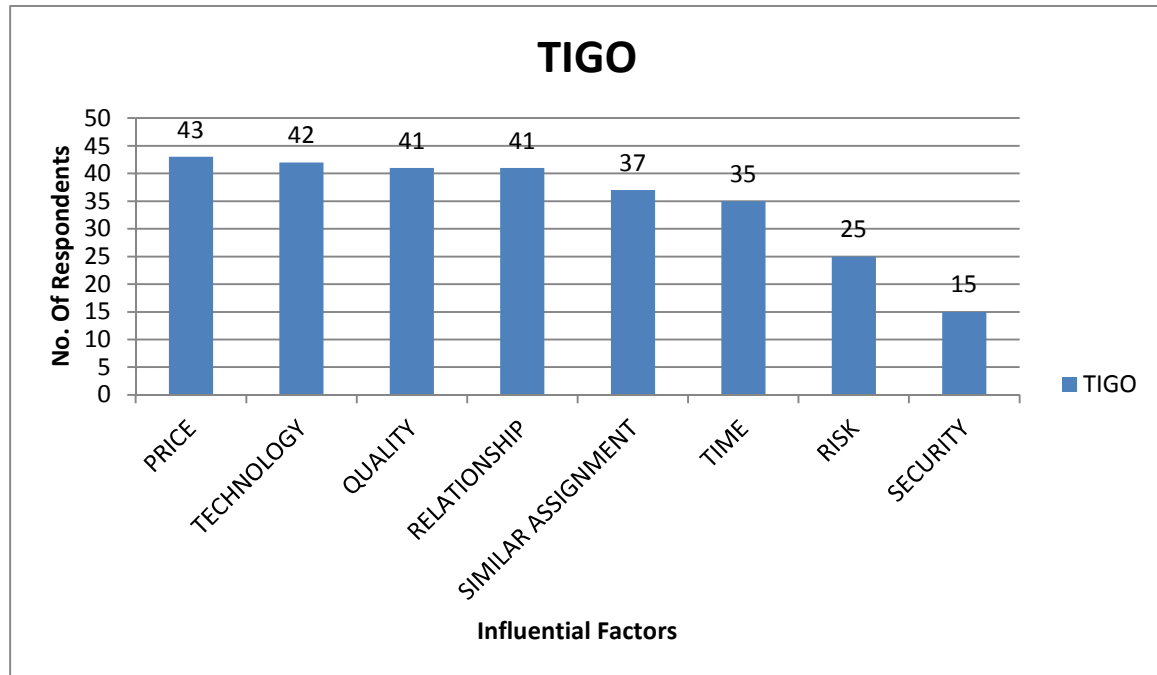


Figure 5: Graphical representation of most influential factors of TIGO.
Source: Field Research, 2016

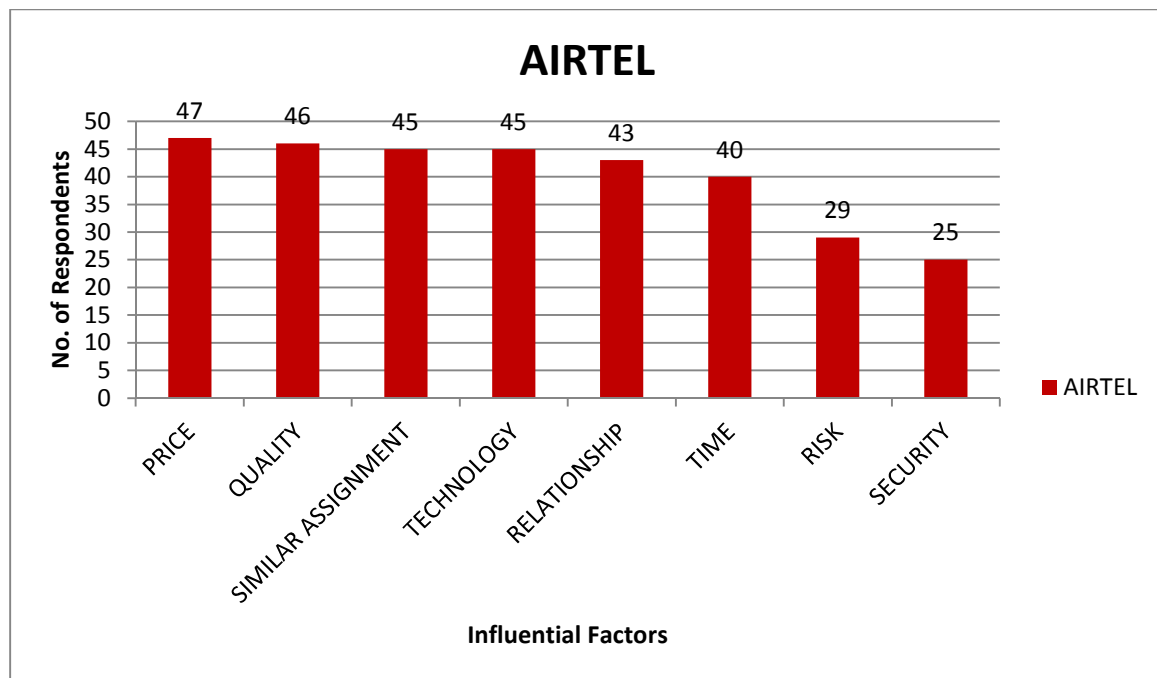


Figure 6: Graphical representation of most influential factors of Airtel.
Source: Field Research, 2016