

# **A Correlation Analysis Concerning Customer Satisfaction and Business System**

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## **ABSTRACT**

This research attempts to identify a specific feature of the company with a strong competitive advantage by analyzing the cause of escalation rate at the call center.

As the premise on this research, it would be assumed that the level of business system is determined by that of business structure and that of business operation. In addition to this, we believe that customer satisfaction plays an important role to sustain strong competitive advantage.

With the above premise, we chose the call center as a research object and analyzed some factors to lead variance of escalation rate that is a substitute parameter of customer satisfaction among call centers in terms of the concept of Business System.

Along with this idea, we conducted quantitative analysis at the call center as an object for this research to examine the next three themes below.

Identify some possible factors that lead difference of the escalation rate among call centers in terms of the concept of Business System.

Identify what would most affect the escalation rate at the call center?

What kind of business activity has a strong relation with the call center activity?

Suggest some propositions about features of companies with a strong competitive advantage throughout the result of & .

Finally, this research suggests some argument that customer satisfaction might be interrelated with the level of business system.

Key word: Business system, Customer satisfaction, Call Center

## **Introduction**

The core theme on this paper attempts to identify a specific feature of the company with a strong competitive advantage.

On this research, we chose the call center as a research object and analyzed some factors to lead variance of escalation rate that is a substitute parameter of customer satisfaction among call centers in terms of the concept of Business System.

Along with this idea, we conducted quantitative analysis at the call center as an object for this research to examine the next three themes below.

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Before we present our detailed research highlight, we would like to present our research frame including prior research about customer satisfaction and the concept of Business System.

### **What does Customer Satisfaction contribute to the Company?**

#### **Previous research indication**

It has been a long time that the customer satisfaction has been argued both in academic field and business circle. There are many arguments about the importance of customer satisfaction. Therefore, we present one previous work, which is quite noteworthy to introduce.

According to the previous research by Christian Homburg, Nicole Koschate, and Wayne D.HoyerZ, the degree of customer satisfaction is positively related with the willingness to pay of customers. The definitions of willing to pay is average purchase price per customer. They also emphasize that the relation between customer satisfaction and WTP becomes stronger as customer satisfaction judgement moves from transaction-specific to cumulative (Homburg, Koschate, and HoyerZ, 2005).

From their suggestions, we realized that customer satisfaction has a strong influence on the company's economic returns that should support company's strong competitive advantage.

Because of this, the company has to have some structure and have operational ability to maintain a high customer satisfaction.

In summary, customer satisfaction is one of important elements to make the company competitive. Therefore, it is very important for the company to have some organizational capability to maintain high customer satisfaction that is one of important aspects to be competitive in their markets.

### **Customer Satisfaction and Call Center**

In addition to the information from a previous work, we focused on the customer satisfaction at the call centre. In details, we tried to make clear what is a customer satisfaction at call centers?

Before we explain about the customer satisfaction call centre, we briefly introduce the reason why we chose a call center as a research object.

According to 'Call Center white paper' published in Japan, 2006, we found out that the most used communication tool between customer and company is a telephone. From this fact, we assumed that most opinions or expectations from customers might be aggregated at the call center and the customer service provided by call center might have a strong influence on customer's perception toward the company. For this reason, we chose the call center as a research subject and analyzed customer satisfaction at the call center to lead some potential propositions about the customer satisfaction of the company as a whole.

### **What Do Customers Expect Call Centeres?**

To use the call center satisfaction as a substitute parameter, we had to define, 'What is the call center satisfaction?' We examined some research papers published in Japan. Throughout this research, we found out what customers most dislike was that their inquires are transferred without being given any answers on the first contact and customers have tendency to rate the kind of call center as the call center with low satisfaction.

'Escalation' means the issue that fast line could not solve and was transferred to Second line or related external parties that play as third line. Therefore, all actors would be possible to be responsible for the issue that customer inquired.

Moreover, the factor of escalation occurrence is various. At least, there are three factors that are related to the escalation at the call center.

One of those is caused by customer's disagreement with the corporative policy. For example, a customer would like to pay the bill on internet banking, but the company doesn't have such a system and the customer might be frustrated by the situation.

Second case is that escalation is caused by the discrepancy in the corporate customer handling. As the example in this case, the company presented a delivery guarantee in 5 days when customer purchased, but actual delivery were executed in more than 5 days.

As a final case, escalation was caused by service failure that a customer could not agree with the first encounter. With typical example, the person who handled the issue first could not behave along with a customer's expectation and the customers were negatively impressed or irritated by the behaviour.

