

The Causal Relationship on Quality-centered Organizational Culture and Its Impact on Service Failure and Service Recovery*

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Abstract

The purpose of TQM (Total Quality Management)-centered organizational culture is to enhance the efficiency of business through the proper allocation and concentration of restricted resources. In order to maximize the corporate profitability through customer satisfaction, what kind of, when and how many resources should be allocated and managed to the preventive TQM activities and corrective TQM activities have become a very important decision making factors at the point of high management. This study aims to identify the causal relationships of quality-centered organizational culture on service quality and customer satisfaction relating to service failure in food service industry. And this study is intended to discover the factors of quality-centered organizational culture which impacts on service recovery justice after service failure happens, and it can be helpful for the top managers to make a decision to how to form corporate structural culture.

Key Words: TQM (Total Quality Management), Service Recovery, Service Failure, Causal Loop Diagram

1. Introduction

As the scale of a service industry's market grows greatly, the scope of service category keeps on growing a position level in the whole industry. According to the research in 2007 of the Bank of Korea, service industry holds a proportion of 57.6% on basis of the gross added value and thus Korea is predicted to enter the society based on service industry. On

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account of surrounding's advances such as income increases from economic growth, changes on a society and a culture and demographic changes, specialized foodstuffs' development and advanced food service system, the weight of food service industry related to eating-out is skyrocketing more and more in the entire service industry and ranking high as a significant industry field. Food service companies should differentiate the strategy from that of rivals to outgrow and advance higher than rivals in these growing food service industry environments and serious competitions between them. Since they cannot satisfy the every-customers' personalized demand as the needs of individualized consumers vary lately, they may run into unpredicted situation and service failure. On these occasions, they ought to cope with customers' demand as they must grasp it in an accurate way and attract customer satisfaction in accordance with efficient service recovery method and procedure in service failure. They are placed in the situation that they cannot help developing effective service operation systems, lest they face a collision with customers and service failures.

Let's take a look at the study about the service failure and the service recovery and we will find the analysis on the relation of service failure and service recoveries to a motivation, a procedure and a customer satisfaction. If we gripped the circulating relations between many variables relative to service failure and service recoveries, we could bring forward the efficient dealing methods. Thus we studied the strategic operation scheme for the customer satisfaction improvement, continual revisit inducement, potential customer creation and these profitability raises, as understanding bilaterally circulating human relations that are existent among each of variables between service failure and service recovery and TQM-centered organizational culture from a viewpoint of food service operator in this study. We'd like to show the activity direction of TQM-centered organizational culture for the purpose of the management improvement through service recovery.

As we place the aim on the setting-up of an optimal management strategy by forming the TQM-centered organizational culture in terms of the administration of service companies, analyzing bilateral human relations both between service failure and service recovery and between service quality and customer satisfaction, we intend to show the basic information for competitiveness raises of food service industry.

2. Literature Review

2.1 The TQM-centered organizational culture in the field of a service industry

Food service industry has been trying such a new management paradigm shift as quality competitiveness uplift and customer-oriented management through a customer service renovation to adapt itself to inner-or-outer diversified global environmental transformation. These changes cannot be faced up to without permanent efforts of all the constituent members in

all fields since they cannot be carried out with only partial and temporary endeavors. As Total Quality Management (TQM), customer-oriented approach is a kind of the management principles to improve organizations for the improvement of the service quality and the management quality, ensuring an inner-or-outer customer's demand and an unsettled customer satisfaction, it's progressed on the basis of 3 fundamental principles such as customer centric approaches, process improvements and enterprise-wide participations and 6 supporting items such as leadership, education training, supporting formation structure, communication, compensation and recognition (Tenner and Detoro, 1992).

