

THE ROLE OF EXPERTS IN CREATING CUSTOMER VALUE

- renovation of housing company

Olli Lehti¹, Olavi Uusitalo².

¹*Termorak Oy*

²*Tampere University of Technology*

ABSTRACT

Inexperienced people carrying out the renovation can ‘ruin’ the whole project and the residents feel they did not receive value for their investment. Lack of necessary knowledge of renovations, resources and time have driven the board members of housing companies and house managers to find outside help (Mittilä, 2000).

The paper concentrates on showing how renovations such as pipeline, electricity assemblies and lifts are done in apartment buildings and aims to analyze how and why customer value can be lost in mismanaged renovations or in choosing contractors.

So far our research is based on three different repairs: lifts, pipeline and electricity repairs, all related to renovation of housing company. So far we have several cases from the lift repairs. For the other two, pipeline and electricity repair we have studied about ten cases. We will conduct more interviews for guaranteeing fully covering questions for our coming survey.

Customer value may be lost in renovations as a result of: mismanaged renovations, lack of resources, necessary expertise among board members and experts, time and sufficient rewards and in purchasing. The residents who pay the bill face the bad planning and poor result in their everyday life feeling that they lose value.

Keywords: purchasing, customer value, customer perceived value, standardization, myopia, must-be requirement

INTRODUCTION

Finland has a lot of aging apartment buildings, from the 1960s, which have a need for repair in pipeline, electricity and lifts. Due to global recession the Finnish government tries to keep construction business running by providing subsidies for renovations of apartment buildings (Rakennusteollisuus ry, 2009). As a result the board members of housing companies, contractors and engineers are encumbered with work. The results from repairs have not been that satisfied and the resident faces the bad planning in his/her everyday life, thus the value creation has been neglected (Lehti and Uusitalo, 2009). To persuade customers to focus on total costs rather than the purchase price, a supplier must understand exactly what the customer would value. In short and essence, customer value is something perceived by customers rather than objectively determined by sellers (Anderson and Narus, 1998).

Lack of necessary knowledge of renovations and lift buildings has driven the board members of housing companies and house managers to find outside help (Mittilä, 2000). For that same reason an expert (consultant, architect) likes to use purchasing methods, like commoditization and standardization to get power over the suppliers, makes standardized inquiries to choose a contractor or purchase a product, and thus uses competitive tendering and bases purchase decisions on price (Kotler, 1997). Griffith (1992) pointed out that tender selection is nearly always based on lowest tender but that this may not always be the most economic solution in the long run. By selecting the lowest bid (Birrel, 1988) means also that the customer is running the risk of poor performance by that contractor during the project life.

According to Moshini and Davidson. (1986) purchasing in construction sector is seen as selection of 'contractor' or manufacturer before product. Tendering (method, content) originated in pre-contract communication between architect and contractor (builder). By the end of the 18th century, the architect's role had become consolidated as construction designer and leader of the project coalition. These formative years paved the way to a tendering practice, which affected both architect (preparation of pre-contract documents/ evaluation of offers) and builder (estimation of costs, time, and method of tender submission) (Holt et.al, 1995) According to current practice, once tenders have been submitted, the major discriminating factor in selection is cost. It follows then that negative corporate phenomena may remain undetected. The cost-centered 'thinking' is guiding also the different engineering, which need to be done in renovations.

Electricity engineering in individual flats done by the experts seem to be narrow minded if they have certain type of myopia (Levitt, 1960). Engineers concentrate mainly on the safety aspects which has been perfect in Finland since 1980s and being in Kano's (1984) terms "the must-be requirement", for a long time and forgot the practice side. There was little if any consideration of the wider concepts of value such as the effect of the quality of the built environment on performance or the well-being of the occupants and the lifetime operating costs of the building (Brady et al., 2005).

The paper concentrates on showing how renovations, like pipeline, electricity assemblies and lifts, are done in apartment buildings and aims to analyze how and why customer value can be lost in renovations or in choosing products or contractors. The paper shows the relationship between customer satisfaction and mismanaged renovations, where the persons using the product and paying for the renovation feel they did not receive value on their investment. The rest of the paper is organized as follows: first, the theoretical part discusses the literature pertinent to this paper. It includes customer value, purchase methods, customer requirements and definitions affecting to customer satisfaction and second, elaborates on the research methodology. Third, we look at the

cases and their products, the lifts, pipeline repairs and electricity assemblies, and, fourth conclusion and avenues for future research.

