



Quality management systems and value creation

Quality
management
systems

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Abstract

Purpose – The purpose of this paper is to explore the role of a quality management system (QMS) for the assurance and improvement of value in an inter-organizational business relationship. The study is carried out in the public transportation industry where service provision has been outsourced.

Design/methodology/approach – In-depth interviews are conducted with 26 participants from two organizations involved in an inter-organizational business relationship. From the interview material, the authors identified the drivers that create value for the inter-organizational business relationship and for the customers of public transportation. All value drivers are categorized according to the central areas in a QMS.

Findings – The results show that internal processes and management responsibility are central areas where value is destroyed. Since service provision has been outsourced, this means that the intended value is never experienced by the customer.

Research limitations/implications – The identified value creators and destroyers originate from the suppliers' view and focus on how the different suppliers create value for customers.

Practical implications – Managers should acquire knowledge about the value they create or destroy and focus on improving the value-creation processes. The QMS can be used to assure and improve value creation in an inter-organizational business relationship.

Originality/value – The research sheds light on the difficulties and possibilities in value creation where service provision has been outsourced.

Keywords Transport management, Quality management, Outsourcing

Paper type Research paper

Introduction

Outsourcing service processes and establishing inter-organizational relationships have become an increasingly common business strategy in many industries (Metters and Verma, 2008). Such organizational settings can be challenging to manage because the more actors who are involved with different roles and objectives, the higher the complexity within these networks (Normann and Ramirez, 1993). Creating value for customers is a concern to all kinds of businesses. Research shows that value is the primary influence on purchase decisions and the leading indicator of market share, revenue growth, profitability, and competitive advantage (Monroe, 2003). Creating value for customers in a context where the service provision process has been outsourced can lead to challenges (Jonson, 1999; Metters and Verma, 2008) that require a high degree of co-ordination and shared visions among the different actors. Beaumont (2006) addresses some potential disadvantages of outsourcing, such as loss of distinctive competencies, compromised confidentiality, problems of transferring



activities to the business partner, ascertainment of relevant costs, a lack of a “cultural fit” between the parties and the lack of flexibility inherent in signing a fixed-term contract.

One context where service provision has been outsourced is the public transportation industry in Sweden. Each county has a public transport authority (PTA) that is owned by the county council and municipalities. They are responsible for public transportation on roads and railway in the region as well as public transport from and to the region (Enquist, 1999). The transports are run by private operators and the business relationship is regulated through a contractual governance agreement (Enquist *et al.*, 2005). These organizations, the PTA and the operators, co-create value for their common customers (Enquist, 1999; Enquist *et al.*, 2005). The PTAs do not have a direct, face-to-face relationship with the users of public transportation; therefore, there is a mutual dependence between the PTA and the operators in delivering value-creating services. It is a challenge for the PTAs since they must take into consideration not only the users’ benefits and corporate benefits, but also the social benefits (Fryer *et al.*, 2007). Outsourcing service processes and formalizing internal relationships have become common management decisions (Beaumont, 2006). Few research studies, however, explore this trend and there is a lack of theories explaining this organizational structure (Baltacioglu *et al.*, 2007; Balakrishnan *et al.*, 2008). This empirical study aims to contribute to existing theory by exploring the difficulties and possibilities in creating value where the service provision has been outsourced.

The creation of value for stakeholders in outsourced service provision can be managed in different ways. One possible strategy is to design and develop a quality management system (QMS) that will direct and control an organization in terms of quality. A QMS can be designed to include certain principles, additional practices, and techniques (Dean and Bowen, 1994). It often follows the substance of Deming’s plan-do-check-act (PDCA) cycle (Deming, 1986), and provides support to organizations for the assurance and improvement of quality. Within an organization, or business network, there are internal processes that aim to manage and support the operative processes. To create value in an inter-organizational relationship, a joint QMS can be created with shared resources to perform the processes and routines for measurement and improvement (ISO, 2000b, c).