Table. 1 Component's comparison of TQM

Components	Martin (1993)	Poter <i>et al.</i> (1993)	Anderson (1994)	Flynn <i>et al.</i> (1994)	Forker <i>et al.</i> (1997)
CEO Leadership	○	○	○	○	○
Customer Satisfaction	○		○		
Employee Development and Training		○	○	○	○
Employee Involvement		○	○		○
SCM Partnership				○	○
Design Mgt. of Service/Product		○		○	○
Process Management		○	○	○	○
Use of Quality Data	○	○		○	○
Continuous Improvement			○		
Customer Involvement	○			○	
Efficient Communication		○	○		
Role of Quality Dept		○			○

Source: Martin (1993), Porter and Parker (1993), Flynn, Schroeder and Sakakibara (1995), Anderson (1994) Forker, Mendez and Hershaner (1997).

TQM-oriented organizational culture is a sort of unique company's culture that constituent members share and that is enterprise-wide quality management for the improvement of customer satisfactions through a formation of specific organizational culture. A corporation can raise the quality both of service and of management, offering the best service to customers by means of a TQM-centered organizational culture. As especially service industry struggles to elevate customer satisfactions and management effectiveness, improving the service quality by presenting customers with the highest service through the TQM-oriented organizational culture, the TQM-oriented organizational culture means something for the customer satisfaction improvement.

2.2 The investigation on service failure and service recovery

2.2.1 Service failure

We cannot help encountering service failure during the presentation of service on account of its property in spite of a quality improvement activity toward the customer satisfaction improvement with the TQM-oriented organizational culture. As service failures take place when services don't reach customer's expectation level in the service connection point, Bell and Zemke (1987) in their studies defined that service failure is the experience of a service result that service reaches lower than customer's expectation and Parasuraman, Zeithaml and Berry (1988) said that service failure is that service outcome falls in lower than perceived zone of tolerance. Herein zone of tolerance means the zone between customers' demanding services and services that are thought to be proper and services that are considered to appropriate mean customer's expecting services. Thus presentation of less than customers' expecting services to customers means service failure. Hart *et al.* (1990) defines that service failure is that customers have a bad feeling on a service process and a service result in terms of an emotion and Johnston (1995) defines a service failure as something wrong regarding a service process and a service result. We should apprehend the service failure in the dimension of customers' perception and emotion, for the service failure can occur in the middle of not only service results but also procedures. Weun (1997) extended the definition of the service failure up to a poor service experience bringing about customers' dissatisfaction in service connection point, claiming that the service failure must cover every mistakes occurring in presentation of services, service promise breach to customers and all kinds of service errors. As defined herein, service failures are divided into an outcome failure and a process failure (Bitner, Booms and Tetreault 1990; Hoffman, Kelly and Rotalsky 1995; Keaveney 1995). Especially Michel (2001) spitted service failure into such fairness dimensions as sharing, procedural and bilateral and Hoffman and Kelley (2000) maintain that contingencies like relation depth, accessibility and customers' fairness and consumers' justice needs have an influence on service recovery satisfaction in their researches.

2.2.2 Service recovery

Ordinary service failure is defined as such unpleasant experiences as poor service experiences resulting in customers' dissatisfaction in service connection points, various faults showing during the service delivery, service promise breach and service errors (Weun, 1997). Grönross's (1988) study defined the service recovery as serial steps service suppliers take to cope with service failure in reaction to these. In this definition, it's maintained that the expectation to customers' service recovery is affected by the sensibility to fairness and the connection level and that the customers' satisfaction on service and the recovery effect have an effect on long-term related variables such as the overall satisfaction, the faithfulness and

the reliability (Ruyter and Wetzels, 2000). In that we, overall, estimate something about company's service recoverys, constituent members' attitude and recovery processes of service failure like the trouble-shooting swiftness are the most important key point in the service recovery. The final aim of service recoveries, as we run a program of recoverys of service mistakes to customers to increase the customer satisfaction, are the key cause to attract the customer satisfaction and the high service quality. Holloway and Beatty claimed that service failure leads to enterprise's tremendous expenses from customers' losses and wrong and negative oral transmissions and that they also cause customers' turnovers. The manager of service firms had better continually improve a recovery strategy to compensate customer-dissatisfactory service failure, appreciating those as inevitable aspects of the service supply.