LITERATURE

In terms of value the construction industry has been dominated by the term 'cost'- with buildings designed down to a budget by experts and then tendered for by contractors with the lowest cost tender winning. There was little if any consideration of the wider concepts of value such as the effect of the quality of the built environment on performance or the well-being of the occupants and the lifetime operating costs of the building (Brady et al., 2005).

Customer value and its creation in the BtoB business

In organizations, value has different meaning to different people. It is important to pay attention to the fact that customer value is something perceived by customers rather than objectively determined by a seller (Anderson and Narus, 1998). The value of industrial products depends on who (seller or buyer) looks at the matter. Buyers put weight mostly on price, and the benefits they can get and value the delivery as a whole. According to Monroe (1990) buyers perceive value as a trade-off between the quality and benefits of the product relative to the sacrifice made in the price. In business markets value means monetary value, technical service and social benefits a customer receives in exchange for what he pays for a market offering (Woodruff and Gardial, 1996). According to Ulaga (2001), value is "a ratio of benefits versus burdens endured by the customer".

Suppliers in turn try to distinguish themselves from other suppliers in one way or another. To persuade customers to focus on total costs rather than the purchase price a supplier must understand exactly what the customer values (Anderson and Narus, 1998). According to Woodruff and Gardial (1996) customer value is a customer's perception of what they want to achieve in a specific usage of a product or service offering. They point out that customers prefer dimensions of value other than just attributes, such as use consequences. The voice of the customer describes the problem to be solved by the new product from the customer's point of view. This means that the technical solutions aren't as important as the problems the customer faces and the value a solution gives to him/her (Hauser and Clausing, 1998).

The customer value approach focuses on how people choose among competing suppliers (Gale, 1999). This approach leads companies to search for answers to three customer value questions:

- What are the key buying factors that customers value when they choose among our business and our toughest competitors?
- How do customers rate our performance versus competitors on each key buying factor?
- What is the percentage importance of each of these components of customer value?

On the other hand customer value is seen as an emotional bond established between a customer and a supplier after the customer has found the product to provide an added value after used it (Butz and Goodstein, 1996)

Purchasing

Purchasing methods of industrial products target to cost benefits. Anderson and Narus's (1999) central pursuit of the buying orientation is to maximize the power over suppliers. Provided that the buyer has power over the supplier, it can force the supplier to make price concessions and even accept the product comparison using price as the only factor without exceptions (Anderson and Narus, 1999). To gain power over suppliers buyers often use successfully commoditization and multi-sourcing. If the product is a commodity buyers only care about the price while applying multi-sourcing they let suppliers to compete.

According to Moshini and Davidson (1986) purchasing in construction sector is seen different than in other sectors, since clients in construction sector usually select 'a contractor' or a manufacturer before the actual product. Thus, project success determines the level of satisfaction achieved by clients. However, the choice of a good contractor does not save the project if the product or the project is not designed well enough. Because tenders are selected basically based on cost, the bad corporate image or reputation is not noticed at all. By selecting the lowest bid the customer takes the risk of poor performance by that contractor during the project life (Birrel, 1988). The ever lasting conflict between the attributes of contractors and the objectives of the customer requires a 'trade-off' (Diekmann, 1979). The choice of a contractor may also be based on old relationships, either house managers or experts, which can also be risky for the housing company. Griffith (1990) argues that a client should review the contractor's capabilities for the particular work, because not all the construction works are the same in nature. The contractor might not have the necessary expert knowledge for that particular renovation. Changing circumstances are always present which should be noticed upon contractor selection.

Customer requirements

The voice of the customer (Hauser and Clausing, 1998) describes the problem which needs to be solved when developing a new product from the customer's point of view. This can mean that the technical solution is not as important as the problems or demands the customer faces and the value a solution gives to the customer. The customer's are more interested in what kind of problems the product is addressing than how those problems are solved as long as they are solved.

Customer satisfaction has mostly seen as related to product quality; the higher the perceived quality the higher the customer satisfaction. But fulfilling the individual requirement does not necessarily imply a high level of customer satisfaction (Hinterhuber and Matzler, 1998). Customers are the only judges of quality of products and related services, and they evaluate the quality according to demands and attributes that are important from their perspective.