From this fact, we see that escalation has not been caused by not only call center but also other parties that are related to call center operation.

To avoid causing escalation, we believe that the company has to analyze from various aspects and try to solve fundamental issues.

### **The Concept of Business System**

As we explained earlier, escalation is caused by not only call center but also some parties that are related to call center operation. Behind of this, there is the concept of Business System.

Business System is the mechanism to support all activities of the company as a whole. All activities at the company should be united and interdependent in some way. Depend on how all activities are related effectively, the level of business system would be changed.

Generally, the call center is one of the organizational structures and should be incorporated into Business System and all activities should be interdependent under the concept of Business System. So call center activity would be constrained by other activities that are related to call center activity.

For example, customer's first impression when he or she contacted with a call center would be varied depend on the way of training operators at the call center. However, the flexibility of service recovery may be dependent on the organizational structure.

The level of business system depends on each company. The better business system the company has, the stronger the organizational capability is. If the company could create their own business system and enhance the level of that such as TOYOTA, they would be able to have a strong competitive advantage against other competitors.

## **Research Frame**

### **Our Concept of Call Center Satisfaction from the View Point of Business Systems**

Before we proceed to present our quantitative findings, we would like to organize our research frame and explain the relationship between customer satisfaction and Business System.

First, telephone is a primary tool for customers to contact with the company and the call center is a primary channel.

From this fact, it is possible to assume that most of customer's opinion or needs might be mostly handled at the call center.

Therefore, the customer would be strongly influenced by the way of customer handling at the call center. However, the part of customer handling at the call center would be constrained by the company as a whole because all activities in the company should be interdependent under the concept called as Business System.

As we mentioned earlier, we assume that the level of business system is determined by the level of business architecture and that of business operation. Therefore, call center satisfaction would be varied by the level of company's business system.

From the reason above, by comparing the escalation rate and detailed factors to cause escalation among call centres, it might lead some propositions about a specific feature of the company with a strong competitive advantage.

## **Quantitative Analysis**

### **Preparation for Survey**

Before we actually conducted survey, we had done some preparation for survey to make our questionnaires valid.

First, we interviewed some employees who work for one outsourcing agency. We selected staffs that are responsible for managing call center operation. Total number is 17 people. From this interview, we realized the core issue as for call center satisfaction, organized our concept again and made questionnaires for survey.

As the next step followed by the preparation above, with questionnaires that we planned, we asked call center staff to answer those questions and asked them to suggest some points that they are confused to answer. We reorganized our questionnaires along with their suggestion.

So we launched the survey through the above-mentioned process.

## Survey Outline

Research subjects are Call center staff who are employed by one outsourcing agency and are engaged in management work. We also carefully selected the call center not to place a disproportionate emphasis on one particular industry.

We distributed research questionnaires the below and collected five samples per call center. As a result, we collected 125samples, but deleted some samples that have wrong answers or invalid answer under our standard.

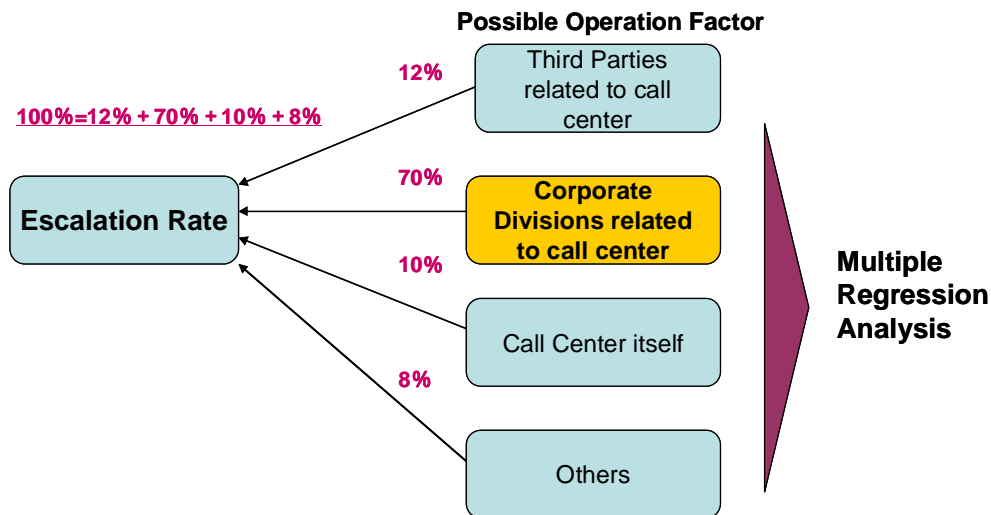
List of Questions				
0	The name of subjects			
1	The name of company			
2	Type of call center			
3	Type of contract			
6	Job description			
7	Size of call center			
8	Q1	Average escalation rate per month		
10	Q2	The ratio of external party's responsibility for escalation	Explanatory Variable	←
11		The ratio of internal division's responsibility for escalation		
12		The ratio of call center's responsibility for escalation		
13	Q4	Degree of role setting	Relation1	
14		Degree of operation along with role setting		Relation1
15		Please mention the reason why the degree of operating along with the role setting is performed well.		Details
16	Q5	Degree of information usage	Relation2	
17		Range of information sharing	Details	
18		Degree of using shared information		Relation2
19	Q6	Degree of target goal	Relation3	
20		Range of sharing target goal	Details	
21		Degree of setting the rule to manage target goal	Details	
22		Degree of usage the numerical result to improve performance		Relation3