2.2.3 Equity theory

As many studies on service recoveries are based on the equity theory (Goodwin *et al.*, 1990; Tyler *et al.*, 1990; Mueller *et al.*, 2003), the reason the equity is important is that unfair service experiences are much stronger than fair and so fairness is important (Schneider and Bowen, 1991). Because the essential point of the equity theory is related to the situation in which exchanges occur in the proportion (Adams, 1965) of input and output, which is appropriate to explain how to estimate the recovery. The equity theory puts a stress on output (compensation, satisfaction, etc) and input (sacrifice, investment) and compares these investment yields with those of these kinds of situation (Brockener *et al.*, 1991). The yields against an investment include service strategies coping with special recovery tactics (cash compensation, apology, replacement, etc), and staff's attitude (Kotler and Scheff, 1997). The equity theory focuses on perceiving procedures in which it compares weights on an investment or a sacrifice for a certain goal and output or compensation and compares standard targets with customers' investment and yield ratio on the same condition. The equity theory can be applicable to all the places where we see exchanges (Adams, 1965). We can sometimes recognize exchanges' unilateral or bilateral unfairness in those courses. Customers perceive whether it's fair or unfair when the weights on their investments (money, time, effort, etc) exceed those of yields (presented goods, services, etc) from exchange procedures. Awareness of unfair exchanges provokes customers' desire that they want to put those back to the fair state.

We can define a fairness factor as the level as to whether the exchange situation is fair or unfair. The fairness factor that is a component part suggested by Adams (1965) is regarded as both balance and correctness. According to Blodgett *et al.*'s (1995) study, a consequential fairness and a process fairness from perceiving service recoverys affects customers' oral transmission and their purchase intent to the pertinent service company. In addition, for purchase activity the bilaterally relative fairness is said to be more influential than the consequential fairness. The unsatisfied customers are known to want the polite and cor-

dial recovery in the course of recovery process as well as the fair recovery on the result. These fairness notions are divided into three sub-factors like distributive fairness, procedural fairness and interactional fairness in general (Clemmer *et al.*, 1996; Blodgett *et al.*, 1997; Tax *et al.*, 1998; Smith *et al.*, 1999; Maxham III *et al.*, 2002; Chebat *et al.*, 2003).

Firstly, distributive justice is discussed in the aspect of a personally received end object and includes a monetary compensation (Sparks *et al.* 2001; Mattila, 2001; Maxham III *et al.*, 2002) such as a refund, a discount, a coupon and no charge on service failure focused on substantial end object of service recoveries, a correction and a replacement (Mueller *et al.*, 2003; Lewis *et al.*, 2001). Customers prefer the tangible consequential substance (Goodwin *et al.*, 1990) in occurrence of service delivery failure and expect various sorts of a monetary compensation on the inconvenience from service failure, but the concrete amount varies according to the conditions (Bitner *et al.*, 1990). Because service recovery achievement level is connected to the substantial thing presented to unsatisfied customers for a service company and suppliers to cope with the service troubles, distributive justice perceived by unsatisfied-customer from service failure is determined by service recovery fruits (Goodwin *et al.*, 1992; Blodgett *et al.*, 1995).

Secondly, procedural justice to amend service failure includes enterprises' strategies and regulations (Smith *et al.*, 1999). It's estimated not good when we feel procedures, which we experienced with the gain of recovery's consequential substances, unsatisfactory though customers satisfy presented recovery tactics (Hoffman *et al.*, 2000). Customers' procedure control and complaint voice have an influence on a justice perception and a perception of procedural justice is affected by the fact that customers have an opportunity to express their emotion on obvious unfairness (Bies *et al.*, 1987; Sparks *et al.*, 2001). The more complaints customers file, the more satisfied customers are. Especially a tangible compensation given and customers are the more satisfied.

