# The Annual Conference on Management and Information Technology (ACMIT) 2016 How the Role of Risk Tolerance on Manage Satisfaction Level

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#### **Abstract**

Many major firms within the world, particularly in Indonesia, they contend to every different to allow best services as the way to achieve the goal of their main business. They need launched several programmes to enhance and commit for higher quality management by approach of listening their customers. In an exceedingly service surroundings, info on client response toward services is one in all the simplest key component of feedback that indicates whether good or not, the services meet into perception or even below expectation. Someday what we would like is simply assembling info from client and re-evaluation to actual system of performance report. Supported analysis and assessment, we would like change some parameters to satisfy into the client expectation that become their satisfaction. Since client satisfaction can bring United States into trust and commitment, that loyalty are going to be the the last word goal and bussiness can continue once more and once more, coincidental.

To adjust some parameters appears straightforward however really all tough. To measure Perception and Expectation become Service Quality is tough, want observation from time to time to induce the best values, particularly to face risk factors like internal and external setting factors, Risk Management capability, IT capability, and IT-related business capability become Risk Response. To achieve the goal to produce Service Quality between Risk Factors and Risk Response, we have got to regulate Risk Tolerance to induce ideal worth and at an equivalent time manage service quality.

"Keywords: Service Management, Risk Management, Tolerance, Satisfaction;"

### 1. Introduction

Loyalty is that the final goal of success of the many corporations to require care of customers which is this most tough challenges because of maintaining of customer's psychological and behavior since these factors are not simple to regulate the changes of them. However, after we produce the standard of service as worth, thus it will conjointly maintain quality of the connection of three main elements (satisfaction, trust and commitment) incessantly then we are able to get their loyalty and generate it mechanically. So, we can see that to maintain the satisfaction the maximum amount as attainable and within the same time will increase trust level continously. In fact, this ideal condition is usually difficult to realize once some Risk Factors happen and the way responsive we have a tendency to area unit to resolve or to mitigate for any risk, within the real state of affairs Risk Factors like internal and external setting factors, risk management capability, IT capability, and IT-related business capability are not continuously will resolve as presently as attainable however we are able to deal to place a threshold as Risk Tolerance as a part of Service Quality in an agreement as Service Level Agreement. That's why inter-correlation between Loyalty and service Quality can become a problem if we have a tendency to cannot define it with agreed value. For that the problematic of our study was as follow: - How role of risk tolerance to manage satisfaction level in Telecommunication Company?

3.1 Service Quality

In International Journal of Hospitality Management, introduced a 22-item scale, called as SERVQUAL, for measuring service quality which is this model already adopted by many across industries. In service quality, customer has measured indirect comparison between expectations (pre sales) and perception (after sales) of company performance. That measure is indicated by, or outlined as, the arithmetic of perceived service quality and customer satisfaction across the 22 measurement items. They are then reduced to fewer factors like dependability, Assurance, Tangibles, Emphaty, and Responsiveness through correlational analysis. The result scores will represent service quality are "indirect" to the researcher(s), not the subjects themselves (customers), performs the comparison between expectations and perceptions. [2], [3]

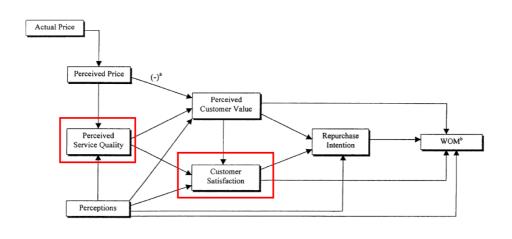


Figure 1. Model of service quality and satisfaction

Note: Arrows indicate hypothesized causal effects

<sup>a</sup> The hypothesized relationship is negative; all the other causal paths are hypothesized to be positive.

## 3.2 Customer Satisfaction

Theory posits that customers measure their satisfaction with comparisons between their expectations and perceptions toward target service as a result of subjective (or direct). To provide that comparison value, mostly some customers directly asked as questioner for obtaining some parameter value through "worse than/better" scale. The perceptions and expectations are determined can influence satisfaction of customer and subjective to be confirmation.