The aim of this paper is to explore the role of a QMS for the assurance and improvement of value in an inter-organizational business relationship in the public transportation industry where service provision has been outsourced. The study focuses on an inter-organizational business relationship between a PTA and a private operator. The empirical research is based on 26 in-depth, semi-structured interviews with key informants from these two organizations with the purpose of identifying value drivers, that is, the attributes that create or destroy value. The research results are analyzed with central concepts of a QMS. The findings show that multiple value destroyers relate to internal processes within this business network, which negatively affect efficiency. Furthermore, several value destroyers could be traced to the concept “management responsibility” within this inter-organizational relationship. These results illustrate that internal processes and management issues are central areas that destroy value in a context where service provision has been outsourced.

The value concept

Value has been discussed in a variety of literature streams and has a range of different meanings (Gale, 1997; Ramirez, 1999). The relational exchange of value, that is, value embedded in the relationship among business partners and further constellating value drivers, has been investigated by a number of scholars (Anderson *et al.*, 1993; Anderson and Narus, 1995, 1999; Lapierre, 1997, 2000; Ulaga, 2003; Ulaga and Eggert, 2006; Vargo and Lusch, 2004; Lusch and Vargo, 2006; Walter *et al.*, 2003). Many scholars define value as a trade-off between the benefits and sacrifices of a supplier's offer as perceived by the customer (Zeithaml *et al.*, 1990; Woodruff and Gardial, 1996; Monroe, 2003). The perceived benefits are a set of physical attributes, service attributes and technical support available in relation to the particular use situation. The perceived sacrifices refer to the price occasionally, but can be described more broadly as well (Monroe, 2003). Customer value theory stresses the importance of understanding customer perceptions of value (Woodruff, 1997). Suppliers need to understand how they can create and deliver value in business-to-business relationships beyond merely selling products (Ulaga and Eggert, 2006) because value is created, originally owned and offered for sale by a seller who is independent of customers' perception (Holbrook, 1994).

An investigation of the constellation of value conducted by Lapierre (2000) focused on a business-to-business relationship in the service sector and identified 13 value-based drivers of customer-perceived value. The 13 value drivers were divided into three scopes: product, service, and relationship. The perceived benefits that include ten value drivers refer to the product (alternative solutions, product quality, and product customization), service (responsiveness, flexibility, reliability, and technical competence) and relationship (image, trust, and solidarity). The perceived sacrifices that include three value drivers refer to price, time/effort/energy, and conflict issues.

Value creation in networks

An organization can create value in three domains: value creation through relationships with suppliers (in a business-to-business domain), value creation through alliance partnering, and value creation through relationships with customers (in a business-to-consumer domain) (Ulaga and Chacour, 2001). Many industries are establishing inter-organizational relationships through the outsourcing of parts or their total offerings, which forces a rethinking about organizational structures and managerial arrangements (Ramirez, 1999). Within these business networks, organizations create value through their relationships, partnering, and alliances. The value concept represents a view that value is created by various actors using various resources in the market or business network (Ramirez, 1999). This means that value is co-invented, combined and reconciled in an interlinked chain of activities (Porter, 1985). The actors in these networks can be separate or joint economic actors. For this reason, value creation can be studied in joint ventures or separately. The complexity and dynamism of roles and relationships is increasing in joint business systems (Normann and Ramirez, 1993).

Quality Management System

A QMS can be viewed in different ways. ISO (2000a) defines it as a "management system to direct and control an organization with regard to quality". Berggren *et al.* (2001),

give a more comprehensive description and view it as a tool to control and improve the quality of the company's products, which includes everything from methods and routines to organization and responsibility distribution. We interpret a QMS as a comprehensive practice that supports the assurance and improvement of quality (ISO, 2000b, c). According to this interpretation of a QMS, commonly recognized principles and techniques (as described by Dean and Bowen (1994) or Dahlgaard *et al.* (2002)) are used to customize practices to fit the needs of a particular organization. Every organization has a general management system whose development can be graded on a scale according to different levels of adoption. In terms of the higher levels, organizations have achieved efficiency and effectiveness through continuous improvement and learning.