Thirdly, interactional justice as the one relevant to the method that we treat highly, focuses on interactional treatments and in coping with the recovery includes an apology, a politeness, a sympathy and a help of staffs (Wirtz *et al.*, 2004). We can see the difference between procedural justice and interactional justice in spite of connection between those and the former focuses on the overall structural procedure and meanwhile the latter focuses on the interactional procedure (Brockener *et al.*, 1991). Procedural justice and interactional justice point to a macroscopic aspect and a microscopic aspect respectively (Weun, 1997). Interactional justice as that of humane aspect that customers recognize, explains the reason customers feel treated inappropriate despite of the fairness of decision-making procedures and consequences on problems that customers file (Bies *et al.*, 1987). When service suppliers show the highest attention and reaction after service failure occurs, customers are the most satisfied (Hocutt *et al.*, 1997). Interactional justice is the decision-making and key factor both on customers' repurchase intent (Blodgett *et al.*, 1997) and on negative oral transmission intent (Blodgett *et al.*,

1997) and uniquely claimed to have a direct affect on the faithfulness (Chebat *et al.*, 2003).

3. A Causal Loop Diagram of Service Failure and Recovery

3.1 A Causal Structure of Service Failure

If we take a closely look at the causal structure and relationship of service failure, we can easily find that service capacity conjection will be larger by increasing the number of new customers who are encouraged to good compliments of other customers. By doing that, Service Complaint will be increasing in the part of excess on service capacity and then obviously service delivery failure happens a lot. Service delivery failure means the raising the rate of service failure and consequently customer expectation of service recovery will expand gradually. Meanwhile, increasing customer expectation of service recovery will go through customer satisfaction by the difference between qualities of service recovery which is recognized through the process of service recovery. Making the satisfied customer is increasing the new comers in the service system by using existed customer's word-of-mouth and then customers revisit will increment due to their improving loyalty of the service (B1/B2 Loop).

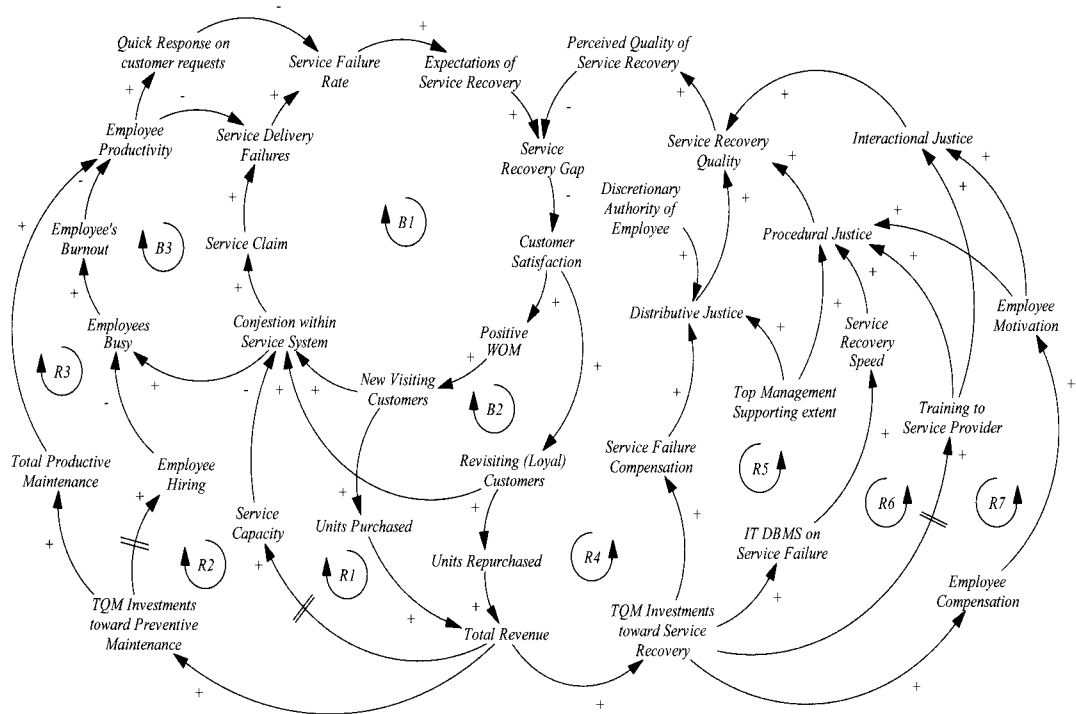


Figure 1. Causal Loop Diagram on Service Failure and Recovery

On the other hand, employees' burnout and fatigue will be increasing and service productivity will decrease due to disorder in the working process of the employees by increasing the number of customers in the service system. Of Course, low productivity of service employees will result in failure of service delivery or necessity of prompt response to customers' request to fix it. And that kind of actions will cause the service system to fail and successively the service failure rate will go up(B3 Loop).