Figure 1 . List of Questions

## Method

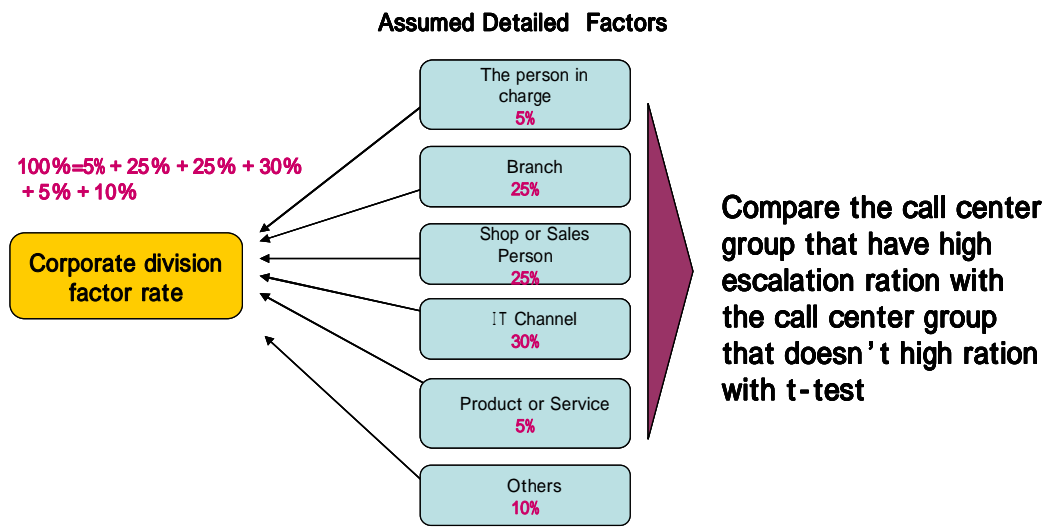
As a basic method of this analysis, Escalation Rate is an independent variable and we nailed down the factor that affects Escalation Rate. Along with this idea, 'Escalation Rate' as 100%, we asked subjects to classify each assumed operation factor, which should compose Escalation rate, with ratio. By using the result, we did multiple regression analysis.

The structure of this survey is the below;



**Figure2. Multiple Regression Analysis Structure**

From the result of this regression analysis, we figured out that corporate division activity is positively correlated with call center operation. We again subjects to classify assumed detail factor of corporate division operation as the rate of that as 100%.



**Figure3. Multiple Regression Analysis Structure**

We also compared with the call center with a high escalation rate and the call center with a low escalation rate. We examined with both t-test and Mann-Whitney U test because we were not sure that collected samples were normally-distributed or not. From this test, we could find some differences of Call Center Activities.

Research Question was five scale (1=very unlikely to 5=very likely) and asked subjects to mark depend on his opinion. Part of question list is the below;

**Q 4 :Which of the following best describes the role setting at your call center?**

Does your call center clearly set the role and the responsibility with other divisions or external companies?

Very unlikely                      Depend on the situation                      Very likely  
1                      -                      2                      -                      3                      -                      4                      -                      5

If you chose 4 or 5 at the question ,

Do you think that your call center has been managed along with the setting role or responsibility?

Very unlikely                      Depend on the situation                      Very likely  
1                      -                      2                      -                      3                      -                      4                      -                      5

**Figure 4 . Part of Question List**



## Results

Overall result is the below. In the next chapter, we would discuss about this result.

