Organisational Value of Participating in Quality Award Processes

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ACKNOWLEDGEMENTS

The research for this thesis has been conducted at the Division of Quality and Environmental Management at Luleå University of Technology. During the completion of this thesis, I have received generous support from a large number of people.

First of all, I would like to thank my supervisor, Professor Bengt Klefsjö, who has supported and encouraged me throughout this work. Your help has been invaluable. Moreover, I would like to thank my assistant supervisor, Professor Håkan Wiklund, who was very helpful during the initial phase of my postgraduate education. Special thanks are also due to my previous and present colleagues at the Division of Quality and Environmental Management, who have been extremely helpful and given me invaluable support during the completion of the thesis. Without your support I would not have been able to write this thesis. In addition, I want to thank the co-authors of my papers and reports, Dr. Rickard Garvare, Dr. Jonas Hansson, Fredrik Johansson, Klara Palmberg, and Professor Håkan Wiklund, for a productive collaboration. I would also like to thank Dr. Lena Abrahamsson, who has given me valuable comments in order to improve the thesis. Furthermore, I would like to thank Paul McMillen, who has helped me improve the English of the thesis.

The work behind this thesis would never have been accomplished without the cooperation and support from the studied organisations. Thanks for your contribution. I especially want to thank Johanna Jakobsson at the Swedish National Road Administration (“Vägverket”), Ann Horn at Agria Djurförsäkring, Per-Arne Persson and Torbjörn Tärnhuvud at Sydkraft Vattenkraft, and Malin Axtelius and Petra Karlsson at Kronans Droghandel.

I would also like to thank Professor Jan Eklöf, Dr. Johnny Lindström, Torsten Olsson and Anna Sjödahl, who have in different constellations and during different research projects given valuable comments. I also gratefully acknowledge the financial support of the Association of Swedish Engineering Industries (“Teknikföretagen”), the Swedish National Road Administration (“Vägverket”), the Swedish Institute for Quality (SIQ), the Department of Economic Statistics at Stockholm School of Economics and “Söderbergstiftelsen”.
On a personal note, I would like to thank my parents, Berit and Kurt Eriksson, and my brother, Stefan Eriksson, for believing in me. Thanks are also due to Bernt, Kerstin and Peter Rönnbäck for their support. And last, but definitely not least, I want to thank Åsa for her valuable insights into the subject, positive spirit and moral support.

Henrik Eriksson
Luleå, 14 January 2004
ABSTRACT

Total Quality Management (TQM) is sometimes considered to be a continuously evolving management system consisting of values, methodologies and tools, the aim of which is to increase external and internal customer satisfaction with a reduced amount of resources. Whether TQM improves the performance of and strengthens values within organisations has been discussed for several years. One way of working with TQM and its values, methodologies and tools is to participate in a quality award process. The purpose of this thesis is to describe and explain the organisational value of participating in quality award processes.

This thesis is limited to Swedish organisations, and consists of an extended summary and five appended papers on the subject, each with a different aim and methodology. The work described in one paper investigates the financial performance of quality award recipients compared with competitors and branch indices. Two of the papers illuminate participation in in-company quality award processes regarding experiences and organisational performance. Two of the papers describe the organisational value of participation in the Swedish Quality Award process.

The main conclusion of the thesis, which is in agreement with earlier published results, is that, if companies successfully implement TQM, the financial performance is affected positively. Good examples are also identified of the application of methodologies and tools, based on participation in a quality award process, in order to improve organisational performance within a number of areas.

The results of this thesis have not been able to show strong evidence proving that the organisational performance of company units which have worked with in-company quality awards, but have not yet successfully implemented TQM, are affected by this work. However, such units experience that working with in-company quality awards has positive effects on the customers as well as the employees.

The same is also true of organisations participating in a national quality award process. In particular, the main value of participation in a national quality award process is improved customer orientation, process orientation and improvement work. On the other hand, the main drawbacks are the resource-demanding activities involved, in particular during the phase of description of activities, and the elaborate model used for participation in the quality award process.
SAMMANFATTNING

Offensiv kvalitetsutveckling kan ses som ett ledningssystem i ständig utveckling bestående av värderingar, arbetssätt och verktyg med målet att skapa ökad kundtillfredsställelse med lägre resursåtgång. Huruvida offensiv kvalitetsutveckling leder till bättre resultat och förstärkta värderingar inom organisationer har diskuteras i många år. Ett sätt att arbeta med offensiv kvalitetsutveckling, och dess värderingar, arbetssätt och verktyg, är att delta i en kvalitetsutmärkelseprocess. Syftet med denna avhandling är att beskriva och förklara det organisatoriska värdet av att delta i kvalitetsutmärkelseprocesser.

Denna avhandling är begränsad till svenska organisationer, och består av en “kappa” och fem bifogade artiklar, var och en med olika syften och metodologi. I en artikel undersöks det finansiella resultatet hos mottagare av kvalitetsutmärkelser i jämförelse med konkurrenter och bransch index. Två av artiklarna belyser ett deltagande i företagsinterna kvalitetsutmärkelseprocesser avseende erfarenheter och organisationers resultat. Två av artiklarna beskriver det organisatoriska värdet av att delta i processen kopplad till Utmärkelsen Svensk Kvalitet.

Slutsatsen i denna avhandling, som överensstämmer med tidigare publicerade resultat, är att om företag implementerar offensiv kvalitetsutveckling framgångsrikt påverkas det finansiella resultatet positivt. Bra exempel av användandet av arbetssätt och verktyg baserat på ett deltagande i en utmärkelseprocess för att förbättra det organisatoriska resultatet inom flera områden har också identifierats.

Resultaten från denna avhandling har inte lyckas påvisa starka bevis för att resultatet, för enheter som arbetet med en företagsintern kvalitetsutmärkelse men som ännu inte har lyckas med implementeringen till fullo, har påverkats av detta arbete. Enheter upplever däremot att arbetet med företagsinterna kvalitetsutmärkelser har en positiv effekt på såväl kunder som medarbetare.

Detsamma gäller organisationer som deltar i en nationell kvalitetsutmärkelseprocess. Det främsta värdet av ett deltagande i en nationell kvalitetsutmärkelseprocess är en förbättrad kundorientering, processorientering och ett förbättrat förbättringsarbete. De största nackdelarna med ett deltagande är de resurskrävande aktiviteterna, speciellt fasen beskrivning av aktiviteter, och den omständliga modellen som utgör bas i kvalitetsutmärkelseprocessen.
LIST OF APPENDED PAPERS

This thesis includes an extended summary and the following five papers, appended in full.

**Paper I**

**Paper II**

This paper was also presented at the Seventh World Congress for Total Quality Management: Business Excellence. Make It Happen, Verona, Italy, 25-27 June 2002. The paper was published in the conference proceedings, Vol 2, pp. 197-204.

**Paper III**

**Paper IV**

**Paper V**
LIST OF DEFINITIONS

Some definitions which are used in this thesis are listed below.

**Total Quality Management (TQM)** is defined “as a continuously evolving management system consisting of values, methodologies and tools, the aim of which is to increase external and internal customer satisfaction with a reduced amount of resources”, see Hellsten & Klefsjö (2000).

A **quality award** is an award that honours and encourages TQM efforts.

**Values** “refer to the guiding principles and/or behaviours that embody how your organisation and its people are expected to operate”, see NIST (2003a).

A **national quality award** is a quality award to which only organisations within a given nation are allowed to apply.

An **in-company quality award** is a quality award to which only units within a given company are allowed to apply.

**Self-assessment** is “a comprehensive, systematic and regular review of an organisation’s activities and results referenced against a model of business excellence”, see EFQM (1996).

A **quality award process** is the activities, classified with the phases of plan, do, study and act, which must be performed in order to apply for a quality award and improve the organisational performance.

**Successful implementation of TQM** within an organisation means that the organisation has received a quality award, see Hendricks & Singhal (1997).

**Value** “refers to the perceived worth of a product, service, process, asset, or function relative to cost and relative to possible alternatives”, see NIST (2003a). In this thesis, the organisational value or the perceived worth of participation in a quality award process is illuminated.

**Performance** is “a measure of attainment achieved by an individual, a team, an organisation or a process”, see EFQM (1999). In the present study, the performance of or the measure of attainment achieved by organisations or companies is studied.
# TABLE OF CONTENTS

1 INTRODUCTION .................................................................................................................. 1
  1.1 BACKGROUND ................................................................................................................ 1
  1.2 PROBLEM AREA ............................................................................................................. 4
  1.3 PURPOSE OF THE THESIS ............................................................................................ 4
  1.4 PROBLEM DISCUSSION AND RESEARCH QUESTIONS .............................................. 5
  1.5 DELIMITATIONS ............................................................................................................ 7
  1.6 THESIS STRUCTURE .................................................................................................... 7

2 THEORETICAL FRAME OF REFERENCE ........................................................................... 10
  2.1 QUALITY .......................................................................................................................... 10
  2.2 TOTAL QUALITY MANAGEMENT .................................................................................. 11
  2.3 CORE VALUES .................................................................................................................. 14
  2.4 METHODOLOGIES ......................................................................................................... 17
  2.5 TOOLS .............................................................................................................................. 21
  2.6 QUALITY AWARDS ........................................................................................................ 26
  2.7 ORGANISATIONAL CULTURE ....................................................................................... 30
  2.8 SUCCESSFUL IMPLEMENTATION OF TQM .............................................................. 33
  2.9 FAILURES TO IMPLEMENT TQM .................................................................................. 34
  2.10 TQM AND PERFORMANCE ........................................................................................ 37

3 METHODOLOGY .............................................................................................................. 41
  3.1 RESEARCH APPROACH ............................................................................................... 41
  3.2 RESEARCH STRATEGY .................................................................................................... 47
  3.3 RESEARCH PROCESS .................................................................................................... 48
  3.4 SAMPLING AND OTHER SELECTIONS ....................................................................... 49
  3.5 ANALYSIS AND INTERPRETATION ............................................................................. 65
  3.6 SUMMARY OF APPROACH AND STRATEGY .............................................................. 67
  3.7 MODEL OF ANALYSIS .................................................................................................. 69
  3.8 RELIABILITY AND VALIDITY ....................................................................................... 70

4 SUMMARY OF STUDIES ................................................................................................... 74
  4.1 STUDY 1 ............................................................................................................................ 74
  4.2 STUDY 2 ............................................................................................................................ 77
  4.3 STUDY 3 ............................................................................................................................ 82
  4.4 STUDY 4 ............................................................................................................................ 87
  4.5 STUDY 5 ............................................................................................................................ 93
1 Introduction
This chapter consists of the background to the research area. In addition, the problem area, the purpose, the research questions, the delimitations, and the structure of the thesis are presented.