The purpose of a QMS is to establish an organization's policies and to realize the contents of these policies through short and long-term goals (Nilsson, 2000). The substance of a QMS often follows PDCA cycle. The cycle is a continuous quality improvement model consisting of a logical sequence of four repetitive steps for continuous improvement and learning (Deming, 1986). The main purpose is to start by planning and formulating concrete goals for the organization. The next step is to put the action plans or programs into action to reach the goals, check that the goals have been obtained, evaluate, and then further improve the organization's processes (ISO, 2000b, c).

A QMS can be developed according to a standard. ISO 9000, for example, is the best known standard (Nilsson, 2000). The ISO 9000 series of QMS standards is a widely diffused management technique. The ISO 9001:2000 standard has been adopted by over 897,000 facilities in 170 countries (ISO, 2006). It consists of specified requirements for a QMS that are generic and intended to be applicable to all organizations regardless of type, size and product provided (ISO, 2000b). The requirements of ISO 9001:2000 are divided into five areas: "QMS," "Management responsibility," "Resource management," "Product realization," and "Measurement, analysis and improvement" (ISO, 2000b). The model of a process-based QMS (Figure 1) illustrates the process linkages among

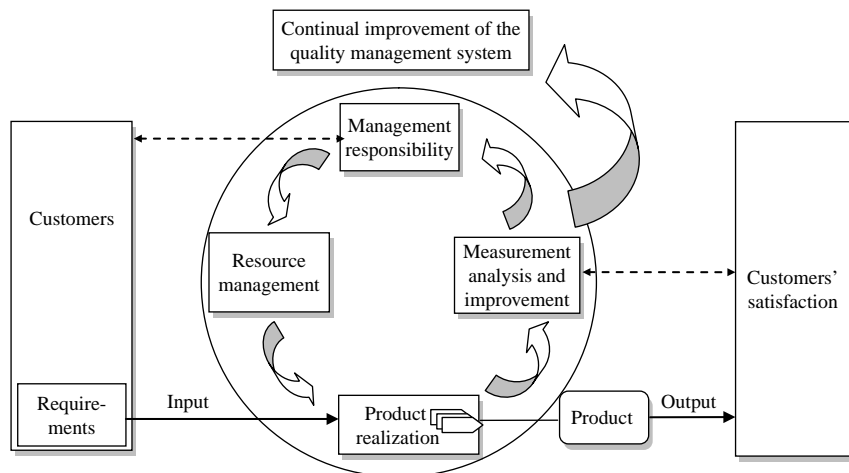


Figure 1.
Process approach
of the QMS

Note: Reproduced from ISO 9004:2004

the five areas, and shows that customers play a significant role in defining requirements as inputs. Monitoring customer satisfaction requires an evaluation of information relating to customer perception as to whether the organization has met the customer requirements. The model covers all the requirements of ISO 9001:2000 but does not show processes at a detailed level (ISO, 2000b). The full arrow in the figure symbolizes value-adding activities and the broken line stands for information flow.

Empirical investigation

Public transportation in Sweden has undergone a transformation in recent decades to being organized, as regulated by law, with a PTA in each county. The PTAs manage the public transportation while the services are outsourced and provided by private-owned operators contracted through a public procurement process (Enquist *et al.*, 2005). The PTAs are responsible for public transportation on roads and railway in the region as well as public transportation from and to the region. The owners of the PTA are the county council and the municipalities. The owners, the PTA and the operators form a business network with a joint interface towards their common customers, that is, the passengers. The activities within these networks, which are coordinated by the PTAs, have developed a practice based on contractual governance and management accounting/control (Enquist, 1999; Enquist *et al.*, 2005). This has led, according to Enquist *et al.* (2005), to the operators becoming production oriented with a focus on cost rationalization, which has resulted in a reduction in performance of the services (Enquist and Eriksson, 2007; Burwick and Sjöwall, 2007).