According to Kano (1984) there are three types of different product requirements which influence customer-perceived value (Figure 1): 1) the *must-be requirements* are basic customer criteria of the product, if not fulfilled, the customer will not buy the product or will be dissatisfied; 2) *one-dimensional requirements* where the value is proportional to level of fulfillment and 3) *attractive requirements* if fulfilled higher perceived value is provided (Hinterhuber, Pechlaner and Matzler, 1999). With the help of Kano's model quality attributes influencing most on customer satisfaction can be identified. These attributes can be utilized in product or service development and improvement (Hinterhuber et al., 1997). With respect to must-be requirements, if such a quality is considered less important in the estimation of customers, it can be defined as a necessary quality requirement, but without being considered critical (Yang, 2005).

Definitions affecting to customer satisfaction

Latham (1994) has confirmed that customers should base their selection of contractor on a value for money basis, and put weight on criteria for skill, experience and previous performance rather than accepting the lowest tender.

Construction companies purchase necessary products which are needed in renovations according to the plan done by an expert (architect), The expert's role has increased being a construction engineer and having also management role in projects, hence establishing traditional purchasing (Holt et al., 1995). The overall low cost demands means that companies try continuously minimize costs at the products expense. The selection of the construction company and the expert is a consequence of free market competition; the lowest bid is accepted whether from a competent company or not (Holt et al., 1993). Construction customers are more prone to the adverse effects of this misdirected selection procedure where they select a contractor before a product. This is one reason why the project success determines the level of satisfaction of the construction client, the resident (Moshini and Davidson, 1986).

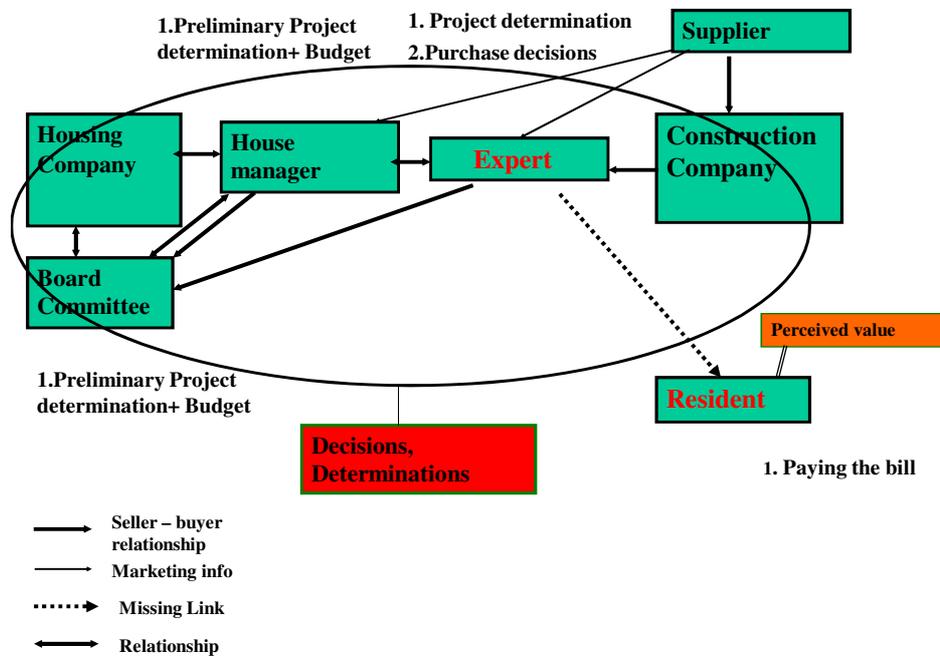


Figure 1. Decisions and determinations made in renovations.

RESEARCH METHODOLOGY

Absolute quantitative analysis is not entirely possible because the study is partly dependent upon the human factor: 'namely the people make the decisions- not techniques' (Mott, 1992). According to Eisenhardt (1989), in case studies, qualitative and quantitative data can be used very much synergistically. Thus we have selected, in our study, a composition of quantitative and qualitative method. This empirical study is a case study (Yin, 1989), and its data will be collected using several methods such as participative observation, existing literature, internal and external documents, and interviews.