1.1 Background
What is the value of different approaches adopted and activities performed within organisations\(^1\) in order to improve their performance? There are many different theories and approaches in the field of Organisational Development (OD) that argue for different, and sometimes similar, activities in order to enhance organisational performance. Grieves (2000) presents a thorough discussion of management theories in the past and present.

This thesis focuses mainly on theories and approaches used in the management system of Total Quality Management (TQM). A discussion concerning how TQM is related to other management theories and approaches can be found in, for example, Spencer (1994), Dean & Bowen (1994), Boaden (1996) and Grieves (2000). Both Dean & Bowen (1994) and Boaden (1996) observe that TQM is not unique and that TQM already has incorporated many insights from other management theories. Grieves (2000) notes, for instance, that OD is a discipline with many approaches, of which TQM overlaps some.

Quality has been an important issue for organisations for many years. The early focus on quality evolved from inspection to quality control and later to quality assurance, according to Dale (1999). During the 1990s, TQM evolved as a common term among organisations. Oakland (1993) and Dale (1999) define TQM as an “approach”. However, Hellsten & Klefsjö (2000) view TQM “as a continuously evolving management system consisting of values, methodologies\(^2\) and tools, the aim of which is to increase external and internal customer satisfaction with a reduced amount of resources”. The values of TQM are considered, by Bergman & Klefsjö (2003) and Hellsten & Klefsjö (2000), to be focus on customers, top management commitment, base decisions on facts, focus on processes, improve continuously and let

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\(^1\) The terms “organisation” and “company” are used in this thesis synonymously to describe a private or publicly owned producer of goods or services.

\(^2\) Hellsten & Klefsjö (2000) used the term “technique” in their article. The term was later changed to “methodology”. The term methodology will therefore be used in this thesis.
Participating in a quality award process is for many organisations a way to support the management system of TQM. The criteria of quality awards conform with the major constituents of TQM, see Ghobadian & Woo (1994), Hendricks & Singhal (1999) and Tan et al. (2003). In particular, Hendricks & Singhal (1999) claim, after a review of various criteria and core values of quality awards, that the core values emphasised in the quality awards are those that are widely considered to be the building blocks of TQM. Receiving a quality award is also a common proxy for a successful implementation of TQM, see Hendricks & Singhal (1996) and Ghobadian & Gallear (2001). One of the arguments for this is that organisations giving quality awards typically decide on recipients after conducting an independent evaluation and assessment of an organisation's quality practice and after measuring the organisation's quality performance against some pre-established criteria, see Hendricks & Singhal (1996).

Japan began honouring outstanding quality practices in the 1950s through the Deming Prize. After the successful development in Japan, several countries established programmes in the late 1980s and early 1990s to recognise the inventive, yet effective, quality practices taking place, see Vokurka et al. (2000). Ghobadian & Woo (1994) note that a number of factors have encouraged many western countries to introduce local, national or transnational quality awards. These have been, among other factors, the importance of “quality” as a significant contributor to competitive superiority, the essential contribution of benchmarking and self-assessment methodologies to the improvement of performance, and the success of the Deming Prize as a catalyst for spreading quality methodologies in Japan. According to Ghobadian & Woo (1994), the broad aims of these awards are to:

- increase awareness of the importance of the “quality of offerings” and interest in “quality management” because of their important contribution to superior competitiveness
- encourage systematic self-assessment against established criteria and market awareness simultaneously
- prompt co-operation between organisations concerning a wide range of non-commercially sensitive issues
- stimulate sharing and dissemination of information on successfully deployed quality strategies and on benefits derived from implementing these strategies
• promote understanding of the requirements for the attainment of "quality excellence" and the successful deployment of "quality management"

• stimulate organisations to introduce a "quality management" improvement process.

Two examples of well-known national and international quality awards are the Malcolm Baldrige National Quality Award, see NIST (2003a), and the European Quality Award, see EFQM (2003a). Furthermore, Vokurka et al. (2000), Funk (2003) and Tan et al. (2003) present a thorough list of quality awards and a comparison between different awards. In many countries, however, the development of national quality awards is still new or non-existent, see Chuan & Soon (2000).

In the year 2003, 68 organisations applied for the Malcolm Baldrige National Quality Award (MBNQA), see NIST (2003b). Over the twelve years of the European Quality Award, there have been several hundred applicant organisations covering virtually every European country, according to the European Foundation for Quality Management (EFQM), see EFQM (2003b). Some of the quality award recipients' experience of the European Quality Award is presented in Zink (1997). In Sweden, the Swedish Quality Award has received 137 applications from organisations that have participated in the quality award process between 1992 and 2003, see SIQ (2003). In addition to organisations participating in quality award processes, numerous organisations use the criteria of the different quality awards in order to improve their performance, see Vokurka et al. (2000).

Ghobadian & Woo (1994) note that the awards included in their study are based on a perceived model of quality management. Vokurka et al. (2000) observe that the quality award programmes support customer-driven quality via streamlined processes, product design, leadership, human resource development and customer-focused strategic plans. Almost all the contemporary quality award processes include activities aimed at obtaining a description of the organisation's way of working based on a set of criteria and questions. Moreover, the quality award processes involve individual assessors to evaluate submissions, a consensus score determined by an impartial examiner group, a site visit to high-scoring finalists, and awards given to the organisations that best exemplify the criteria of award models, see Vokurka et al. (2000).

One main difference between the quality awards is the variation of the approaches and the definitions of the criteria, see Vokurka et al. (2000). Another difference is the group of organisations which the award is aimed at. For instance, a national quality award is only aimed at organisations...
within a specific nation, and an in-company quality award is only applicable to units within a specific company.

1.2 Problem Area

Vokurka et al. (2000) argue that, with customers demanding quality and competitors responding to such demands, business turned to TQM as the key to enhance overall performance. In particular, Hakes (1996) states that the main reason for participating in a quality award process is to initiate action to improve the organisation’s performance.

Sila & Ebrahimpour (2002) performed a literature analysis of 347 survey-based research articles about TQM published between 1989 and 2000, one of the aims being to determine trends in TQM and recommend future directions for research. One of five future areas for research in TQM includes quality awards. In particular, Sila & Ebrahimpour (2002) state that there has been an increase in the use of quality awards by companies, and that there is a lack of published research on the experience of various companies that have gone through a quality award process.

To be able to apply for any type of quality award, the organisation has to perform certain activities. For example, activities such as planning for and writing an application have to be performed. Furthermore, the purpose of the quality award is also that the organisation should follow up the application and the suggested improvements. The improvements can, in turn, result in improved performance in the organisation. However, these activities have to be performed without neglecting “everyday” activities within the organisation. Whether participating in a quality award process really results in any value for organisations, or not, is an important issue for many organisations today.

The main problem area that this thesis sets out to illuminate is whether organisations benefit from participating in quality award processes or not. Does participation in quality awards result in any value for organisations, or are the resources spent on quality awards an inappropriate investment?

1.3 Purpose of the Thesis

The purpose of the thesis is to describe and explain the organisational value of participating in quality award processes.
1.4 Problem Discussion and Research Questions

1.4.1 Research Question 1

The relationship between TQM initiatives and improved performance is frequently discussed. Some people claim that TQM programmes are ineffective, see, for example, Eskildson (1994) and Harari (1997). Furthermore, Bergquist & Ramsing (1999) and Przasnyski & Tai (1999) argue that it is difficult to establish a relationship between TQM and improved performance in companies. On the other hand, results have been published which state that TQM investments do result in improved performance in companies, see, for example, Lemak & Reed (1997), Hendricks & Singhal (1997) and Handsfield et al. (1998). A common approach to studying possible benefits regarding TQM investments is to investigate how companies that have received a quality award have been developing in terms of performance, see, for example, Hendricks & Singhal (1999), Przasnyski & Tai (1999) and Bergquist & Ramsing (1999).

Several organisations have participated in quality award processes in Sweden, and some organisations have also received a quality award. For example, 14 organisations have received the Swedish Quality Award between 1992 and 2003, see SIQ (2003). Hendricks & Singhal (1997) conclude that companies in the United States that have received a quality award and have hence successfully implemented TQM outperform a control sample of companies similar to the award recipients. In Sweden no similar study has been performed previously in order to explain how a successful implementation of TQM affects the financial performance of the company. Besides cultural differences between the United States and Sweden, see Hofstede (1991), the companies in the two countries also use somewhat different models in their application for the quality awards. The first research question that is raised in this thesis is:

1. What is the value of a successful implementation of TQM for the financial performance of Swedish companies?

1.4.2 Research Questions 2 and 3

In Sweden, there are some large companies that work with in-company quality awards. In addition, there are also companies that have ceased or are currently ceasing their in-company quality awards. One disadvantage of a competition like, for example, an in-company quality award can be that too much focus is on the scoring instead of finding and executing improvements. Conti (2001) identifies this problem, and states that if the goal of self-assessment is performance improvements, the best choice is to
ignore scores and weights, see also Conti (2002). Furthermore, Conti (2001) argues that internal awards linked to self-assessment can indeed be a stimulus; they can drive interest and create the motivation to start. However, although awards will certainly help to produce improvement at the beginning, the rate of improvement then tends to slow down, according to Conti (2001).