Sample

Data were gathered in in-depth interviews with 26 key informants at a PTA in Sweden and at their largest operator, which runs approximately 71 percent (in 2008) of the total public transportation in this county. The respondents included key informants involved in a business relationship with the PTA and the operator. The direct involvement in the business-to-business relationship was seen as critical in the process of identifying and describing value-creating drivers. A total of 26 key informants (out of 27 possible) agreed to participate in this research study. At the PTA, the management group consisted of seven members and all were interviewed. This included the chief executive officer (CEO), an information manager, a technical manager, an economical manager, and three business area managers. An additional six employees were identified at the PTA as having a relationship with this particular operator. This included, among others, two traffic planners, a person responsible for goods handling and a person responsible for attending the bus station. At the operator, an additional 13 managers and employees were interviewed, including two business area managers, a group leader for traffic planning, two operations managers, two regional managers, and a person responsible for goods handling.

Interview guide

The interviews were semi-structured and consisted of three parts. In the first part, the interviewee described the research project and the value concept. The respondents were asked about their background and position in the company. In the second part, the respondents were asked to describe the benefits and sacrifices they perceived in relation to the customers and then in relation to the PTA and the operator.

The respondents were asked to describe the value drivers and their effect. In the third part, the participants were asked to identify any critical incidents, positive or negative, that had occurred and influenced the relationship. They were asked to give a detailed description of the incident – its cause, course and result. The notion of incidents traditionally refers to an episode when the customer interacts with the service provider's contact persons, systems or physical equipment. In contrast to routine incidents, a critical incident (Bitner, 1990; Flanagan, 1954; Johnston, 1995) or critical phase (Edvardsson and Strandvik, 2000) is when something happens, unusually positive or negative, which deviates from the norm and catches attention (Edvardsson and Olsson, 1992). A negative critical incident, for example, may result in the termination of a relationship and a positive critical incident may result in a stronger and deeper relationship. Critical incidents are used to reveal additional value drivers that have not been revealed through the other parts of the interview (Gustafsson and Johnson, 2003).

The value drivers were analyzed and categorized according to the following areas of the QMS standard ISO 9001:2000: QMS, management responsibility, resource management and product realization, measurement, analysis, and improvement. This was done to be able to trace in what areas value was created and destroyed within the two organizations in the business relationship. From the interviews, value drivers were identified, analyzed, and sorted from a business-to-customer perspective and a business-to-business perspective.

Results and analysis

By using the "critical incidents" technique (Edvardsson, 2000) and investigating the relationship dynamics between a PTA and their largest operator, areas of improvement were identified in their joint management system and conflicts concerning their individual management systems became apparent. In 2005, the operator in question had financial problems and was forced to cut costs by optimizing traffic. In practice, this meant that each vehicle was used frequently. The spare vehicles that the PTA had paid for through their contractual agreement were never utilized. The production, that is, the quantity in kilometers that each vehicle runs, became the operator's foremost priority and the service to the customers deteriorated. There were severe problems with traffic delays and customers complained through the local newspaper, to the operator and to the PTA. As the PTA is responsible for the traffic, it was forced to deal with the problematic situation. The PTA made the decision to blame the operator publicly for the traffic delays, which put a strain on the business relationship. An additional factor that caused the relationship conditions to become critical was the contractual agreement that became valid in 2004. The requirements in the agreement are formulated in a way that makes it possible for the operator to interpret its contents. For example, instead of formulating the requirement regarding the cleaning of vehicles more explicitly, "the vehicles must be cleaned inside and out on a daily basis," it is formulated ambiguously, "the vehicles must be clean and intact." The operator, with its financial difficulties, utilized this vague agreement to its own advantage, which deteriorated the service quality for the customers. These critical incidents, that is, the operator's optimizing of traffic and interpretation of the contractual agreement for self-interest, illustrate how value can be destroyed in an outsourced service provision context.

The business-to-customer domain

Altogether, 67 value drivers were identified in relation to the business-to-customer domain. The analysis revealed 35 benefits and 32 sacrifices. In relation to the central areas of a QMS, “management responsibility” revealed seven benefits and 14 sacrifices, “resource management” revealed one sacrifice, “product realization” revealed 25 benefits and three sacrifices, and “measurement, analysis, and improvement” revealed three benefits and 14 sacrifices (Table I).