For preventing the service failure, we can introduce the strategic variables and one of them is proactive investment for service capacity enlargement. Namely this case is that service operator spends the revenue in developing new service facility and expanding service capacity. That decision is expected to take a long-term process and need the quite a time to obtain the result. So we can consider that decision long term strategic decision variables (R1 Loop).

Additionally, TQM investment for provision as against total revenue will cause the hiring new employees. If the hiring of the new employee could the disorder of the employees in the service system, finally the service failure rate will be decreasing. But this is also the strategic decision which needs the time lag in the long term perspective and it is also needed the quite a time consumption (R2 Loop).

Another TQM investment example is the activity of Total Productive Maintenance (TPM). That is, TQM activity of service failure of service industry is composed of preventive maintenance activity and post breakdown maintenance processes. TPM is classified under preventive maintenance activity and is the program for innovative improving of facility maintenance function in an internal organization by participating in the whole participants. Therefore, TPM is indicated to the activity of productive maintenance based on the thorough plan and facilitated by employees. The state of the suspending or inferior operations and will be decreasing thanks to achieving the employees' dual commitment both their own job and the facility maintenance work together. And it is likely to enlarge the profitability in the service system because of improving the productivity of the service facility usage. In the end, TPM helps the employee's self maintenance activity to pursue efficiency of service production system by training the basic facility maintenance tasks to their employees on the service scene of labor (R3 Loop).

Furthermore the firm of performing TPM is available for forecasting the accurate service consumption time for retaining the service productivity of maximum efficiency on its service. It is of benefit to prepare the plan and strategy of the service firm to provide the customers with necessary service exactly on time. Also it is possible that we can understand and control the part of service facility affecting service quality attributes variation through TPM. So it is likely to cause the quality of product and service to increase and reduce the corresponding expense and then it is possible to decrease the customers' complains by providing the targeted values.

3.2 A Causal Structure of Service Recovery

This research defines the competitive advantage of food service industry as service failure and service recovery corresponding to service failure and the equity is evaluated as the measurement on quality estimator of food service industry. A causal structure on post service recovery for service failure implies the encouraging process on customer satisfaction after the service failure occurs. The starting point of that is making a decision to increase TQM investment. Enlargement of TQM invest for service recovery is expected to expand the financial and physical compensation, for doing this customers are aware of the distributive equity. Also the distributive justice has the positive effect by varying the employees' empowerment and CEO's support and is believed to improve the quality of service recovery. Increased quality of service recovery can be formulated as a causal relationship reducing the gap between the service recoveries due to improving the recognized quality of service for customers (R4 Loop). The distributive justice has been argued with the personal receiving rewards and it has the financial rewards (Sparks and McColl-Kennedyet 2001; Mattila, 2001; Maxham III and Netemeyer, 2002) such as refund, discount, coupon and no charge, adjustment, substitution, etc (Mueller *et al.*, 2003; Lewis and Spyrapopoulos, 2001) for compensating the service failure focused on real output of the service recovery. The research shows that customers prefer receiving the financial rewards to the others when they encounter service failure (Goodwin and Ross, 1990), but detailed types and amount of the rewards are quite different in accordance with the service failure situations (Bitner *et al.*, 1990). The performance dimension of service recovery is pertinent to financial and physical rewards providing customers for modifying the first service problems. Finally customers who have complaints in receiving service recognize distributive justice to some degree of performance on service recovery (Goodwin and Ross, 1992; Blodgett, Wakefield and Barnes, 1995).