On the other hand, Myers & Heller (1995) discuss AT&T’s in-company quality award, called the Chairman’s Quality Award (CQA), and conclude that the units that have worked with and applied for the award show great improvement in the average scores from the examiners. Evidence of success is the increasing median scores for the eight units involved in the CQA between 1990 and 1993.

Despite the work connected with in-company quality awards carried out in organisations, no study has been performed, according to extensive literature studies, with the aim of understanding how units experience and are affected by participating in an in-company quality award process. Nor, to the knowledge of the present author, have the effects of the work connected with in-company quality awards on the actual performance of units within companies been studied. One issue in this context is whether units that apply for and work with in-company quality awards experience improved performance in comparison with units that do not apply for and work with in-company quality awards. In summary, the organisational value of participating in an in-company quality award process has not been investigated. These issues lead to the following two research questions:

2 What are the effects of working with in-company quality awards on the performance of the participating units?

3 How do units experience working with in-company quality awards?

1.4.3 Research Questions 4 and 5

Most of the organisations that apply for a national quality award and most of the units that apply for an in-company quality award never receive any award. An interesting issue for national quality award applicants is whether they benefit from the award process. One of the incentives of applying for a quality award is that improvement areas are identified, which can support actual improvements. The executed improvements can result in, for example, a greater customer orientation, more effective and efficient processes, better employee relations, and an increased profitability of the award applicants. The quality award applicants can hence benefit in the long
run from their application for the quality award as a result of the performed improvements.

However, it is not clear how national quality award applicants utilize the participation in the quality award process, and how they actually benefit from the performed improvement work. What the organisational value is for national quality award applicants that execute improvements successfully, and how much the organisations gain or profit from the improvement work are topics worth examining more closely. Moreover, there has not yet been any systematic examination of how organisations actually should make use of their participation in a quality award process, and what there is to gain from such a process. In particular, what activities are performed in order to strengthen the organisational performance is an issue that has not been fully illuminated. This leads to the following two research questions:

4 What is the organisational value of participating in a national quality award process?

5 How have organisations utilized their participation in a national quality award process in order to improve performance?

1.5 Delimitations

The empirical studies are limited to Swedish organisations, primarily in order to minimise cultural differences between organisations.

1.6 Thesis Structure

The chapters of the thesis are presented below.

**Chapter 1: Introduction.** This chapter consists of the background to the research area. In addition, the problem area, the purpose, the research questions, the delimitations, and the structure of the thesis are presented.

**Chapter 2: Theoretical Frame of Reference.** In this chapter, the theoretical frame of reference is discussed. Areas such as TQM, quality awards, organisational culture, implementation aspects and the relationship between TQM and performance are described. Moreover, some criticisms of TQM are presented.

**Chapter 3: Methodology.** In this chapter the chosen methodology is presented. The chapter includes a description and discussion of aspects related to the chosen research approach and strategy. The research process and the model of analysis are also
presented. Furthermore, other relevant choices that influence the studies, and the validity and reliability of the thesis are discussed.

Chapter 4: **Summary of Studies.** In this chapter, the background, the purpose and the methods of the studies are given a short presentation. Furthermore, the main results of the studies are presented. Finally, the main conclusions of each study are presented.

Chapter 5: **Conclusions and Discussions.** In this chapter, the findings with respect to the different research questions are discussed. An analysis comparing the studies, and comparing the studies and the theory is presented. Some general conclusions are also presented. Furthermore, the strengths and weaknesses of the studies and the entire thesis, and a discussion are presented. This chapter also consists of ideas for further research which have evolved during the research process.

Besides these chapters, the thesis also consists of five appended papers. Figure 1.1 presents the chapters, the appended papers and the main thread of the thesis.
The number of each research question is also the number of the study and the paper that mainly set out to illuminate the research question. Research question 1, the value of a successful implementation of TQM for the financial performance of Swedish companies, is dealt with in study 1 and the results are displayed in Paper I. The work performed by units within companies in connection with in-company quality awards, research question 2 and 3, is evaluated in study 2 and 3, and the results are presented in Paper II and III. The investigations concerning the national quality award process constitute study 4 and 5, and are presented in Paper IV and V. The connection between the research questions, the studies and the Papers is displayed in Figure 1.2.

![Figure 1.2](image-url)
2 Theoretical Frame of Reference

In this chapter, the theoretical frame of reference is discussed. Areas such as TQM, quality awards, organisational culture, implementation aspects and the relationship between TQM and performance are described. Moreover, some criticisms of TQM are presented.

2.1 Quality

In order to keep a competitive advantage on the market, organisations have for many years focused on the quality of their products. Different initiatives to increase the quality of products and services have evolved over the years. The early focus, at the beginning of the twentieth century, was on inspection, which included checking that the manufactured products met the specifications. During the past few decades the focus in organisations has shifted from inspection to quality control of products. Through quality control organisations are trying to identify, directly in the process, flaws which can be corrected before producing too many products that do not meet the specifications. In the evolution of the work based on the concept of quality, the focus on quality has moved even further upstream in the process. Quality assurance has become a recognised practice for planning and preventing problems at the source before starting to manufacture products. The latest focus in the evolution of quality is considered to be on Total Quality Management (TQM), which involves the application of quality management principles to all aspects of the organisation, including customers and suppliers, and their integration with the key business processes (Dale, 1999).

However, there are also other views of the evolution of the work on quality than the single-path evolution presented above by, for instance, Dale (1999). Kroslid (1999), for example, identifies a dual-path framework with two different schools of quality management, “the deterministic school of thought” and “the continuous improvement school of thought”. The deterministic school of thought has developed from a deterministic view of reality, with a belief in the existence of one best way, while the continuous improvement school of thought is founded on a reality full of variation, with an awareness of the improvement potential in every aspect of work. Furthermore, the deterministic school of thought could be characterized by compliance with standards and specifications through procedures, for example the ISO 9000 standards. On the other hand, the continuous improvement school of thought could be characterized by the use of self-assessment and quality awards in order to drive organisational improvements.
Kroslid (1999) argues that China, Japan, South Korea, Sweden and the United States, in terms of their current national approach, predominantly position themselves within the continuous improvement school of thought, while Australia, Brazil, Germany, Great Britain, Italy, Norway and Saudi Arabia belong more to the deterministic school of thought. In particular, Japan, Sweden and the United States are in terms of development on a “high” level within the continuous improvement school of thought, with a great focus on practices based on culture.

2.2 Total Quality Management

Different definitions of TQM have been presented over the years. For instance, Oakland (1993) states that TQM is “an approach for improving the competitiveness, effectiveness and flexibility of a whole organisation”. Dale (1999) defines TQM, in accordance with ISO 8402, as “a management approach of an organisation, centred on quality, based on the participation of all its members and aiming at long-term success through customer satisfaction, and benefits to all members of the organisation and to society”. Dahlgaard et al. (1998), on the other hand, view TQM as “a corporate culture characterized by increased customer satisfaction through continuous improvement, in which all employees in the firm actively participate”. Shiba et al. (1993) argue that “Total Quality Management (TQM) is an evolving system of practices, tools, and training methods for managing companies to provide customer satisfaction in a rapidly changing world”.

Hellsten & Klefsjö (2000) support the view that TQM is an evolving system. Hellsten & Klefsjö (2000) define TQM “as a continuously evolving management system consisting of values, methodologies and tools, the aim of which is to increase external and internal customer satisfaction with a reduced amount of resources”, see also Figure 2.1. This definition is acknowledged and used in this thesis. Hellsten & Klefsjö (2000) argue that the methodologies and tools support the values and that the three units together form the whole. Hence, a TQM implementation should start with the identification of core values. Secondly, methodologies that support these core values should be identified and used continuously and consistently. Finally, tools should be selected and used in an efficient way in order to support the methodologies chosen. Dale (1999) supports the view that tools and methodologies are used in TQM in order to improve the organisation continuously.
Figure 2.1 Total Quality Management (TQM) seen as a continuously evolving management system consisting of values, methodologies and tools, the aim of which is to increase external and internal customer satisfaction with a reduced amount of resources. It is important to note that the methodologies and tools in the figure are just examples and not a complete list. Source: Hellsten & Klefsjö (2000).

As shown above, and described in Boaden (1997) and Hellsten & Klefsjö (2000), opinions differ about what TQM really is. The different opinions concerning what TQM is lead to different opinions about what TQM should result in. In particular, Eskildson (1994) states, on the basis of survey results, that many organisations do not succeed in their TQM efforts due to a vague definition of TQM. As a solution to this problem, Pyzdek (1999) states, after summarizing some criticism against TQM, that TQM professionals constantly need to seek to improve the knowledge of quality and the methodologies for attaining it in order to manage the changing concept of TQM.

Boaden (1997) claims also that “attempting to define TQM is like shooting at a moving target. As it is more widely practised, and other initiatives emerge, the emphasis on different aspects change.” This fact was one of the reasons for the definition of TQM “as a continuously evolving management system” provided by Hellsten & Klefsjö (2000). Furthermore, Reeves & Bednar (1994) admit that there is also a lack of agreement concerning the definition of quality, but state that it is impossible to define quality globally because different definitions are appropriate under different circumstances.
Dale et al. (2001) explore the position of TQM with respect to the theory. One of their main findings is that TQM is still in the early stage of theory development. Furthermore, TQM tends also to be a part of operations management rather than an academic subject in its own right. Dale et al. (2001) argue, however, that this is changing and TQM is becoming established as an independent discipline. In particular, the works of international quality management experts such as Crosby, Deming, Feigenbaum and Juran have provided the baseline for the advancement of TQM theory through areas such as management by facts, a customer focus, process orientation and teamwork. However, Dale et al. (2001) claim further that in order to extend the scope of TQM theory, it is necessary to incorporate appropriate management theories into its development. On the other hand, both Dean & Bowen (1994) and Boaden (1996) observe that TQM already has incorporated many insights from other management theories.