The analysis shows that several attributes that create value can be traced to “product realization,” with examples such as “vehicle quality,” which the participants perceived as being improved because of the latest contractual agreement. “adjustment of traffic” was also perceived as a driver that creates value, that is, major restructurings had been carried out in recent years by the PTA to make the traffic fit the travelling patterns of today’s public transportation users.

Regarding the drivers that destroy value in relation to the customers, the analysis shows that the greatest number of value destroyers was related to “management responsibility” and “measurement, analysis, and improvement.” The PTA believes it is challenging to manage this business network without having direct face-to-face contact with the users of public transportation. In addition, the relationship deficiencies between the PTA and operator affect their common customers because the operator’s actions and attitudes towards the customers are influenced by the relationship with the PTA. In relation to the area “measurement, analysis, and improvement,” many respondents still perceive that the quality of vehicles are deficient, the timetables include many errors, the ticket machines function poorly and the routines for managing customer complaints can be improved.

Certain value drivers that can be regarded as “prerequisites” were mentioned by the respondents and can be traced to the area “management responsibility.” These prerequisites are issues that are outside the control of the actors’ value creation network but can be viewed as belonging to the system. Examples of such prerequisites are the “physical location of the PTA’s main office causes a geographical distance to the customers,” the industry suffers from a “culture of low price and low quality” and the “challenge to balance supply and demand on a long-term perspective.” These prerequisites influence the possibility of creating value for the users of public transportation. Although they are outside the day-to-day activities of the value-creating network, they still belong to “management responsibility” because it is their obligation to analyze these prerequisites and plan how to reduce them when they hinder the value creation processes.

In relation to the business-to-customer perspective, the most frequently mentioned value creator is “adjustments of traffic,” which concerns “product realization,” and the most frequently mentioned value destroyer is “vehicle quality” within “measurement, analysis, and improvement.” Even though it is the perception of the respondents that the quality of vehicles has been improved since the latest contractual agreement was established in 2004, many still perceive the quality as deficient and in need of further improvement (Table I).

The business-to-business domain

Altogether 204 value drivers in the business-to-business domain were revealed: 41 benefits and 163 sacrifices. In relation to the central areas of a QMS, “QMS” revealed

	Benefits (35)	Business-to-customer (67) Sacrifices (32)	Benefits (41)	Business-to-business (204) Sacrifices (163)
Quality management system			Clearer routines at PTA (5)	Bureaucracy (2) Hierarchy (3) Inflexibility (6) Lack of comprehensive view (16) Internal problems (6) Indistinct routines (13) and Information (2) Delays in traffic orders and payments (5) Relationship deficiencies (11) Attitude problems (6) Personal-related problems (3) Lack of engagement (2) Unprofessional managing (5) Outlook (1) and breaches of agreement (8) Indistinct agreement (19) Lack of knowledge concerning agreement (1) Level of educational attainment (1) Public procurement process (6) and regulations (7) Two PTAs in county (conflict) (1) County traffic less attractive (1) Lack of knowledge concerning traffic (2)
Management responsibility	Monetary advantage (1) Relationship (6)	Relationship between the PTA and users (6) Relationship between the PTA and the owners (3) Negative attitude between the PTA and operator affects the users (1) Maintenance of bus stops (1) Challenge to balance supply and demand on a long-term perspective (1) Placement of the main office (far off) (1) Culture of low price and low quality (1)	Relationship (11) Cultural changes (3) Openness for suggestions (1) Organizational changes at PTA (1) Professionalism (2) Well-functioning market (4) Agreement (1)	
Resource management Product realization	Communication (3) Information (3) Safety belts and alcohol locks (4) Vehicle quality (4) Adjustments of traffic (10) Timetables (1) Managing customer complaints (3)	Handling of goods (1) Information (3)	Traffic planning (1) Capacity at operator (3) Communication (6) External information (1)	Traffic planning (7) Communication deficiencies (22)
Measurement, analysis, and improvement	Managing customer complaints (3)	Managing customer complaints (2) Poorly functioning ticket machines (1) Vehicle quality (10) Timetable (errors) (1)	Routines for controlling operators (2)	Poorly functioning radio system (1) Handle customer complaints (1) Quality follow-up (5)

five benefits and 33 sacrifices, “management responsibility” revealed 23 benefits and 92 sacrifices, “resource management” revealed four benefits and two sacrifices, “product realization” revealed seven benefits and 29 sacrifices, and “measurement, analysis, and improvement” revealed two benefits and seven sacrifices (Table I).

