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Service improvement by business process management using customer complaints in financial service industry

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ABSTRACT

In financial service industry, service improvement should be considered from process viewpoint and customer viewpoint because the value creation is ultimately linked with internal business processes on the back office and customers are involved as a co-producer of value. In this perspective, customer complaints through call centers are adequate to support the analysis for service improvement in financial service industry. In this study, we propose a web-based decision support system for business process management employing customer complaints, namely Voice of the Customer (VOC), and its handling data for service improvement. It involves VOC conversion for data enrichment and includes analysis of summarization, exception and comparison. The proposed system is evaluated on a major credit card company in South Korea.

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1. Introduction

As a labor force of service industry has grown significantly and a portion of service industry in GDP has increased, services are increasingly important to the economy. With this shift to focusing on services, the studies for service improvement are increasing. However, the difference of characteristics between products and services makes it difficult to improve service quality as follows:

- *Intangibility and simultaneity of services*: For the service improvement, it is required to monitor and measure results of service. Results of service are expressed as customer satisfaction or dissatisfaction, which is hard to get information about.
- *Customer involvement in services*: The role of customers as co-producer of service values has been highlighted (IBM Almaden Services Research Reports, 2006). Customers are both the inputs and the source of innovation to the service process. Service quality should be addressed from the customer-oriented viewpoint. Customers' collaboration is required for service improvement.

In addition to these general differences, there exists a problem for service improvement in financial service industry. Service is claimed to be a process that creates benefits by facilitating a change in customers, their physical possessions, or their intangible assets (Wikipedia, 2009). In case of financial service industry such as a credit card service, the service is a series of activities of enabling customers to carry on credit card transactions. These companies create values by supporting customers to manage their financial assets. In this case, the value creation is ultimately linked with internal business process on the back office.

- *Close relation with business process management*: When the state of an internal business process is not normal or when it is not the same with a customer's awareness, a negative value gap arises, which means the difference between service providers' intention and service recipients' expectation. In financial service industry, the negative value gap is related with inadequate states of internal business processes rather than the transaction itself.

Beyond supporting transactions, internal business processes on the back office should be managed to provide all-inclusive services and optimized to make a positive value gap as much as possible. This is can be why business process management (BPM) is issued in service science, management, and engineering (SSME), which is the study of service systems aimed at improving them (Hidaka, 2006; IBM Almaden Services Research Reports, 2006).

However, most of BPM pakages do not support sufficiently diagnoses (Weske, van der Aalst, & Verbeek, 2004). So far, they focus mainly on process design, configuration of a process aware information system such as a workflow management system, and

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process enactment based on ICT infrastructures. They build up the environment where internal processes are automatically monitored about the delivery time and the cost. For the service improvement, it should be considered not only performance data for each business process but also non-measurable contents such as customer responses. To produce reasonable and valuable analysis results for service improvement, companies require a conceptual model that describes the substance of problem from process side and customer side.

Therefore, we propose a business process management framework that employs customer complaints through call centers for business process analysis. The customer complaints are called Voice of the Customer (VOC). As VOC tells what customers think about companies' current offerings and VOC is highly related to internal business processes, it is adequate to support the analysis for service improvement in financial service industry. Because VOC itself is expressed by customers' words, transforming the VOC for analytic usefulness is a prerequisite for analysis. And then, a practical methodology for analysis is presented for managerial implications. In this VOC conversion and analysis, we employ traditional concepts of quality management. To demonstrate results, we introduce a case of a credit card service company in South Korea and build a web-based system embedding the proposed methodology.