Moreover, van der Wiele et al. (2000) discuss whether TQM is a fad, fashion, or fit. A fit of TQM into normal management practice means that the original fad will have affected the normal way of working within the whole organisation and not just a small part, such as would be the case in the adoption of a mere fashion. The fieldwork from van der Wiele et al. (2000) shows that a change to a fit of TQM to other management theories will only occur when there is a strong internal motivation for and emotional involvement in the implementation of TQM.

Foley (2004) summarizes some of the criticism against quality management and claims in particular that quality management:

- is not universally or even widely accepted
- has no generally accepted definition or agreed content
- does not have a theoretical foundation
- has not found a place in mainstream Western management literature
- has failed to deliver promised results (see also Section 2.9).

Foley (2004) claims further that, due to the critics of quality management, consultants and quality promotion institutions are trying to expunge “quality” from their lexicon, and that quality management now regularly appears under a different guise, often with a new set of gurus and new “catchy” slogans; but in substance it remains the same. Foley (2004) states that quality awards, for example in Canada, Ireland and Australia, are giving way to business excellence awards. Foley (2004) states also that quality management should rather be seen as the means to the end of achieving business excellence.
2.3 Core Values

In the context of TQM and quality awards, values carry a different meaning from the meaning of values that one usually finds defined in dictionaries. In this thesis, values “refer to the guiding principles and/or behaviours that embody how your organisation and its people are expected to operate”, see NIST (2003a). Furthermore, “values reflect and reinforce the desired culture of the organisation. Values support and guide the decision making of every employee, helping the organisation to accomplish its mission and attain its vision in an appropriate manner”, see NIST (2003a). Specifically, Lagrosen (2003) states in summary, after conducting a survey covering 500 quality professionals, that there is a strong correlation between the adoption of the core values of TQM and successful quality management.

An organisation’s core values are the basis of its culture, according to the belief of Hellsten & Klefsjö (2000). They believe further that the core values should not be considered to stand alone, but rather they should be looked upon as being connected to each other. The core values may vary a little between different organisations and over time, according to Hellsten & Klefsjö (2000). Different core values are also included in the management system of TQM by different authors, as well as in different standards and quality awards. For example, the ISO 9000:2000 standard includes eight quality management principles, while the SIQ Model for Performance Excellence, see SIQ (2002), which is one of the models used in the Swedish Quality Award, includes 13 core values.

Sila & Ebrahimpour (2002) summarise, after analysing 347 survey articles published between 1989 and 2000, the most frequently covered TQM factors in the literature, see Table 2.1. Both Kennerfalk (1995) and Hellsten (1997) performed a study of the literature of TQM, using roughly the same literature, in order to find out which core values constitute TQM. Kennerfalk’s (1995) and Hellsten’s (1997) views of which core values constitute TQM, with small differences between the conclusions of the two authors, are also displayed in Table 2.1.

As displayed in Table 2.1, the TQM factors presented by Sila & Ebrahimpour (2002) and the core values presented by Kennerfalk (1995) and Hellsten (1997) are roughly the same. Since core values are an essential part of the work connected with quality awards, the core values of TQM, identified in Table 2.1, are briefly discussed below. The core values are discussed in more detail in the references cited below. The notions of the core values discussed below are the ones that are used by Hellsten & Klefsjö (2000) and Bergman & Klefsjö (2003). However, the notions are similar to
the ones used by Kennerfalk (1995), Hellsten (1997) and Sila & Ebrahimpour (2002).

| Table 2.1 Slightly different views of which core values and factors constitute TQM. |
|---------------------------------|---------------------------------|
| Customer focus and satisfaction | Focus on customers               |
| Quality information and         | Fact-based decisions             |
| performance measurement         |                                 |
| Process management              | Focus on processes               |
| Continuous improvement and      | Continuous improvement           |
| innovation                      |                                 |
| Employee training               | Everybody’s participation        |
| Teamwork                        |                                 |
| Employee involvement            |                                 |
| Leadership and top management   | Management commitment            |
| commitment                      |                                 |

2.3.1 Focus on Customers

Focusing on customers is stressed by most authors of TQM literature to be an important part of TQM. Deming (1986) states that quality can be apprehended differently, but that the consumer’s or customer’s judgement of the product or service is a central part of estimating the quality. Shiba et al. (1993) define a customer as “a person or group who receives the work that one carries out”, and asserts that a business function without a customer should not be performed. Evans & Lindsay (1996) stress the importance of a customer focus, and imply that any business has four goals: to satisfy its customers, to achieve higher customer satisfaction than its competitors, to retain customers in the long run and to gain market shares.

2.3.2 Base Decisions on Fact

An important element in a quality philosophy is to make decisions which are based on facts and are well founded, and not to allow random factors to be of decisive importance, see Bergman & Klefsjö (2003). Shiba et al. (1993) argue that at no time should one see speculation or opinion as the basis of decision-making. This core value also focuses on the need for utilizing efficient statistical tools, such as the seven quality control tools, see Shewhart (1980) and Ishikawa (1985), and the seven management tools, see Mizuno (1988).
2.3.3 Focus on Processes

Nearly every organised activity can be looked upon as a process whose aim is to deliver products which satisfy its customers, see Bergman & Klefsjö (2003). Davenport (1993) states that process orientation involves elements of structure, focus, measurement, ownership, and customers, and that adopting a process view implies a commitment to process improvement. Harrington (1991) defines a process as "any activity or group of activities that takes an input, adds value to it, and provides an output to an internal or external customer. Processes use an organisation’s resources to provide definitive results." Harrington (1991) introduces a strategy called Business Process Improvements (BPI), with the phases of organising for improvements, understanding the process, streamlining, measurement and control, and continuous improvement, in order to ensure that the processes provide maximum benefits to the company.

2.3.4 Improve Continuously

Deming (1986) states in one of his 14 points for management that one should “improve constantly and forever the system of production and service”, to enhance quality and productivity, and thus constantly decrease costs. He also emphasised the use of the improvement cycle. The improvement cycle is also called the Shewhart cycle and the Deming cycle, according to Evans & Lindsay (1996). The improvement cycle is composed of four stages: Plan, Do, Study and Act (PDSA). Similarly, according to Shiba et al. (1993), any activity can be improved if you systematically plan the improvement, understand the current practice, plan and implement the solutions, analyse the results and their causes and perform the cycle again. Juran (1989) describes how to improve management performance effectively. The basic function of the managers, as he describes it, is to create and to prevent change. The created change, the breakthrough, is a dynamic, decisive movement to a new higher level of performance.

2.3.5 Let Everybody be Committed

For the quality work to be successful, it is essential to create conditions to enable the employees to participate in the work. Hence, an important means for quality improvements is to facilitate the opportunities for all employees to be committed, and participate actively in the decision-making and the improvement work, see Bergman & Klefsjö (2003). In particular, communicating, delegating and training are important activities, according to Bergman & Klefsjö (2003). Moreover, Shiba et al. (1993) argue that

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3 The third stage, “study”, was earlier called “check”, and the improvement cycle used to be known as the “PDCA cycle”, see Deming (1986).
everyone in the company should be mobilised in order to improve the way in which they perform their jobs and satisfy customers. A discussion concerning the importance of everybody's commitment and employee involvement can also be found in Oakland (1993) and Lawler III et al. (1995).

2.3.6 Top Management Commitment

Another condition for the quality work to function is that the top managers should be committed, see Bergman & Klefsjö (2003). Juran (1989) also emphasises the importance of top management commitment when working with quality issues. Dale (1999) states that it is the responsibility of the senior management team to create the organisational environment, atmosphere, values and behaviour in which TQM can achieve its potential. In addition, Oakland (1993) stresses the importance of top management commitment for success in promoting business efficiency and effectiveness. Moreover, he states that TQM must be truly organisation-wide, and it must start at the top with the Chief Executive. The importance of a top management commitment when leading change is also emphasized by Kotter (1996).

2.4 Methodologies

Hellsten & Klefsjö (2000) argue that methodologies are “ways to work within the organisation to reach the values”. A methodology, according to Hellsten & Klefsjö (2000), “consists of a number of activities performed in a certain way”. It is important to note that the methodologies presented in Figure 2.1 are just examples and not a complete list. The main methodology studied in this thesis is self-assessment. Conti (2002) presents a general outline of quality-related assessments and their connection to quality awards. Self-assessment has many similarities to the phases that an organisation goes through when participating in a quality award process. The main differences between the methodologies of quality award processes and self-assessment are explained in Section 2.6.3 and Figure 2.8. Hence, self-assessment is studied in this thesis to describe the work connected with quality awards. The definition of, the approaches to, the reasons for, the procedure of, the benefits of and the outcome of self-assessment are the main topics discussed below.
2.4.1 Self-assessment

Self-assessment has during the last few decades been established as an important methodology for improvements, see Finn & Porter (1994) and van der Wiele et al. (1996).

Definition of Self-assessment

According to the European Foundation for Quality Management, see EFQM (1996), self-assessment is “a comprehensive, systematic and regular review of an organisation’s activities and results referenced against a model of business excellence”. Further, according to EFQM (1996), “the self-assessment process allows the organisation to discern clearly its strengths and areas in which improvements can be made and culminates in planned improvement actions which are then monitored for progress”.

Approaches to Self-assessment

Samuelsson & Nilsson (2002) state, in alignment with Conti (2002) and after studying nine large organisations, that there is no universal methodology for self-assessment. On the contrary, their findings indicate that several approaches to self-assessment may be successful, as long as they fit the organisation, are used continuously, and foster participation. Samuelsson & Nilsson (2002) claim further, on the basis of their findings, that self-assessment must be considered from a holistic perspective in order to realise its full potential. Moreover, Conti (1997) argues that self-assessment and the subsequent improvement planning should be integrated into the corporate strategic planning cycle as a first fundamental step in the process of integration of quality concepts into business practice.