The factor of TQM-centered organizational culture affecting the procedural justice includes the management and control method of information system and human resources. First of all, taking a close look at the causal structure in the information system management perspective, increasing the TQM investment on service recovery affects the speed of service recovery through analysis the various data on service failure. In the end we are aware that procedural justice will increment positively (R5 Loop). Also, TQM investment to employee's training program for service recovery has positive impact on procedural justice (R6 Loop), and finally we can expect the increasing procedural justice. If the rewards for employees become larger and then the motivation of employees seems to be encouraged and on the same way we can see the high level of the procedural justice again. Procedural justice is the concept with the meaning of process justice for reducing the service failure and firm's policy and regulation (Smith *et al.*, 1999; Mattila, 2001). Procedural justice is a proper and systematic organizational process for managing the service failure and dealing with customer's complaints.

It is the decision process to obtain the goal (Tax *et al.*, 1998), and even if the customers are satisfied with the providing service recovery strategy, they can evaluate the service recovery treatment badly because of incomplete delivery process from the service firm (Hoffman *et al.*, 2000).

On this wise, process control and complaint from customers have an impact on their recognition of equity (justice), if the customers have opportunity to act up to their opinion on apparent unfairness it will have enormous influence on the awareness of procedural justice (Bies and Shapiro, 1987; Sparks *et al.*, 2001). Namely the higher the customers can have the opportunity to tell the complaints about the service, the more they are satisfied with the service. To be specific if the service firm can provide the financial rewards to the customers having the complaints; this result can happen exactly (Goodwin *et al.*, 1990). Not only whether having the opportunity to tell the complaints but also whether having the right procedure and criteria or not has an impact on the recognition of procedural justice (Tyler and Bies, 1990; Blodgett *et al.*, 1997; Tax *et al.*, 1998; Palmer *et al.*, 2000), and the customers responds affirmatively to the evaluation the quality of service by receiving the service recovery in short time and process (Bowen *et al.*, 1999). The customers hardly accepted the service failure from the injustice procedures compared with from the justice procedure (Goodwin *et al.*, 1992), their awareness that the service provider is doing their best service result in high level customers satisfaction, perception of service quality and efficient service recovery (Johnston, 1995; Mohr and Bitner, 1995). The procedural of service failure delivery has influence on the customers in the most negative and the customers who perceive the procedural justice in dealing with the service failure does not represent the negative emotion but express the positive one (Hegtvedt and Killian, 1999).

Besides, in the case of serious service failure, only procedural justice affects the customers' satisfaction, there is another researcher's opinion that procedural justice is not a main decision factor of determining the customers' loyalty (Blodgett *et al.*, 1997). Procedural justice of service recovery is measured and calculated by using the various scales like delivery on time, promptness, accessibility, flexibility, procedural control, result control, justice policy, proper method (Clemmer *et al.*, 1993; Blodgett *et al.*, 1997; Tax *et al.*, 1998; Smith *et al.*, 1999; Mattila, 2001; Maxham III *et al.*, 2002; Chebat *et al.*, 2003; Wirtz *et al.*, 2004), efficiency, immersion, mistake, help, etc (Clemmer *et al.*, 1993). In this research, we used the procedural control and accessibility measurement and defined the procedural justice of service recovery as the degree of the customers' perception about the process order justice in the recovery process of service failure.

Justice of interaction on service recovery process is related to the treatment of the customers (Sparks *et al.*, 2001) and is focused on interactive recovery treatment. For example, it includes the employees' apology, courtesy, empathy and aid, etc in dealing with service recovery (Wirtz *et al.*, 2004). Procedural justice and interactional justice have the similarities