The empirical part is based on three different repairs: lifts, pipeline and electricity repairs, all related to renovation of housing company. The other author has worked in industrial sales for over 25 years in several industries such as the paper and pulp industry, the cement and lime industry, and the lift industry with renovation of housing companies/construction industry. So far due to the experience of the other author we have several cases from the lift repairs. For the other two, pipeline and electricity repair we have studied about ten cases of which four are feedback to Lehti Uusitalo (2009) article concerning pipeline renovations. We need to interview about residents, experts, house managers and board members who have experienced housing renovation within last five years. Based on our thorough literature review and the results of the deep interviews we will conduct a survey.

EMPIRICAL PHENOMENA

Background: Renovation in apartment buildings.

A housing company seldom has experts among residents or board members for designing, planning and running on a repairs and/or lift building projects, thus it needs to hire an expert for help. The house manager has neither the necessary expertise nor time to concentrate properly on renovations and lifts. All this makes the role of an expert decisive concerning the success of the renovation and how much this give value to individual resident. Correspondingly choice of an expert is important to retain the necessary expertise on the repairs and construction work. When an expert is involved in purchasing, he makes his decisions based on his calculations and plan. Ordinary renovation involve roof repair, pipeline repair, or painting and insulating the outer wall or lift building.

Usually, experts (architects) by drafting specifications for buildings (including the lift) decide on the purchase. The construction company bases its offer on the expert's renovation plan and specifications. Experts usually lack special know-how of necessary products (lifts) and construction methods and thus tenders need to be based on their standard inquiries. Consequently, tenders are easy to compare because of their similar formats, and the choice made in favor of the lowest offer which fulfill the specifications. Purchase decisions are made without hearing the resident.

Architects usually without special know-how of lifts determine the basic / standard lift with specifications which are not including qualities important to the user such as durability, noise, leveling, smooth ride, low energy consumption. In most cases, a construction company has to purchase the lift from a lift manufacturer (for instance, Kone, Otis, or Schindler) but do not want to pay for these qualities when making purchase decisions. The lowest bidder usually wins. The price is more important than a well performing lift.

Loss of customer value is documented in three cases: 1) lifts for buildings, 2) pipeline repairs and 3) electricity line repair in housing companies. Mistakes or shortcomings in engineering of renovations and lift building are listed in table 1.

Lifts for buildings

The expert's specified, the basic, standard lift may not necessarily fulfill its use requirements. Such standardization can be very unpleasant or even harmful to end user. The lift may be too loud, aesthetically unattractive, and energy-consuming. Moreover, its maintenance costs may be high, or it simply does not work. After the delivery, customer's customers (users) have sometimes requested the company to redress the defects.

Wrong made lift plan can cause huge costs to a construction company or a housing company. A thirteen stop lift was offered and delivered according to inquiry compiled by the expert. The demand was one 8 passenger lift (which meant difficulties in removal and lift maintenance). It was also clearly announced that the lift will be chosen according to 1) the expert's instructions and 2) the lowest bidder will be chosen. The chosen lift supplier wasn't experienced enough with delivering high rise lifts. According to residents the chosen lift was too noisy and it had many functional faults. After three years of complaining of residents, the construction company had to change the lift for a new one. The extra cost of the change was 90 000€. The cost of the previous lift was around 65 000 €. Thus altogether the lift cost was 155 000 €, because of wrong based decision.

Lifts are different in technical, physical qualities, and demands for lifts are different for residents than construction companies have. Construction companies want only to fulfill the demand determined in lift plan, not pay attention to other wishes because of increased costs.

Pipeline repair

Our cases concerning unsatisfied residents report of imperfect planning of renovation. When planning the pipeline repair some electricity changes need to be done at the same time. In many cases those changes are not planned at all. To the ordered a pipe line repair rested with renovation of every bathroom. The problem was that sufficient planning and resident inquiry haven't done at all. We have been informed of several shortages which have arisen during renovation. In bathroom repair the radiator has been changed into non-adjustable radiator element with continuous heating, which made the bathroom very hot during summer time and the new outlet pipe of washing machine was installed so that it takes too much space. In another case new electric cables were installed, but when making the planning necessary plug points were forgotten. The resident has to install necessary plug points afterwards by himself.

According to feedback to Lehti and Uusitalo (2009) other reasons for bad results in repairs made culminated to 1) the paid expert and executive committee fees, and 2) the work load of a house manager or executive committee. Because of low design or planning budgets well performing experts have not even responded to inquiries and executive committee members are not committed to do repair supervising properly only in the spirit of 'voluntarily work'. It has also turned out that in renovations where the necessary repairs were not done satisfactorily, the elements which pointed out to be important to residents, were left out. Thus residents opinion were not taken into account.