Reasons for Self-assessment

On the basis of data from 117 organisations that have experience from self-assessment, the five most important reasons for organisations taking the initiative to start the process of self-assessment have been identified by van der Wiele et al. (1996). These are:

- finding opportunities for improvement
- creating a focus on the TQM model portrayed by the award criteria
- directing the improvement process
- providing new motivation for the improvement process
- managing the business.

In more detail, van der Wiele et al. (1996) point out that organisations use self-assessment to identify strengths and weaknesses, and to facilitate internal and external learning in terms of the transfer of best practice and ideas.
Moreover, Brown & van der Wiele (1996) show, on the basis of a national postal survey of self-assessment practices in Australia, that the reasons for using self-assessment are mainly to find opportunities for improvement and to direct the improvement process, while the goals for introducing self-assessment are to improve business performance, to drive continuous improvement and to increase quality awareness in all aspects of the business.

**Self-assessment Procedure**

The self-assessment procedure can be divided into four phases, according to Svensson & Klefsjö (2000) and the description below. These four phases, see Figure 2.2, are closely related to the four phases of the improvement cycle 'plan-do-study-act', which was emphasised by Shewhart and later by Deming, see, for example, Deming (1986).

![Figure 2.2](image.png)

**Figure 2.2** Self-assessment illustrated as a procedure consisting of four phases, which together correspond to the four phases of the improvement cycle ‘plan-do-study-act’. Source: Svensson & Klefsjö (2000).

- In the first step it is very important to plan the self-assessment process seriously. The questions that have to be posed are: “Why shall we perform a self-assessment? When shall the work be carried out? Who shall be involved? Which model shall be used as a basis for the description?”
- In step two a description of the organisation shall be obtained, preferably based on the criteria from a quality award or another similar tool for business excellence.
- In the next step an analysis of the description shall be made in order to find strengths and improvement possibilities.
• In step four, on the basis of the results from the analysis a plan for improvements shall be created. In this phase the following issues need to be raised: “What shall be done? What resources are needed? Who shall perform the work? Who is responsible?”

Figure 2.2 was developed further to include also the improvement work that is intended to follow the self-assessment, see Figure 2.3. The improvement work can also be divided up into the four phases of the improvement cycle.

Figure 2.3 Self-assessment and improvement work seen as two interdependent and consecutive processes, each consisting of four phases similar to those in the improvement work. Source: Svensson (2002).

Benefits of Self-assessment
Gadd (1995) states that the major benefits gained from self-assessment can be grouped into four categories: business results, culture, process management and benchmarking. In summary, he claims that self-assessment provides organisations with a measurement system which embraces the entire organisation. Finn & Porter (1994) state, according to a survey study, that companies are increasingly using self-assessment and the benefits from this methodology are quickly realised. Brown & van der Wiele (1996) also report that the organisations in their study are positive about the results of self-assessment.

Outcome of Self-assessment
The plan for improvement, based on the analysis of the description, is the major output from the self-assessment procedure, see also Figure 2.3. Self-
assessment usually generates many improvement opportunities, and it is important to prioritise this information and use it to drive business improvement, see Porter & Tanner (1996). Moreover, it has been argued that the appropriate follow-up of the self-assessment, the establishment of action plans and their implementation, is highly dependent on the commitment of top and line management, see also Porter & Tanner (1996). Simpson et al. (1998) discuss the reaction of receptiveness in quality award applicants to external feedback reports from the award assessors. Simpson et al. (1998) argue that it is widely accepted that subsequent self-assessment is more successful than the first exercise. In one case cited in their study, a pragmatic approach has been taken to the management of the feedback and hence the company is more susceptible to the feedback. However, the feedback phenomenon is complex, according to Luckett & Eggleton (1991), who state that care must be exercised in making both predictions about the impact of feedback and general statements about the effectiveness of the feedback. Furthermore, Argyris (2000) discusses how and why so much of today’s business advice, such as feedback from assessors, is flawed and the fact that many programmes, such as TQM, do not create more internal commitment.

Coleman et al. (2000) investigate the effect of training on improving the accuracy of third-party evaluators’ scoring for organisations. Their main conclusion is that the training of the examiners improves elevation accuracy, but not dimensional accuracy. Elevation is useful when the scores are being used to investigate whether the organisation meets some minimum threshold or level of performance. On the other hand, dimensional accuracy is useful when the scores are used to provide the organisation with feedback on relative strengths and weaknesses.

**2.5 Tools**

Hellsten & Klefsjö (2000) define tools as “rather concrete and well-defined tools, which sometimes have a statistical basis, to support decision-making or facilitate analysis of data”. It is also here important to note that the tools presented in Figure 2.1 are just examples and not a complete list. A tool developed by the Swedish Institute for Quality (SIQ) and called the SIQ Model for Performance Excellence is the main tool studied in this thesis, since it is used by most of the quality awards in Sweden. Furthermore, the EFQM Excellence Model used in the European Quality Award (EQA) and the Criteria for Performance Excellence used in the Malcolm Baldrige National Quality Award (MBNQA) are given a short presentation, since these tools have many similarities to the SIQ Model for Performance Excellence, and are relatively widespread and used by many organisation in
comparison with other similar tools. In addition, organisations applying for
the Swedish Quality Award have since 2000 been able to use either one of
the three tools presented in this thesis.

The tools that are discussed in this thesis consist of four parts, see Figure
2.4. First, the tools consist of a model of the organisation and its work. This
model displays the criteria and how they are related to each other. Second,
the tools consist of the criteria and questions for evaluation that are used in
order to examine the organisation’s way of working and its results. The
criteria are the same as those included in the model of the organisation and
its work for the tools presented in this thesis. Third, the tools consist of
dimensions and criteria for assessment that help the examiners to evaluate
and score the organisation. Finally, the tools also comprise the core values
that are intended to support and permeate the criteria and questions for
evaluation, and the dimensions and criteria for assessment.

![Diagram of the constituents of the tools discussed in this thesis.](image)

Figure 2.4 The constituents of the tools discussed in this thesis. Inspired by Svensson (2002).

### 2.5.1 The EFQM Excellence Model

Many different tools have been developed in order to support self-
assessment and the work connected with quality awards. In Europe, the
European Foundation for Quality Management (EFQM) Excellence Model,
see EFQM (2003a), is probably the most well-known of these tools. The
model of the organisation and its work in the EFQM Excellence Model is
presented in Figure 2.5.
The dimensions and criteria for assessment which are used to evaluate the organisations’ description are called the RADAR logic in the EFQM Excellence Model. RADAR consists of four elements: Results, Approach, Deployment, and Assessment and Review. The core values (called fundamental concepts in the EFQM Excellence Model) which are the basis of the EFQM Excellence Model are:

- Results Orientation
- Customer Focus
- Leadership & Constancy of Purpose
- Management by Processes & Facts
- People Development & Involvement
- Continuous Learning, Improvement & Innovation
- Partnership Development
- Corporate Social Responsibility.

2.5.2 The Criteria for Performance Excellence

In the USA many companies have since the start in 1987 applied for the Malcolm Baldrige National Quality Award (MBNQA), see NIST (2003a). Figure 2.6 describes the model of the organisation and its work for the Criteria for Performance Excellence that is used in the MBNQA.
The dimensions and criteria for assessment in the Criteria for Performance Excellence are based on three evaluation dimensions: approach, deployment and results. The core values and concepts that the Criteria for Performance Excellence are built upon are:

- Visionary Leadership
- Customer-driven Excellence
- Organisational and Personal Learning
- Valuing Employees and Partners
- Agility
- Focus on the Future
- Managing for Innovation
- Management by Facts
- Social Responsibility
- Focus on Results and Creating Value
- System Perspective.

### 2.5.3 The SIQ Model for Performance Excellence

The Swedish Quality Award is organised by the Swedish Institute for Quality (SIQ). The SIQ has developed a tool called the SIQ Model for Performance Excellence, which is based on 13 core values and seven criteria, which are further divided into 27 sub-criteria. The model of the organisation and its work of the SIQ Model for Performance Excellence is displayed in Figure 2.7.
The dimensions and criteria for assessment comprise three elements: namely approach, deployment and results. The core values of the SIQ Model for Performance Excellence are:

- Customer Orientation
- Committed Leadership
- Participation by Everyone
- Competence Development
- Long-range Perspective
- Public Responsibility
- Process Orientation
- Prevention
- Continuous Improvement
- Learning from Others
- Faster Response
- Management by Facts
- Interaction.

2.5.4 Similarities and Differences

The SIQ Model for Performance Excellence, which was originally inspired by the version of the Criteria for Performance Excellence that was used up to 1996 in the MBNQA, has many similarities to the latter. For example, both emphasise the results achieved by the organisations, see Chuan & Soon (2000). However, there are also differences between the two. For example, the SIQ Model for Performance Excellence places a greater emphasis on evaluation and improvement concerning all the criteria addressed and on the practice of TQM principles in all organisational activities. There is also a relatively greater emphasis placed on the organisation’s impact on society, and on the organisation’s commitment to the customers compared with most of the criteria of other national quality awards, see Chuan & Soon (2000). For a thorough discussion concerning the difference between the
tools of the Swedish Quality Award, the Malcolm Baldrige National Quality Award and the European Quality Award, see Puay et al. (1998).

2.6 Quality Awards

Today, there are many different kinds of quality awards. A quality award is defined in this thesis as an award that honours and encourages TQM efforts. In this section, national quality awards and in-company quality awards are briefly discussed, due to the fact that these quality awards are the main focus of this thesis. Some of the benefits and criticism of national quality awards and in-company quality awards that are presented below might also be valid for other types of quality awards.