Another item to be considered to support Customer Satisfaction is Customer Value itself. We have to examine between price and quality. Mostly, when the price is higher then will indicate higher quality as well, which this will implicate also more higher Customer Value than more higher Customer Satisfaction level since the expectation will be more and more. To accommodate this situation, most of company aware to provide the perception of quality service more precise.

#### 3.3 Risk Tolerance Threshold

Risk tolerance is the level of risk appetite which is value of deviation still can be tolerable and business objectives.[4] Propose Risk Tolerance threshold is creating the boundary to take care of customer satisfaction to meet its objectives and express limitation of perception measurement to the underlying business objectives and impacts (acceptable and unacceptable). Most of the time, Risk Tolerance can inter-related to five factors for SERVQUAL (Reliability, Assurance, Tangibles, Emphaty and Responsiveness).<sup>[5]</sup>

#### 4.1.36 Methodology and Hypotheses

Sometimes unwanted event is something that unavoidable but how to emphasize impact of customer satisfaction on loyalty, was drafted as following hypothesis:

<sup>&</sup>lt;sup>b</sup> Word-of-mouth communication intention.

- Customer loyalty, at Telecommunication Company, impacts positively on trust, and trust will generates commitment to be loyalty to company.
- To get better hypothesis, we have the objective: "To find out customer satisfaction towards telecom service providers in PT. XYZ"

But to create a trust and a commitment, we have to line up some attending to manage the chance, we are going to use the chance IT Framework for reference on Risk Analysis, Risk Response. This framework tells once the matter or the risk came to intercept, that we have to analysis and estimate frequency and also the impact. If the chance exceeding risk tolerance level then consequent step is choose risk response possibility. To measure the risk tolerance level is referring to service level agreement and actual condition from customer side since sometime perhaps the value of threshold already below from the agreement however if actual condition still under-control then it may be compromised as a part of the chance tolerance, further over SERVQUAL.

#### 3.1 Sample data

The data will collect from database outage in one of telecommunication company from W17-W33 2015. Those data will indicate repeatitive complaint toward service level agreement. Repeat complaint state is indicating a trust and within SLA state is indicating a commitment. During that period, we can process and combine data between repeat complaint and within SLA into percentage (%).

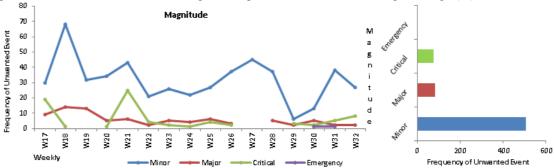


Figure 2. (a) Trend Magnitude of Outage towards Frequency – Weekly; (b) Magnitude vs Frequency

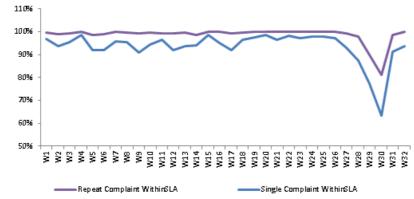


Figure 3. Impact of Unwanted Event (Outage) towards to SLA (Trust & Commitment)