The analysis identified that an immense number of value drivers, both creators and destroyers, can be traced to the area “management responsibility.” The value creators mentioned by the respondents within this area are, for example, the “relationship between the PTA and operator,” which several perceive as positive. In addition, since the two organizations had new CEOs, “cultural changes” took place. A “professional attitude” on the part of both the PTA and operator is perceived as a benefit in this business-to-business relationship. As in relation to the business-to-customer perspective, certain prerequisites can be traced to “management responsibility.” Such a prerequisite is the perception that the market is functioning well. Prerequisites that destroy value and can be traced to “management responsibility” are, for example, the latest governance agreement from 2004 that contains a number of deficiencies, such as “breaches of agreement” and “indistinct agreement.” Other examples of prerequisites are the “public procurement process,” “different regulations” and the “level of educational attainment,” which is regarded as low in the public transportation industry.

Other value destroyers that can be traced to “management responsibility” are “indistinct responsibility conditions and routines at the PTA and operator,” that is, the two actors do not hold the correct information about whom to address in certain matters. Also, the “relationship,” “information,” “delays in traffic orders and payments,” “attitude problems,” “personal related problems,” “lack of engagement” and “unprofessional managing” are drivers that destroy value that can be traced to “management responsibility.” Several of the respondents still perceive the relationship between the PTA and operator as strained after the problems that occurred in 2005, with frequent traffic delays followed by numerous customer complaints. In addition, routines concerning information and communication between the two business partners can be improved. They rarely meet in person and discuss common business strategies and plans. Instead, the PTA often calls for a meeting to discuss a problem that has already occurred with a need to immediately deal with the situation. There is a lack of systematic routines between the PTA and operator in their joint value creation processes for customers. Also, certain prerequisites, such as the agreement deficiencies (“breaches of agreement,” “indistinct agreement” and the “lack of knowledge concerning the agreement”), are perceived by several members of this inter-organizational relationship as value destroyers that can be traced to “management responsibility.”

Individually, the most frequently mentioned value creator in the business-to-business domain is “relationship,” which can be traced to “management responsibility,” and the most frequently mentioned value destroyer is “communication deficiencies” between the PTA and operator in relation to “product realization” (Table I).

Analyzing value creation throughout the value chain

The analysis of the two domains of business-to-customer and business-to-business, reveals that there are certain value drivers that can be traced to the business-to-customer domain but their origin is in the value-creating processes between the PTA and operator in the business-to-business domain. There are also value drivers in the

business-to-business domain that are never experienced by the customers. The technique “critical incidents” facilitated the identification of the cause, course, and result of incidents that had occurred between the two actors in the past and thus the parts of the value chain they had influenced.

The “relationship between the PTA and operator” and the “negative attitude between the PTA and operator” are value drivers that have their sources in the business-to-business domain but still have affect on the users of public transportation. In 2005, a negative critical incident occurred that put a strain on the relationship between the PTA and operator. The two actors began to communicate through the local newspaper and because the service provision is outsourced to the private operators, the negative relationship between the PTA and operator affected the passengers through the actions and attitudes of the operator. In addition, the outsourced service provision causes a more complex relationship with the users from the PTA’s perspective. The PTA loses the direct face-to-face relationship with the users and thus the ability to influence service quality. The location of the PTA’s main office further complicates the relationship with the users of public transportation because it is placed for political reasons in a small community far from the customers.

Regarding quality, the analysis also shows that outsourcing of service provision has lead to a deterioration of vehicle quality and maintenance of bus stops as well as difficulties spreading information to the passengers.