2.6.1 National Quality Awards

A national quality award is a quality award to which only organisations within a given nation are allowed to apply. Japan began honouring outstanding quality practices in the 1950s. The Japanese national award was called the Deming Prize, in recognition of Deming’s contribution to the quality revolution in Japan. The Deming Prize proved to be an effective instrument for spreading quality throughout Japanese industry, see Ghobadian & Woo (1994). After the successful development in Japan, several countries established programmes in the late 1980s and early 1990s to recognise the inventive, yet effective, quality practices taking place, see Vokurka et al. (2000). The development of national quality awards in many countries is, however, still new or non-existent, see Chuan & Soon (2000). For a thorough list of quality awards and a comparison between different awards, see, for example, Vokurka et al. (2000) and Johnson (2002). Furthermore, Puay et al. (1998) have performed a comparative study of differences and similarities between nine quality awards, including the Swedish Quality Award.

Benefits of National Quality Awards

Link & Scott (2001) performed an economic evaluation of the Baldrige National Quality Program and concluded that the net private benefits associated with the Baldrige National Quality Program to the economy as a whole in the United States were conservatively estimated to be $24.65 billion. When compared with the social costs of $119 million associated with the programme, it is clear that, from an evaluation perspective, the Baldrige National Quality Program is socially beneficial, as summarised by a benefit-to-cost ratio of 207 to 1, see Link & Scott (2001).
Leonard & McAdam (2003) argue that the training and experience that are obtained by quality award examiners and assessors constitute one of the most unique, rigorous, practical and worthy forms of professional development that one can participate in. They claim further that organisations committing scarce resources to the quality award process can obtain synergistic benefits in other areas, especially organisational learning.

Adam & Hansson (2002) discuss the Swedish Quality Award and consider that the SIQ Model that is applied in the award process is a strong contribution to the re-constructed leader role. The re-constructed leader role is a transformation from the bureaucratic and hierarchical structure of organisations to support employees in the core values of TQM. Furthermore, Evans (1996) claims that the new role of managers could be classified, using the Criteria for Performance Excellence, into five classical categories of management: planning, organising, co-ordinating, directing and controlling.

Criticalism of National Quality Awards
Quality awards have also received criticism both internally and externally. For instance, Steventon (1994) argues that receiving an award is only a measure of success in achieving that particular goal and is no substitute for achieving both profits and delighted customers.

Loomba & Johannessen (1997) criticise the MBNQA and conclude that three areas, unfairness, superficiality and publicity-related problems, may arise in the process of applying for the Baldrige Awards programme. The unfairness of the programme concerns the prohibitive cost of joining the competition, the imbalance in the number of laureates between the competing categories, and the conflict of interests arising when examiners judging the competition also work as consultants for competing companies. The superficiality aspect includes the fact that the Baldrige Awards programme is used by the recipients only to obtain free and extensive publicity, and that companies with mediocre consumer ratings win and thus obtain undeserved positive media coverage. Another imputation is that several other recipients suffered poor results and one even went bankrupt after receiving the award. A final issue is the avalanche of publicity and media coverage which usually follows the disclosure of the award recipients. The consequences for the recipients are found to be ominous, as the managers of these companies might find themselves diverted from the initial mission of continuous quality improvement. The risk is also that, because of the poor performance of previous winners, and the intense media following, the whole programme might be undermined (Loomba & Johannessen, 1997).
2.6.2 In-company Quality Awards

An in-company quality award is a quality award for which only units within a given company are allowed to apply. In-company quality awards or internal quality awards have not aroused great research interest. However, some publications are presented below.

Benefits of In-company Quality Awards

One possible benefit of an in-company quality award in comparison with a national quality award is that it is easier for units to benchmark and learn the best practices, since access to the award recipients of in-company quality awards is easier. For instance, van der Wiele et al. (1996) claim that both internal and external learning in terms of best practices and the transfer of ideas takes place when performing self-assessment, and this procedure contributes to the improvement of the performance of organisations.

Myers & Heller (1995) discuss AT&T’s in-company quality award, called the Chairman’s Quality Award (CQA), and conclude that the units that have worked with and applied for the award show great improvement in the average scores from the examiners. Evidence of success is the increasing median scores for the eight units involved in the CQA between 1990 and 1993. The CQA is based on the Malcolm Baldrige National Quality Award, and consists of site-visits and award criteria like leadership, strategic quality planning, and a customer focus.

Hannukainen & Salminen (1998) discuss Nokia’s Current State Analysis (CSA) tool. CSA is a tool for self-assessment concerning process capability, and was developed in nine steps, including studying the criteria of the European Quality Award. According to Hannukainen & Salminen (1998), Nokia is, through this successful way of working, exhorting its people around the globe to establish the most challenging performance targets based on their self-assessment concerning process capability. The CSA scoring system has seven performance levels, from zero (theoretical knowledge only) to seven (verified world-class performance).

Criticism of In-company Quality Awards

One disadvantage of a competition like an in-company quality award can be that too much focus is on the scoring instead of finding and executing improvements. Conti (2001) identifies this problem, and states that if the goal of self-assessment is performance improvements, the best choice is to ignore scores and weights, see also Conti (2002). Furthermore, Conti (2001) argues that internal awards linked to self-assessment can indeed be a stimulus; they can drive interest and create the motivation to start. However, although awards will certainly help to produce improvement at the
beginning, the rate of improvement then tends to slow down, according to Conti (2001).

2.6.3 Quality Award Processes versus Self-assessment

There are many similarities between a national quality award process, an in-company quality award process and self-assessment. During both the award processes and self-assessment, the organisations pass through the four phases of plan, do, study and act, see Figure 2.2. In order to clarify the differences between the three concepts, Figure 2.8 is presented below.

![Figure 2.8](image)

Figure 2.8 The author’s view of a national quality award process, an in-company quality award process and self-assessment.

One main difference between a quality award process and self-assessment is the ownership. The owner of a quality award process is not the evaluated organisation, while in the case of self-assessment the evaluated organisation is the process owner, according to the belief of the author. During participation in a national quality award process, an external organisation administers the quality award. This organisation supports the quality award applicants with the planning, for example describing the formalities for the application and setting dates for handing in the application. The administrator also trains external examiners and supports them in their evaluation of the applicants’ description (the phase of study). The administrator might also support the applicants in their plan for improvement.

Similar help is also available for applicants that participate in an in-company quality award process, with the difference that no external organisation is involved. Instead, the support is contributed by staff within the company that is administrating the award. The examiners are also normally employees within the company, but not directly from the unit that is applying.
The author’s view of self-assessment is that no external people are involved. Instead, the employees from the evaluated organisation perform all the four phases without any extensive help from external organisations.

2.7 Organisational Culture

Peters & Waterman (1982) were among the first authors to argue that a strong organisational culture is the key to organisational success. Ouchi (1982) also made a significant contribution in this field. He argued that Japan’s economic success and rapidly accelerating economic supremacy were due largely to its very strong corporate culture. Furthermore, the noteworthy studies of Hofstede (1991) illuminated the differences between organisational cultures of different nations regarding power distance, uncertainty avoidance, individualism and masculinity. Sweden was regarded as a country with a low degree of power distance, uncertainty avoidance and masculinity, but with a high degree of individualism.

Bruzelius & Skärvad (2000) state that organisational culture is difficult to define, but that some constituents of culture are ideal goals, dominating ideas and values, significant actors and role-models, norms and rules, and informal communication channels. Superior values are often derived from the organisation’s mission and strategy, see Bruzelius & Skärvad (2000). They claim also that employees are integrated into an organisational culture through socialisation, which means that the individual takes part in and successfully accepts the organisational values and action patterns within the organisation.

Schein (1992) discusses organisational culture and the essence of organisational values. He is of the opinion that there are three levels of culture, where “level” refers to the degree to which the cultural phenomenon is visible to the observer, within an organisation. These levels are artefacts, espoused values and basic underlying assumptions. Artefacts are visible organisational structure and processes, which are hard to decipher. Espoused values are strategies, goals and philosophies, and the basic underlying assumptions are unconscious, taken-for-granted beliefs, perceptions, thoughts and feelings. Furthermore, Schein (1992) notes that espoused values are a set of values that becomes embodied in an ideology or organisational philosophy and thus can serve as a guide and as a way of dealing with issues in an organisation. In this context, the core values of TQM that are discussed in Section 2.4 could be regarded as espoused values.

Abrahamsson & Andersen (2000) conclude that there is a discussion going on concerning whether organisational culture can be changed or not. The
advocates of the possibility of changing organisational culture admit, however, that it is a troublesome process and not always necessary, see Lewis (1996b). Schein (1992) claims that organisational culture can indeed be changed if the organisation is stimulated. He notes that both primary embedding mechanisms and secondary articulations and reinforcement mechanisms can be used in order to create and develop a culture. Bruzelius & Skärvad (2000) note that the primary embedding mechanisms for creating and developing culture can effectively be summarized by stating that leaders must be able “to walk the talk”. Abrahamsson & Andersen (2000) add that organisational culture can arise and consolidate in many ways. In particular, organisational culture can arise under the influence of the environment’s limitations, demands and opportunities, and the internal organisational conditions. Furthermore, they argue that changes in culture are often a result of conscious choices to adapt the organisation to new demands. Senge (1993) questions, on the other hand, the leaders’ ability to change individual values. He emphasizes that change must come from the inside and go out, rather come from the outside and in. Furthermore, Kekäle & Kekäle (1995) argue that any possible change of culture depends on how deep-rooted the culture is. In particular, Kekäle & Kekäle (1995) are of the opinion that the basic underlying assumptions are difficult to change.

In contrast to Schein (1992), who believes that organisational culture is quite homogenous and uniform, Morgan (1997) and Hatch (2000) acknowledge the existence of different sub-cultures within an organisation. Hatch (2000) notes that the sub-cultures can be classified on the basis of whether they support, deny or exist in parallel with the general culture’s central values. Furthermore, Hatch (2000) claims that people tend to be drawn to individuals whom they believe to be similar to themselves, and this behaviour creates sub-cultures.