and differences. While the former is focused on the overall structural procedures, the latter is focused on the interactive procedures (Brockener, Ackerman, Greenberg, Francesco, Leung, and Bierbrauer, 1991). Furthermore while procedural justice is a macroscope-oriented concept, interactive justice is a microscope-oriented one (Weun, 1997). Likewise the procedural justice, TQM investment of employee's training for service recovery will increase the interactive justice and it also affects the employees' motivation by enlargement the employees' rewards. Finally we can observe the increment of interactive justice through the causal loop (R6/R7 Loop). Also, overall improvement of distributive, procedural, interactive justice can enhance the quality of service recovery level; finally the quality of service recovery which are recognized from the customers can reach the high level otherwise it cannot. On finding the service failure in service spot when the service provider shows the deep empathy and quick response, the customer is likely to be satisfied with the service recovery and the service firm (Hocutt *et al.*, 1997). There are new arguments such that the interactive justice is the major decision factor for complaint customers' repurchasing intention (Blodgett *et al.*, 1997) and negative information by word of mouth intention (Blodgett *et al.*, 1997). Similarly, interactive justice is the proper method of solving the customers' complaints (Goodwin *et al.*, 1992) and also is the offset manners for customers' perception on service failure like impolite and inappropriate behaviors. For this kind of service failure, service provider has to make an apology whether service firm can offer financial and physical rewards or not. Interactive justice for service recovery is measured by using the terms of politeness, esteem, interests, listening, effort, truth, explanation, empathy, apology, communication (Clemmer *et al.*, 1993; Blodgett *et al.*, 1997; Tax *et al.*, 1998; Smith *et al.*, 1999; Mattila, 2001; Maxham III *et al.*, 2002; Chebat *et al.*, 2003; Wong, 2004; Wirtz *et al.*, 2004) and intimacy, prejudice, sensitivity (Clemmer *et al.*, 1993).

4. Strategic Approach on Service Failure and Recovery

Miller *et al.*, (2000) did the research about the process of service failure from arising to recovery and shows that recognition of materiality on service failure has an impact on performance of service recovery. The practical execution efforts of recovery on service failure are composed of economical (money back, discounts, other treatment) and psychological compensation (apology, empathy, explanation), response speed (recovery time), adjustment and alternatives. In addition to them, strategic execution of service recovery is classified the response, information, behavior, rewards, etc (Bowen *et al.*, 1999). To be specific, the detailed classifications are as follows: Firstly, no charge, price discounts, coupons are provided for service failure (Bell *et al.*, 1987; Bitner *et al.*, 1990; Kelley *et al.*, 1993; Johnson and Fornell, 1991; Levesque and McDougall, 2000; Hui and Au, 2001; Boshoff and Allen, 2000;

Mueller *et al.*, 2003; Wong, 2004; Lewis *et al.*, 2001). These strategic actions are one of the customers' preferable recovery methods about service failure and are expected to make a solid relationship between the customers and firm. Secondly, repairmen and substitution is also used to recover the service failure (Kelley *et al.*, 1993; Mueller *et al.*, 2003; Lewis *et al.*, 2001). That is, this strategic action is related to fix the defective products and substitute the new products for the old ones. Those actions are the most favorable service recovery for the service provider and concurrently can be one of the most preferable recovery execution strategies for the service receivers (customers). Thirdly, it is included the empathy recovery such as making an apology for the frequent service failure for sympathizing their inconvenient (Bell *et al.*, 1987; Bitner *et al.*, 1990; Kelley *et al.*, 1993; Johnson *et al.*, 1991; Levesque *et al.*, 2000; Hui *et al.*, 2001; Wong, 2004; Mueller *et al.*, 2003; Lewis *et al.*, 2001). The degree of success in execution of the service recovery depends on the method of recovery and to some extent service failure and when the service provider performed this strategic action to the customers, the satisfaction of customer is not relatively high compared to others. Fourthly, service providers explain the reason of service failure to their customers (Bitner *et al.*, 1990; Johnston and Fern, 1999; Boshoff *et al.*, 2000; Lewis *et al.*, 2001). This strategy is defined as a major factor in evaluating the service recovery. Fifthly, involvement of CEO and other employees (Kelley *et al.*, 1993; Mueller *et al.*, 2003) to solve the service problems is related to the treatment like a price discount and service adjustment or redesign. Sixthly, the follow-up measures are treated for the complained customers in confirmation to them whether the other problems exist and the customer are satisfied or not after performing several remedies (Bell *et al.*, 1987; Johnson *et al.*, 1999; Lewis *et al.*, 2001).