Electricity repair

Electricity engineering is mainly done based on safety aspects, which is extremely important. However, the safety aspects have been in high level in Finland since the 1980's. This focus on safety has neglected the value creation aspects. The electricity renovation plans concern only the room what is under renovation. For instance in one of our cases the bathroom was under repair, the electricity renovation plan included only the bathroom not for instance the hall through which electric cable need to be taken.

At the same time with the kitchen repair, other noticed and needed electrical installations, like extra electric plugs, are more easy and cheaper to install than separately afterwards. This will create value to the resident by helping his everyday life.

In our case when the planning of the renovation of bathrooms the electricity engineering was forgotten. For instance in such a repair they do not see how to create value in the hall by installing necessary sockets, through which the new electric line has to be taken anyway. This could create value for residents by enabling mobile phone's charging, a mirror lamp lightning etc. In old houses, like this was, electrical plug points are very few and impedes the every day life of the resident

Table 1. Engineering faults in renovations and lift building.

Problem area	Lifts	Pipeline	Electric assembly
Functional fault	X		
Wiring without e-plugs in the hall			X
Electric plugs not installed in the bathroom			X
Necessary wiring not done			X
Radiator element type wrong		X	
Washing machine outlet pipe installation, to wrong place		X	
Mobile phone charging, not installed		X	X
Too small fuses installed		X	
Long installation time		X	

CONCLUSION

Renovations in housing companies divide people and cause discordance because of mismanaged projects and purchasing. The resident, who pays the bill, don't usually have any possibilities to affect either to possible expert or contractor selection. Neither the board members of the housing company or house managers have time or necessary expert knowledge to manage the renovation or make necessary engineering, thus they have to hire an outside help, expert, to do the work. The board members of the housing company and house managers have justified the reasons for poor management of the project with the lack of sufficient rewards which is culminating in low activity and only necessary tasks will be done.

All purchasing is done cost based, the lowest bidder will be chosen, regardless of it is question of contractor or product selection. Because lack of special know-how experts would like the suppliers' offers/products look similar, include similar technical details and often use price as the only variable. The standard inquiry does not necessarily fulfill the resident's requirements, and some considerations relevant to the resident and addressable forthwith may be overlooked.

Electricity engineering done by the experts in individual flats seems to be narrow minded having a certain type of myopia (Lewitt, 1960). Electric engineers and designers concentrate only on the safety. However, as was mentioned safety has been in high level in Finland since the 1980s. Thus, safety has been in Kano's (1984) terms "the must-be requirement" for a long time (Figure 2). The attractive aspects such as sockets in halls, innovative lightning etc. of Kano's (1984) model have been neglected. These could have been achieved with little extra costs. Afterwards they are expensive and electric assembly firms have made nice profits, since the economies of scale in purchasing have been lost. According to regulation (The National Building Code of Finland) a construction company has to purchase the lift. Partly for this reason construction companies consider lift as a 'must-be product', and do not want to pay more than necessary of it. Thus they buy the cheapest possible solution.