Morgan (1997) also notes that research has shown that there is a difference between what people say and what they actually do. For instance, the leaders may say that they support an open environment where the employees have possibilities of expressing their opinions, while in reality the leaders do not support such actions. In particular, the connection between the style of leadership and organisational culture gives valuable insights regarding how organisations work, according to Morgan (1997).

Lewis (1996a) argues that, after a couple of years after the early work of Ouchi (1982) and Peters & Waterman (1982), some failures of culture change programmes were documented. The main reasons for failures were that the changes within the organisation were believed to be too time-consuming and that success could not be expected to occur immediately.
Lewis (1996a) states that the change of organisational culture should rather be seen as a long-term process.

### 2.7.1 Organisational Culture and TQM

Lewis (1996a and 1996b) argues that, even if TQM has different origins from the organisational culture approach, the two fields have recently converged with the idea that, to achieve “excellence” and “quality”. She notes further that researchers and practitioners have moved from an interest in culture as a novel idea to an interest in culture as a managerial tool, and that Organisational Development (OD) theory has been widened to include organisational culture, with an interest in culture change. Furthermore, Lewis (1996b) admits that there is a disagreement in the literature as to whether TQM involves changing a culture to achieve total quality or whether it means using the existing culture. Kekäle & Kekäle (1995) suggest that the best results are achieved when there is a match between the basic assumptions that act as a base for an organisation’s culture and the assumptions that are included in TQM. Bardoel & Sohal (1999) conclude that the effect of TQM on an organisation’s culture should not be underestimated, as it constitutes a radical change in the organisation’s strategy which is geared to changing the culture in the long term. Buch & Rivers (2001) claimed that the results from their case study supported the conclusion that the TQM initiative resulted in culture change characterized by empowerment, employee development and teamwork. However, as pointed out by Buch & Rivers (2001), the culture change was not long-lasting, as evidence of a shift back to the previous organisational culture was observed at the end of their longitudinal case study.

Armands & Josephsson (1995) discuss the connections between TQM, culture and communication. The aim of TQM, according to these authors after reviewing the literature in the field of TQM, is to create a quality culture. Moreover, Dahlgaard et al. (1998) view TQM as a corporate culture (see Section 2.2). They believe that, until the definition becomes reality, TQM is a vision. Through activities such as long-term planning and formulating and implementing annual quality plans, the vision of TQM is achievable. An example of these activities is described in Irani et al. (1997), who have performed a case study at a company that has successfully developed a culture that supports TQM, and thereby improved the organisational performance. Furthermore, Gore Jr. (1999) suggests that TQM provides a way to build an organisational culture that supports improvement.
In summary, the author of this thesis believes, like, for example, Schein (1992) and Dahlgaard et al. (1998), that the culture and values of an organisation can be stimulated in order to support TQM.

2.8 Successful Implementation of TQM

The first research question formulated in this thesis is: “What is the value of a successful implementation of TQM for the financial performance of Swedish companies?” Hence, it is of great importance to illuminate different definitions of and opinions about what constitutes a successful implementation of TQM.

Lascelles & Dale (1991) identified six levels of adoption of TQM. These levels are “uncommitted”, “drifters”, “tool pushers”, “improvers”, “award winners” and “world-class”, see Figure 2.9. It is argued by Lascelles & Dale (1991) that these levels are not necessarily the stages through which organisations pass on their TQM journey. They are rather characteristics and behaviours which organisations display in reaction to TQM. For example, at level 3, “tool-pushers”, the organisations are to an increasing extent looking at the criteria of quality awards, while at level 5, “award winners”, the organisations have reached the stage of being able to compete for a quality award and some recipients of quality awards are also present at this level. At this stage the organisations have reached a point in their total quality maturity where they have developed the kinds of cultures, values, trust, capabilities, relationships and employee involvement in the business that are required to receive a quality award. Lascelles & Dale (1991) claim that the last level, “world-class”, which is only reached by a handful of organisations, is characterised by the total integration of quality improvement and business strategy to delight the customer creatively.

Ghobadian & Gallear (2001) use, among other criteria, the receipt of a quality award as a measurement for a successful implementation of TQM. Hendricks & Singhal (1997) also use the receipt of quality awards as a criterion for a successful implementation of TQM programmes. One of the arguments for this is that award-giving organisations typically decide on recipients after conducting an independent evaluation and assessment of an organisation’s quality practice and after measuring the organisation’s quality performance against some pre-established criteria, see Hendricks & Singhal.

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4 Lascelles & Dale (1991) use the term “Total Quality Improvement” (TQI) instead of “Total Quality Management” (TQM). TQI is, according to these authors, an enabling mechanism based on continuous improvement that incorporates the strategic components that drive the entire business organisation. TQI is required to reach the vision of TQM.
Furthermore, Hendricks & Singhal (1999) claim, after a review of various criteria of quality awards, that the core values emphasised are those that are widely considered to be the building blocks of TQM.

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**Permanency of TQM**

![Levels of TQM Adoption](image)

**Figure 2.9** One way to classify the levels of TQM adoption. Source: Lascelles & Dale (1991).

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**2.9 Failures to implement TQM**

The failures of TQM implementation have been well documented, see, for example, Brown et al. (1994), Eskildson (1994), Harari (1997), Cao et al. (2000), Nwabueze (2001) and Foley (2004). However, Shin et al. (1998) argue that the TQM framework and key principles should not be blamed for the failure of TQM. Rather, they state that it is the lack of understanding of what TQM means for each unique organisation and how to implement it successfully that has created scepticism about the effectiveness of TQM.

Brown et al. (1994) identify three phases of TQM implementation, start-up, alignment and integration, and give reasons why TQM can fail in each phase. In the start-up phase, Brown et al. (1994) note that organisations fail due to a lack of management commitment, poor timing and pacing, wasted education and training, and a lack of short-term and bottom-line results. During the alignment, organisations fail with the implementation of TQM because of divergent strategies, inappropriate measures, outdated appraisal methods and inappropriate rewards. Finally, during integration, organisations fail to transfer true power to the employees, maintaining outmoded management practices, poor organisation and job design, and outdated business systems, and failing to manage learning and innovation.
diffusion. On the other hand, Brown et al. (1994) also state that there are approaches in each phase that could be practised by the organisation in order to avoid failures. Furthermore, Saad & Siha (2000) present guiding principles for a TQM implementation.

Harari (1997) claims that most TQM programmes are ineffective and gives ten reasons why TQM does not work for organisations trying to implement it. Specifically, he points out that TQM:

1. focuses people's attention on internal processes rather than on external results
2. focuses on minimum standards
3. develops its own cumbersome bureaucracy
4. delegates quality to quality czars and experts rather than to real people
5. does not demand radical organisational reform
6. does not demand changes in management compensation
7. does not demand entirely new relationships with outside partners
8. appeals to faddism, egotism and quick-fixism
9. drains entrepreneurship and innovation from corporate culture
10. has no place for love.

Furthermore, Harari (1997) states that, after studying all the independent research conducted by consulting firms, the conclusion is that only about one-fifth, or at best one-third, of the TQM programmes in the United States and Europe have achieved significant or even tangible improvements in quality, productivity, competitiveness or financial results.

However, TQM failures, see for instance Harari (1997), can be explained by the fact that only parts of TQM may have been addressed, rather than the whole management system of TQM, see Lau & Anderson (1998) and Cao et al. (2000). Specifically, Lau & Anderson (1998) admit that TQM initiatives often fail when the implementation begins. The failure of TQM is, however, largely due to the fact that all the philosophical, strategic, and measurement dimensions of the TQM concept are not adequately addressed. Instead of implementing "Total Quality Management", organisations are implementing "partial quality management" according to Lau & Anderson (1998). Moreover, Cao et al. (2000) conclude that TQM implementations mainly concern process change and do not involve enough culture change. Moreover, organisations implementing TQM do not manage structural or political change at all. Instead, the authors suggest that the organisation should use a systematic approach to the implementation which, in addition to the process change, should also include a culture, structural and political change.
Moreover, the failure of TQM implementations can be understood by studying why change in general does not turn out as planned, see, for example, Kotter (1996). Specifically, Reger et al. (1994) argue that TQM initiatives often fail, and argue that employees resist total quality because their beliefs about the organisation’s identity or culture constrain their understanding and create cognitive opposition to radical change. Moreover, Vermeulen (1997) claims that one of the main reasons for the failure of the quality transformation process is the management’s failure to recognise the importance of attitudes and to foster a change. Also, Hackman & Wageman (1995) give two reasons why organisational change programmes, including TQM, can go wrong. Firstly, the changes may be so ambitious and involve such fundamental alterations of the social system that, for all their potential merit, the organisation cannot accommodate them. Secondly, the changes may be more like window-dressing than real changes, as in a programme that exhorts people to alter their behaviour, but requires managers to do little other than issue the exhortation. In summary, as pointed out by Grieves (2000) and Hansson (2003), there are many similarities between the recommendations for implementing TQM and the general theoretical foundation of organisational change. However, these recommendations are beyond the scope of this thesis.

Moreover, the confusion concerning what TQM really is results in TQM implementation failures, see also Section 2.2. For example, Knights & McCabe (1997) state that management often do not understand the flaws or problematic and underlying philosophy of TQM. Consequently, they continue to adopt inconsistent approaches, such as attempting to control costs and employees while espousing the importance of the customer and the need for a trust-based culture.