Table 1	Repeat C		Single C	•
Period	WithinSLA	OverSLA	WithinSLA	OverSLA
2015-1	99.77%	0.23%	99.77%	0.23%
2015-2	99.46%	0.54%	99.46%	0.54%
2015-3	99.62%	0.38%	99.62%	0.38%
2015-4	99.83%	0.17%	99.83%	0.17%
2015-5	99.19%	0.81%	99.19%	0.81%
2015-6	99.34%	0.66%	99.34%	0.66%
2015-7	99.83%	0.17%	99.83%	0.17%
2015-8	99.67%	0.33%	99.67%	0.33%
2015-9	99.72%	0.28%	99.72%	0.28%
2015-10	99.84%	0.16%	99.84%	0.16%
2015-11	99.68%	0.32%	99.68%	0.32%
2015-12	99.61%	0.39%	99.61%	0.39%
2015-13	99.77%	0.23%	99.77%	0.23%
2015-14	99.38%	0.62%	99.38%	0.62%
2015-15	99.90%	0.10%	99.90%	0.10%
2015-16	99.93%	0.07%	99.93%	0.07%
2015-17	99.63%	0.37%	99.63%	0.37%
2015-18	99.80%	0.20%	99.80%	0.20%
2015-19	99.89%	0.11%	99.89%	0.11%
2015-20	99.90%	0.10%	99.90%	0.10%
2015-21	99.93%	0.07%	99.93%	0.07%
2015-22	99.91%	0.09%	99.91%	0.09%
2015-23	99.79%	0.21%	99.79%	0.21%
2015-24	99.93%	0.07%	99.93%	0.07%
2015-25	99.92%	0.08%	99.92%	0.08%
2015-26	99.78%	0.22%	99.78%	0.22%
2015-27	99.68%	0.32%	99.68%	0.32%
2015-28	98.88%	1.12%	98.88%	1.12%
2015-29	94.33%	5.67%	94.33%	5.67%
2015-30	91.05%	8.95%	91.05%	8.95%
2015-31	99.38%	0.62%	99.38%	0.62%
2015-32	99.90%	0.10%	99.90%	0.10%

Table 1. Impact of Unwanted Event (Outage) towards to SLA (Trust & Commitment); (refer to Figure 2)

#### 3.2 Result and discussion

In IT Risk Framework, Risk appetite can be defined using risk maps which different bands of risk significance can be defined. This map can be indicated by coloured bands on the risk map shown below figure. [4] in that example, there are four bands of significance:

- Red : Indicates really unacceptable risk. It is too far beyond normal condition (service level agreement), and it should be triggering an immediate to fix the situation.
- Yellow: Indicates increasing risk and above acceptable risk appetite. It should be triggering a mitigation or another adequate response to be defined within certain time boundaries to isolated the risk.
- Green: Indicates no special action required or a normal acceptable level of risk
- Blue : Indicates very low risk, where cost-saving opportunities will be found by decreasing the degree of control or for assuming more risk might arise

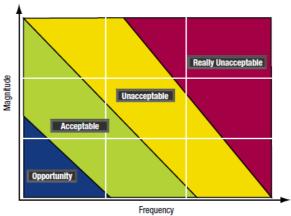


Figure 4. Risk Map Indicating Risk Appetite Bands (The Risk IT Framework)<sup>[4]</sup>

To adjust Risk Tolerance, should involve parameter of Frequency and Magnitude towards to consider risk as the effect of uncertainty on objectives. Mostly Risk depends on two aspects: the probability of an unwanted event and how it deviate the desired outcomes. Give a time frame can treated as a tolerance, an unwanted event may occur anytime, this may impact or not in the desired outcomes. Thus, unwanted event equal to frequency and impact desired outcomes equal to magnitude. For example, if a single disk fails within a storage system with redundancy, an unwanted event occurred but its impact is low (cost of replacement, but no data has been loss). In business case, the impact of risk will be determined by the penalty which is specified in the SLA.

Thus, based on Risk Map, we can conclude as follow: to keep maintain frequency of unwanted event and magnitude of impact desired outcomes on lower value then it will increasing value of SERVQUAL which is keeping maintain trust and commitment, indirectly. In fact, sometimes, we cannot always reduce unwanted event occur, but good communication to customer for begging tolerance since the impact already below Risk Appetite, is a must even though delta of Risk Tolerance will not bigger than 1-4%. For example, if Risk Appetite in SLA is 95% then risk tolerance might be around 93-94%, depends on particular situation at the time.

We can calculate value of risk tolerance based on experience, culture, magnitude, frequency, duration, asset, services, knowledge, etc. but in this paper we discuss it on magnitude and frequency.