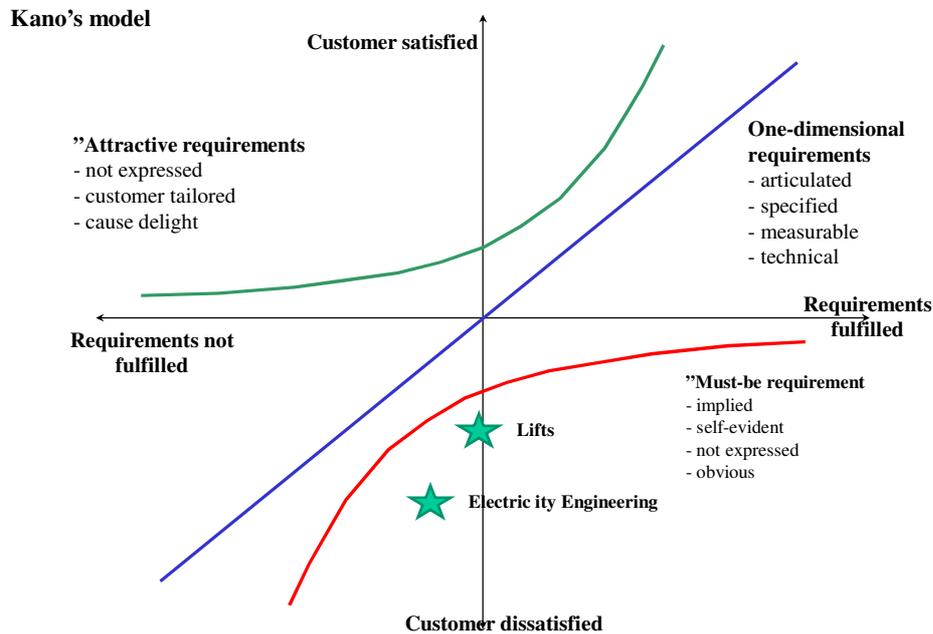


Figure 2. Kano's model of customer satisfaction (Berger, 1993)

The individual resident opinion should be noticed who might have different demands and wishes than the plan of the repair or lift includes. The role of expert should be adding value to residents by giving them information of all possible variations and noteworthy improvements, which can be done easily in connection with main renovation. The expert, whom the customer hired to add value to himself, by standardizing inquiries/offers ruins the customer's customer value (Figure 3). The choice of a contractor or an expert should be based on a value for money basis, not only accepting the lowest cost or bid. The resident faces the bad planning in his/her everyday life and feel that they don't get value for their investment, even though they are the ones who actually pay the bill.

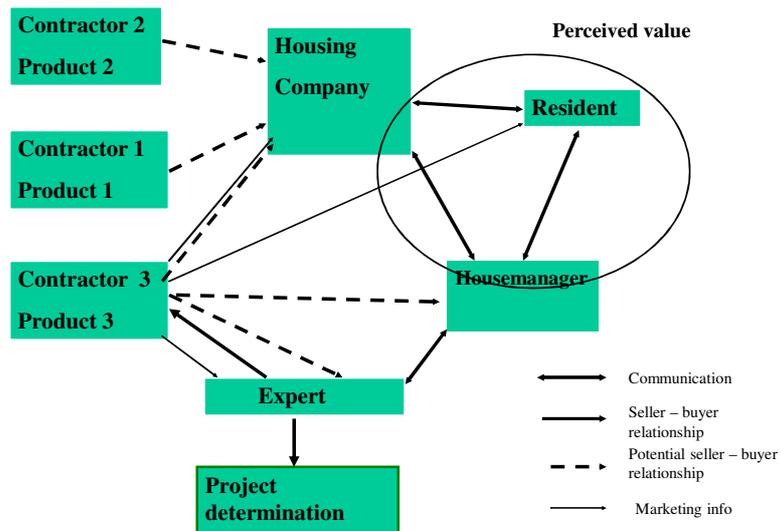


Figure 3. Losing customer value

Future research

Our personal interests and experiences through got feedback have strengthen our opinion of problems caused by inexpertise in contractor selection or purchasing of industrial products. Results of the mentioned cases, which represent different product deliveries, yet the same problem about the customer's customer value, motivate and inspire us to continue studying the phenomenon more deeply.