These examples illustrate value drivers that influence and can be traced to the business-to-customer domain but have their source in the business-to-business domain. The results also show value drivers in the business-to-business domain that are never experienced by the customer. There are various managerial concerns between the PTA and operator, such as, the contractual agreement, information deficiencies, indistinct routines, delays in traffic orders and payments that destroy value in the business-to-business relationship. These value drivers do not influence the whole value chain, including the customers, in a direct sense. As they destroy value in the business-to-business relationship, however, the resources that are wasted could have been used to increase value for the customers.

Conclusions, discussion and further research

The aim of this paper was to explore the role of a QMS for the assurance and improvement of value in an inter-organizational business relationship in the public transportation industry. The study includes value creation in the two domains: business-to-customer and business-to-business. The aim was also to illuminate the difficulties and possibilities in creating value in a context in which service provision has been outsourced.

The results of the analysis of value drivers were compared with the substance of the ISO 9001:2000 standard and the five areas of “QMS,” “management responsibility,” “resource management,” “product realization,” “measurement, analysis and improvement.” The highest number of value creators was related to “product realization” and the most value destroyers were related to “management responsibility” and “measurement, analysis, and improvement” within the business-to-customer domain. Further, the most value creators and the most value destroyers were related to “management responsibility” within the business-to-business domain. The analysis of the whole value chain shows that there are many value leaks and several of them have their

sources in the business-to-business relationship between the PTA and operator. There are value destroyers in this business relationship that affect the customers negatively, which have a direct influence on customer satisfaction and the effectiveness in this business network. There are also value destroyers in the internal processes between the two business partners that are never experienced by the customers, which cause this business network to be inefficient as well. These examples illustrate suppliers in an outsourced service provision context with challenges to create value for their customers.

In reference to the PDCA cycle (Deming, 1986) and the results of this study, it becomes apparent that these business partners individually plan and perform their activities. However, the joint routines are lacking for evaluating how well they are performing in relation to their customers' requirements and for acting upon these data in order to improve the processes, both internally and in particular externally. Consequently, the systematic routines need to be overseen and improved, both within the two organizations separately and in their joint value-adding activities. New routines, in particular their performance in relation to customers' requirements, should also be implemented if this network aims to improve value for customers.

The source of this business relationship is the contractual agreement. As the agreement is formulated with a production-oriented approach, lacking the customer-oriented incentives, this causes the business network to be deficient in terms of service quality. In addition, the requirements in the agreement can be interpreted in many different ways, which causes conflicts between the two business partners because they are driven by different interests. The PTA, owned by the county council and municipalities must take into consideration not only the users' benefits and corporate benefits, but also the social benefits (Fryer *et al.*, 2007). The private operator is production-oriented with its focus on reducing costs and consequently uses the agreement to its own advantage. The two organizations are not viewing themselves in a value-creating, customer-oriented business network. Instead, they are more like two solitary entities focusing on their own internal activities, that is, their attention lies in the management and support processes, giving insignificant consideration to their joint external, operative processes.

The development of a QMS is a strategic decision made by an organization and the commitment of management and top management is critical to its success (Prajogo, 2008). As many perceived value drivers in this study are perceived as sacrifices and can be traced to "management responsibility," it should be a priority for the managers to understand the stakeholders' requirements, develop processes that add value for them, obtain results of process performance and effectiveness, and continually improve the processes based on objective measurements. This means developing a QMS that decreases the value destroyers, that is, identifies, measures, analyzes, and manages them. Further, because the object of study is an inter-organizational relationship, joint routines are required in a QMS in the co-creation of value for customers. For this business network to be successful, both internal efficiency and external effectiveness are a necessity. Since the contractual agreement serves as the basis for this business relationship, the agreement should be reviewed in its forthcoming edition regarding the potential for operators to interpret its contents and, more importantly, to include incentives for service quality with a customer-oriented approach. Beaumont (2006) proposes a service-level agreement in outsourcing business relationships, which is a contract that defines the services provided and the performance criteria.

It would be of interest to conduct further research about business to business and business to business to consumer interactions and how this affects QMS and value creation in the context of public transportation with a stronger service orientation (Vargo and Lusch, 2004; Enquist and Eriksson, 2007; Burwick and Sjöwall, 2007).

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