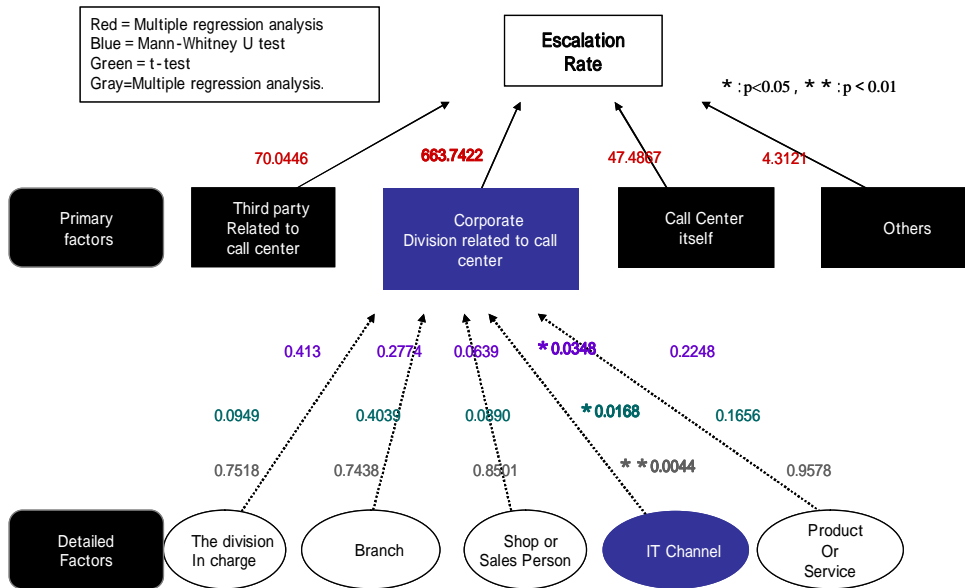


Figure5. Overall Result

\* :p<0.05 , \*\* :p < 0.01

Choice	t-test figure	Mann-Whitney U test figure
Degree of execution along with role-sharing	0.0149 *	0.0065 * *
Degree of information sharing	0.0921	0.1417
Degree of usage the shared information	0.0449 *	0.0346 *
Setting objective performance target	0.0358 *	0.1689
Degree of activity to improve performance	0.2654	0.4725

Figure 6 . The Result of Comparison

## **Discussion**

### **Proposition 1**

Having described in the beginning of this paper, the premise on this research is that the level of business system is determined by the level of business architecture and that of business operation. In addition to this premise, escalation rate was used as a substitute parameter for the customer satisfaction.

With the quantitative analysis, we found out that escalation rate at the call center has been positively correlated with the factor that is transferred to internal division such as a complaint about the attitude problem of sales staff or bringing some confusion to customers because of insufficient information on the web site.

From our finding on this research, it can be said that the level of business system would have a strong influence on the customer satisfaction of the company as a whole.

### **Proposition 2**

Of corporate divisions related to call center operation, IT Channel strongly influences Call Center performance. From this finding, we assume that call center and IT channel complement each other as Non-appearance channel for customer.

However, this supplemental model would be varied depend on business model and targeting customer group that are surely determined by the business model.

On this research, we didn't consider the customer needs and expectation model depend on business model. So we fully acknowledge that the supplemental model between call center and IT channel would be varied.

### **Proposition 3**

After we compared the call center with a high escalation rate with the call center with a low escalation rate, we found out three specific differences.

One feature is linked to the degree of role-sharing. The call center with a low escalation rate was more organized about the role sharing with other internal divisions as well as their role-sharing at the call center. In addition to this, the degree of actual execution along with role-sharing was carried out higher than the call center with a high escalation rate. Another difference is the degree of information usage. The call center with a low escalation rate had a tendency to share information with other parties and use the information to improve their operation.

## Summary

This research attempts to identify the specific feature of the company with strong competitive advantage by analyzing factors of escalation from their call centers to other parties. As the premise of this research, the company with competitive advantage has a higher customer satisfaction. We set this premise from the previous literature. We also assumed that higher level of customer satisfaction is determined by the level of Business System.

On this research, we chose a call center as a research object and an escalation rate as a substitute parameter of customer satisfaction. We actually confirmed that the escalation rate at the call center has been positively correlated with internal division's activities.

From these findings, we could lead some important indications that the level of Business System may have strong influence on the performance of the company as a whole.

As our research limitation, we have to conceptualize more clearly about a more comprehensive model of the determinations of customer satisfaction and have to expand our research object in a wider field.

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