References

- Anderson, J. C. and Narus, J. A. (1998), Business Marketing: Understand What Customers Value, *Harvard Business Review*, Vol.76, No.6, Nov.-Dec., pp. 53-65.
- Anderson, J. C. and Narus, J. A. (1999), Business Market Management: Understanding, Creating and Delivering Value, New Jersey: Prentice Hall.
- Birrel, G. (1988), Bid Appraisal Incorporating Past Performances by Contractors. *American Association of Cost Engineers Transactions*, D1.1-D1.6.
- Brady T., Davies A. and Gann D. (2005), 'Can Integrated Solutions Business Models Work in Construction?'. *Building Research and Information*, 33, pp. 571-579.
- Butz, H.E. Jr. and Goodstein, L.D. (1996), Measuring Customer Value: Gaining the Strategic Advantage, *Organizational Dynamics*, pp.66-7, Winter.
- Diekmann, J.E. (1979), Selection of Cost Plus Contractors Using Normative Decision Methodologies. Ph.D. Thesis, University of Washington.
- Eisenhard, K. M. (1989), Building Theories from Case Study Research. *Academy of Management Review*. Vol. 14:4, pp. 532-550.
- Gale, B. (1999), Introduction to Customer Satisfaction, Loyalty and Value. Available at <http://www.cval.com/intro.html>, quoted Dec. 12th 1999.
- Griffith, A. (1992), Small Building Works Management, Macmillan, London
- Hauser, J. and Clausing D. (1988), The House of Quality. *Harvard Business Review* (May-June), pp.63-73.
- Hinterhuber, H. H. and Matzler, K. (1998), How to Make Product Development Projects More Successful by Integrating Kano's Model of Customer Satisfaction into Quality Function Deployment, *Technovation*, 18(1), pp.25-37.
- Hinterhuber, H., Pechlaner, H. and Matzler, K. (1999). Product Innovation in Services- Using Kano's Model of Customer Satisfaction to Design New Products In: Proceedings, Research Seminar in Management of Innovation and New Product Development, Ed.M.Muffatto. University of Padua in Bressanone, February 15-16.
- Holt, G.D., Olomolaiye, P.O. and Harris F.C. (1993), Tendering Practice-exploring Alternatives. *Faculty of Building Journal*. Nottingham Autumn, pp.28-30.
- Holt, G.D., Olomolaiye, P.O. and Harris F.C. (1993), A Conceptual Alternative to Current Tendering Practice. *Building Research & Information. The International Journal of Research, Development & Demonstration*. 21 (3), pp. 167-172.
- Holt, G.D., Olomolaiye, P.O. and Harris F.C. (1995), A Review of Contractor Selection Practice in the U.K. Construction Industry. *Building and Environment*. Vol 30, No.4, pp.553-561.
- Kano, N., Seraku, N., Takahashi, F. and Tsuji, S. (1984), Attractive Quality and Must be Quality, Hinshitsu. *The journal of the Japanese Society for Quality Control*, pp. 39-48.
- Kotler, P. (1997). *Marketing Management: Analysis, Planning, Implementation and Control*. 9th ed. London: Prentice-Hall.
- Latham, M. (1994), Trust and Money. Interim Report of the Joint Government Industry Review of Procurement and Contractual Arrangements in the U.K. Construction Industry, H.M.S.O., London.
- Lehti, O. and Uusitalo, O (2009) "Asuntoremonteissa asiakas unohtuu" In Finnish (In apartment building repairs the resident is neglected) , *Talouselämä*, Minä väitän, 35/2009, 8.
- Levitt, T. (1960), Marketing Myopia. *Harvard Business Review*, July/August
- Mittilä, T. (2000). Relation Trine: An Analysis of Industrial Supplier – Customer Relations. p.39.
- Mohsini, R. and Davidson, C. (1986), Procurement Organization Design and Building Team Performance – a Study of Interfirm Conflict. *Conseil International du Batiment Proceedings* 8.
- Monroe, K. B. (1990). *Pricing: Making Profitable Decisions*. New York: McGraw-Hill

- Mott, G. (1992), *Investment Appraisal*, Pitman, London.
- Rakennusteollisuus RT ry (2009): Remontit käyntiin taloyhtiöiden kevään yhtiökokouksissa - rakennustarkastuksen vaihtelevat tulkinnat eivät saa hidastaa töiden aloitusta. Construction Industry Publishment .Available at rt@rakennusteollisuus.fi
- Woodruff, R. B.(1997), Customer Value: The Next Source for Competitive Advantage. *Journal of the Academy of Marketing Science*, Volume 25, No. 2, pp. 139-153
- Woodruff, R. B. and Gardial, Sarah Fisher (1996), *Know Your Customer: New Approaches to Customer Value and Satisfaction*. Cambridge, MA: Blackwell Publishers
- Ulaga, W. and Eggert, A. (2006). Value Based Differentiation in Business Relationships: Gaining and Sustaining Key Supplier Status, *Journal of Marketing*, Vol. 70, pp. 122-123.
- Uusitalo, O. and Lehti, O. (2008) The Risk of Loosing Customer Value while Standardizing Industrial Investment Products”, The 3rd International Conference on Business Market Management 2008 (CD), St. Gallen, Switzerland, March 12-14.
- Yang, C-C,(2005). The Refined Kano’s Model and its Application, *Total Quality Management*, Vol. 16, No. 10, pp.1127-1137, December.
- Yin, R. K. (1989). *Case Study Research: Design and Methods*. Sage Publications, Inc.