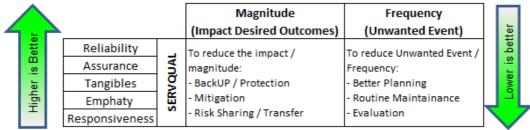


Figure 5. SERVQUAL vs Magnitude&Frequency Model

Customer Service (Weekly Basis)	SERVICE QUALITY	Mean	Standard Deviation
Number of Complaints	Reliability	3.219	1.376
Number of Interruptions	Assurance	3.380	1.737
Outages Clearness	Tangibles	3.676	1.683
Complaint within SLA	Emphaty	3.531	1.379
Hardcomplaint, Priority	Responsiveness	4.435	1.199

Table 2. Mean and Standard Deviation of perception of customers towards Network Condition

The Customer Satisfaction has been computed on some dimensions such as network condition, complaint, SLA, magnitude and those items have been analyzed to measure the opinion of customers using a five point likert scale (Strongly Disagree= 1 and Strongly Agree =5) or (Excellent=5 and Poor=1) has been used to rate the services on the basis of customer satisfaction. Table 2 explains the overall mean and standard deviation of the level Customer Satisfaction towards various services of the risk. It is clear from the table that from Good to Very Good (mean value being more than 3) but however the value of standard deviation is more than 1.0 which indicates a wide variation in the perspective. Even though the statistic said about various perspectives but at least we know when we adjust risk tolerance on various unwanted event which might be lower than risk appetite, we still keep trust and commitment to manage satisfaction of customers.

#### 4.1.37 Conclusions

In this paper, on the idea of hypothesis testing, all factors of SERVQUAL appear to be most significant dimensions of service quality influencing client satisfaction with the telecommunication suppliers. Therefore it is suggested that the telecom service representatives must provide services as or near frequency of unwanted event and magnitude of impact of desired outcomes, so it will not undermine the trust and tolerance level of customers. If the customers feel they get attention both individualized and quality then it will make a chance big opportunity since when there is trust and commitment then customer satisfaction will become a loyalty.

As future work, we can discuss again inter-corelation between risk appetite, risk tolerance, risk culture about how big the impact of revenue when we miss-calculating the risk tolerance.

## References

- [1] S. Youcef, C. Djelloul, and B. Abderrezak, "The Impact of Customer Satisfaction for their Loyalty with the Existence of Trust and Commitment as Intermediate Variables: The Case Study of the Algerian Mobilis Telecom," *Management*, vol. 5, no. 1. Scientific & Academic Publishing, pp. 1–5, 2015.
- [2] H. Oh, "Service quality, customer satisfaction, and customer value: A holistic perspective," *Int. J. Hosp. Manag.*, vol. 18, no. 1, pp. 67–82, Mar. 1999.
- [3] M. Arora, "Role of Customer Service Quality in Customer Satisfaction: an Empirical Study of Select Telecom Service," vol. 3, no. 3, pp. 85–94, 2015.
- [4] ISACA, "Risk-IT-Framework-Excerpt\_fmk\_Eng\_0109.pdf," 2009. [Online]. Available: http://www.isaca.org/Knowledge-Center/Research/Documents/Risk-IT-Framework-Excerpt\_fmk\_Eng\_0109.pdf. [Accessed: 07-Nov-2015].
- [5] S. Bhargava, "The concept of service," altius.ac.in, no. 2004, pp. 1–23.

#### Glossary

Satisfaction: Oliver (1996, P13) defines satisfaction as a judgment of enough level of satisfaction offered by a product or service throughout consumption [2]

Trust: is defined because the level of dependability ensured by one party to a different inside a given exchange relationship, Hosmer (1995) defines trust as reliance by one person, group, or firm upon a voluntarily accepted duty on the a part of another person, group, or firm to acknowledge and shield the rights and interests of all parties engaged during a cooperative endeavour or economic exchange. [2]

Commitment: in relationship promoting literature, commitment has wide been acknowledged to be associate integral a part of any long-run account [2]

Loyalty: is a psychological character fashioned by sustained satisfaction of the client as well as emotional attachment fashioned with the service supplier that ends up in a state of volitionally and systematically being within the relationship with preference, patronage and premium. [2]