For the residue, prompt recovery (Bell *et al.*, 1987; Lewis *et al.*, 2001), the communication (Boshoff *et al.*, 2000), providing the opportunity of complains (Hui *et al.*, 2001), authority delegation (Johnson *et al.*, 1999; Boshoff *et al.*, 2000), approval (Bitner *et al.*, 1990), no recoveries (Lewis *et al.*, 2001), etc. various execution strategic actions for service recover are doing by several researchers. The active recovery methods are largely divided into three ways. Those are composed of financial rewards (price discount, giving bonus and refund), psychological rewards (apology, involvement of CEO and employee) and service execution rerun.

The research subject of Smith *et al.* (1999) was the four service recoveries—compensation, response speed, apology, and initiation—and their influence over customers' satisfaction. The conclusion of the research tells us that financial rewards and an apology to complained customers are not easily discussed with others because the former is related the directly providing "what" with the customers and the latter is concerned with "what" and "how to deliver" to customers. So they are hardly compared with each other due to the different dimensional attributes. Also Miller *et al.* (2000) explains that the service recovery methods are the four types such as psychological measurement, speed of recovery, tangibles, frontline empowerment.

According to this research, among the four types' recoveries, psychological measurements-apology, substitution and coupon-correspond with "what". On the other hand, speed of recovery lies in "how to fix the service failure".

In recovering the service failure we can introduce a lot of possible strategies according to service type. Bell *et al.* (1987) provides five recovery strategic actions including apology, quick response, empathy, symbolic rewards, and follow-up treatment. Especially, apology is the strong recovery for dealing with angry customer and quick response and empathy are enough to take care of the customers with trivial service problems. The authors suggested that for the customers who experience serious service failure all above methods are needed as recoveries. Consequently service firm needs to approach practically strategic recoveries corresponding to each type of service and situation.

5. Result and Findings

The essence of TQM-centered organizational culture activity is appropriate distribution and concentration of managerial efficiency. Considering preventive TQM investment and enlargement of service facility's capacity (R1, R2, R3 Causal Loop Diagram), those are the most important thing to take actions but unfortunately both of the two are long term decision variables. Meanwhile making loyal customers by increasing the satisfactory customers are more valuable managerial decision due to satisfactory customers are expected to do marketing their friends and relatives on behalf of the service firm and make the new customer easily (R4, R5, R6, R7 Causal Loop Diagram). It means that limited resources and proper allocations are helpful in enhancing the service firm's competitive competency. By performing service to customers it is the principles that doing the zero defect service to customers by introducing TQM-centered organizational culture activities is needed. But exceptionally in the food service industry service failure often occurs during the service time and the problems have to be solved efficiently and scientifically. As for as the expense is concerned, maintaining activities for existing customers are more efficient and economical than acquiring activities of the new customers. So this principle is used to insist the reason of making an effort to customers' satisfaction. For that reason to make the employee happy in the working place is very important and we should try to formalize the affirmative organizational culture to exert its full potential and competency.

This research is to study on effects of TQM-centered organizational culture through the valid recovery related to possible service failure in the food service industry. We aim to suggest and enlighten the propel direction of formation the firms' organizational culture to be distinguish the main factors affecting service recovery from the factors of TQM-centered organizational culture in the food service industry.

Henceforth future research area could be occurred as follows:

Firstly, the necessity of the practical research is increment by developing case study in this study field like a linkage and relationship between TQM-centered organizational culture activities and service failure and service recovery. Because the major part of previous research weighs in service failure, service recoveries and additionally customers' satisfaction, the research subject was limited. So there are few research artworks done by several researchers including this article which is new trial for examining the TQM-centered organizational culture activities and their influences. Therefore we need to do the new research by analyzing casual relationship connected TQM-centered organizational culture and service recovery's concrete action plan. Secondly, the customers' recognition on service recovery depends on the characteristics of customers and service firms. According to whether the customer is new one or loyal one or not, the execution strategy of service recovery should be varied and be different. Also the characteristics of the service firms may have impact on the firms' strategy. It is likely to help practitioners in the service firm setting up the strategies about the service failure considering the detailed types of the firms.

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