2. Literature review

2.1. Business process management (BPM)

Many business excellence models, such as European Foundation for Quality Management (EFQM) and Malcolm Baldrige National Quality Award (MBNQA), and international standards such as the ISO 9001 emphasize the importance of process orientation. There have been many terms used for process-oriented concepts including "process improvement", "process-reengineering", "process redesign" and so on. Although business process re-engineering (BPR) has been highly focused until recently, it has failed to deliver the expect results (Harrington, 1998; Huffman, 1997). In this situation, business process management (BPM) is introduced as the approach to "avoid the tendency to fall prey to the hype of a new management fad" (DeToro & McCabe, 1997). Elzinga et al. define BPM as a systematic, structured approach to analyze, improve, control and manage processes with the aim of improving the quality of products and services (Elzinga, Horak, Lee, & Bruner, 1995). Zairi describes BPM as "a structured approach to analyze and continually improve fundamental activities such as manufacturing, marketing, communications and other major elements of a company's operations" (Zairi, 1997). In his attempt to explain BPM, BPM has to be governed by the following rules; activities mapping and documentation, a focus on customers, measurement activities to assess the performance of each process, a continuous approach to optimization, inspiration by best practices for superior competitiveness, and an approach for culture change.

While many people consider BPM to be the 'next step' after the workflow wave of 1990s, BPM is above workflow management. It supports business processes using methods, techniques, and software to design, enact, control and analyze operational processes involving humans, organization, applications, documents and other sources of information. Weske et al. describe the relationship between workflow management and BPM using the BPM life cycle as shown in Fig. 1 (Weske et al., 2004); processes designs, implementation by configuring a process aware information system (e.g., a workflow management system), execution of operational business processes using the configured system in enactment phase and analysis of operational processes to identify problems and find possible improvement in diagnosis phase. The traditional workflow management system focuses the lower half of the BPM life cycle. As results, there is a little support for the diagnosis phase. Few systems support the collection and interpretation of real-time data (Weske et al., 2004).

2.2. Voice of the Customer (VOC)

According to both academic and practitioner's literature, research methodologies used for analyzing and utilizing VOC vary with application domains. Until now, a great deal of research on the VOC analysis deployed VOC in understanding customer requirements for new product developments from conceptual designs through to manufacturing. These applications use VOC as inputs to Quality Function Deployment (QFD) for formalizing processes of listening to customers. Griffin and Hauser explained that industry practices have used 'Voice of the Customer' as customer input for strategic and operational decisions (Griffin & Hauser, 1993). From a viewpoint of total quality management and Baldrige Award criteria, the use of VOC with each priority helps to identify customer needs and ultimately accomplishes the quality based on customers. Haar et al. developed an approach to fine-tune the product or service offering through incorporating VOC into the design of new products or services in a technology-based multinational company (Haar, Kemp, & Omta, 2001).

There also exist several applications other than new product design and development in manufacturing. Radharamanan and Godoy used QFD to deploy VOC in understanding customer requirements and to include them in continuous improvement of service quality in a health care system (Radharamanan & Godoy, 1996). Johnston claimed that complaint management should result in not only customer satisfaction but also operational improvement and better financial performance (Johnston, 2001). Bosch and Enríquez explained that companies can design a process and continuously improve toward service excellence by successfully implemented CCMS (customer complaints management systems) that extracts knowledge from the customer complaints (Bosch & Enríquez, 2005).

3. Methodology

3.1. The present status of VOC management

VOC over diverse receipt channels including automatic response service (ARS), and Internet homepages are put together to customer support representatives (CSRs) on call centers. VOC are directly handled by CSRs on contact points or transferred to the internal department in charge if the VOC handling requires approvals of the other departments or inquiries to the other institutions. On the back office, the transferred VOC is not monitored or tracked about the handling. Therefore, we suggest the framework of VOC-handling as depicted in Fig. 2. It has following features:

(1) According to the type of VOC, required posterior processes should be mapped to the persons in charge.
(2) Customer information, received VOC details, and handling information are recorded in a data warehouse and shared for the status of transferred VOC.
(3) From the initial transfer to the end of the VOC-handling, every intermediate processes should be managed. Companies should take measurements such as duration times, costs, and amounts of resources, and so on. We record these business performance measurements on family of measures (FOM) database.
(4) Companies analyze the data in VOC data warehouse and FOM database, and derive information about the bottleneck and value-added processes.

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