The types of organisations working with TQM vary from private to public, large to small and manufacturing to service organisations. However, there is a discussion going on as to whether the general concept of TQM and its values, methodologies and tools should be the same for different types of organisations, for example large and small organisations, see Ehresman (1995). Ghobadian & Gallear (1997) argue, however, that small organisations can adopt the principles of TQM, but that an implementation of TQM requires specific requirements. Huq & Stolen (1996) analyse the difference between service and manufacturing organisations, and conclude that the underlying concept of TQM applies equally to both types of organisations, but with the difference that service organisations have been slow to adopt TQM. Similarly, public organisations have been slow to adopt TQM in comparison with private organisations, but the concept of TQM is equally important in the two types of organisations, see Dean & Helm (1996). Shin et al. (1998) support the idea that TQM can be implemented in
many different types of organisations, but the specific circumstances at each organisation must be considered in order to gain fully from TQM. On the other hand, Hasselbladh & Bejeroth (2002) believe that transferring ideas from one type of organisation to completely different organisations may be troublesome. For example, Erlingsdóttir (1999) studies what occurs when the ideas behind quality assurance in general and ISO 9000:1994 in particular reach the public sector and health care. In summary, Erlingsdóttir (1999) claims that using ideas in spheres where they do not belong can constitute quite a risk.

2.10 TQM and Performance

One part of this thesis deals with the question of whether working with TQM in general and quality awards in particular affects the performance of companies. Hence, earlier published results describing the connection between TQM and performance are of great importance for the thesis, and are therefore presented in the present section.

There are many different approaches to evaluating the possible benefits of TQM. Historically, one of the most common ways to quantify the benefits of TQM has been to estimate the costs of poor quality, see, for example, Juran (1989) and Sörqvist (1998). In recent years, research has also shown that one of the goals of TQM, customer satisfaction, has a significant positive impact on market value as well as accounting returns, see, for example, Andersson & Fornell (1994) and Eklöf et al. (1999). Another way to calculate the benefits of TQM is to balance expenditures against expected revenue gains and reduced costs. Rust & Zahorik (1995) call this approach Return on Quality (ROQ).

2.10.1 Definitions of Performance

Rogers & Wright (1998) state that organisational performance is one of the vaguest and most loosely defined constructs in organisational research. According to EFQM (1999), performance is “a measure of attainment achieved by an individual, a team, an organisation or a process”. This definition is used in the present thesis. However, only the measure of attainment achieved by organisations or units is studied. On the other hand, NIST (2003a) states that “the term performance refers to output results and their outcomes obtained from processes, products, and service that permit evaluation and comparison relative to goals, standards, past results, and other organisations”
2.10.2 TQM and Organisational Performance

McAdam & Bannister (2001) discuss the need for performance measurement within the TQM framework, and the fact that both hard and soft indicators, and both management- and employee-perceptive measures should be used to measure the outcome of TQM.

Samson & Terziovski (1999) show that the relationship between TQM practice and organisational performance is significant in a cross-sectional sense, in that TQM practice intensity explains a significant proportion of variance in performance. Moreover, the major findings of Allen & Kilmann (2001) show that higher levels of company performance are significantly correlated with greater use of TQM practices. Samson & Terziovski (1999) show further that the categories of leadership, management of people and a customer focus are the strongest significant predictors of operational performance.

The findings of Brah et al. (2002), based on a survey of 185 companies, support the proposition that TQM implementation correlates with quality performance. In particular, they claim that behavioural factors, like the role of top management, leadership, a customer focus, a human resource focus, and a quality focus, as well as TQM methodologies and tools, like corporate planning, a process focus, and information and analysis, contribute to the successful implementation of TQM. The findings also support the conclusion that the size of the company affects the rigour of implementation and the resulting level of quality performance; i.e. larger firms achieve better quality performance than smaller companies. However, the nature of the company, for example whether it is a service or a manufacturing company, does not affect the rigour of the quality management implementation and the resulting level of quality performance.

2.10.3 The Study of the General Accounting Office

The General Accounting Office (GAO) study was one of the first studies trying to establish a link between TQM practices and the performance of companies, see GAO (1991). In this study, Malcolm Baldrige recipients and companies that had received a site-visit (i.e. companies that in a sense were close to receiving an award) were evaluated. The main conclusion from the GAO study was that the companies investigated had improved their operating results. Moreover, better employee relations and improved operating procedures had been achieved, greater customer satisfaction had been accomplished, and an increased market share and profitability had been gained. Many other articles also discuss the results from the GAO study; see, for example, Shetty (1993) and Zairi et al. (1994). Bergquist &
Ramsing (1999) use methods similar to those described in the GAO study. However, Bergquist & Ramsing (1999) claim that the results of their study cannot conclusively determine that quality award recipients perform better than others, even if most of the respondents in the study believed that using award criteria had had a positive impact on the performance of the company.

2.10.4 Study of Quality Award Recipients

The findings of Oakland (1999) indicate that quality award recipients and applicants are unequivocal in their comments about the benefits of TQM and self-assessment for business results, including profitability, an increased market share and more satisfied customers. Quality award recipients, like Texas Instruments Defence Group, also claim that quality work can yield tremendous rewards, see Junkins (1994). Furthermore, Zink (1997) describes how quality award recipients of the European Quality Award have implemented, worked with and gained from TQM.

Hendricks & Singhal (1997) compare recipients of quality awards with different control companies, see also Hendricks & Singhal (1999). In order to perform the comparison they established three hypotheses. The first hypothesis is that implementing a successful TQM programme will improve the profitability of a company. In order to test this hypothesis, operating income is chosen as an appropriate indicator to study. The second hypothesis is that implementing a successful TQM programme will increase revenues. To test this hypothesis, asset turnover and sales per employee are studied. The third hypothesis is that implementing a successful TQM programme will reduce costs. The primary cost measure used in their study is the sum of the annual cost of goods sold and selling and the general and administrative expenses, divided by the annual sales. The main conclusion from their research is that companies that have received a quality award outperform the control companies concerning operating income-based measures and other indictors during a period that follows the announcement. For instance, the growth in operating income for recipients averaged 91% during a period that followed the award announcement, in contrast to a 43% average growth for the control groups.

Wrolstad & Kreuger (2001) showed that the companies that had received a quality award presented better results than a control group concerning measures of the operating profit margin, return on sales and return on equity, while the difference was not so large between the two groups concerning the operating margin, but still in favour of the quality award recipients. Lemak & Reed (1997) also claim that TQM leads to an improved profit margin, after studying sixty companies that had demonstrated a
commitment to TQM for a period of at least five years. Handsfield et al. (1998) claim that the results of their study provide support for the existence of a relationship between a company's quality-driven strategies and improved financial performance. Easton & Jarrell (1998) also show clear evidence that the long-term performance of companies that have implemented TQM is improved.

2.10.5 Quality Award Recipients and the Stock Market

Another approach to measuring the benefits of TQM initiatives is to follow the share price on the stock market of a company that has successfully implemented TQM. Helton (1995) claimed that companies that had received the Baldrige National Quality Award outperformed companies on the Dow Jones Industrials index or the Standard & Poor index. George (2002) also argues that one should invest in companies that have successfully implemented TQM, as these companies show better results on the stock market. Moreover, Hendricks & Singhal (2001) state that award recipients in America significantly outperform firms in the various control groups when studying the stock development. Depending on the control group used, the mean outperformance ranges from 38% to 46%. However, as discussed in Przasnyski & Tai (1999), the returns are often calculated without adjusting for market and industry factors and are not annualised either, which is not correct from a financial point of view. When adjusting to these factors, Przasnyski & Tai (1999) state instead that the stocks of Malcolm Baldrige National Quality Award recipients underperform stocks with a similar risk and in a similar branch of industry by a 31% margin. Furthermore, the impact of the Six Sigma implementations on the stock price performance has also been evaluated, see Goh et al. (2003). They argue that companies that have implemented a Six Sigma improvement programme in order to reduce unwanted variation do not outperform the Standard & Poor index.
3 Methodology

In this chapter the chosen methodology is presented. The chapter includes a description and discussion of aspects related to the chosen research approach and strategy. The research process and the model of analysis are also presented. Furthermore, other relevant choices that influence the studies, and the validity and reliability of the thesis are discussed.

3.1 Research Approach

Denzin & Lincoln (2000) state that the different paradigms of research and theoretical perspectives on research that the researcher believes in influence how the researcher looks at the world and acts in it. Moreover, all research is conducted on the basis of a determined pre-understanding of paradigms and theoretical conceptions, whether it is conscious or unconscious, concerning what is important, interesting and relevant, according to Bjereld et al. (1999).

Certainly, the pre-understanding of the author of this thesis influenced the studies conducted. The author had prior to his doctoral studies worked with quality issues within an organisation, and acknowledged both the benefits and problems of such work. Specifically, this experience has led the author to question what the organisational value is of different activities performed to enhance quality. Consequently, this experience has most likely affected the problem area chosen and the formulation of the research questions.

Furthermore, the author of this thesis has been working at a university division that teaches and promotes TQM during the completion of his doctoral studies. This may also have affected the way in which the author has approached the problem area and conducted the studies. For example, it is possible that someone from the “outside” would have had a more critical view of TQM than the author of this thesis. However, it has been the author’s intention to describe objectively the phenomenon concerned. In addition, the author has participated once in the Swedish Quality Award process as the secretary of an examination group. This participation has given the author valuable insights, even if they are not explicitly described in this thesis, about the value of participation in a quality award process.

The term “methodology” focuses on the best means for gaining knowledge about the world, see Denzin & Lincoln (2000). According to Taylor & Bogdan (1984), methodology refers to the way in which we approach problems and seek answers. Before starting a study, one can, for example, define what the goal of the research is going to be, and whether the research

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5 In this chapter, the meaning of the term “methodology” is different from the one presented in Chapter 2.
is going to be mainly positivistic or hermeneutic, inductive or deductive, quantitative or qualitative. These issues are discussed below.

### 3.1.1 Goals of Research

Dane (1990) claims that the immediate goals of research, exploration, description, prediction, explanation and action, provide us with a strategy for figuring out which questions to ask and which answers to seek. The purpose of the present thesis is to describe and explain the organisational value of participating in quality award processes. Hence, this thesis has both descriptive and explanatory elements.

**Descriptive Research**

According to Dane (1990), descriptive research involves examining a phenomenon to define it more fully or to differentiate it from other phenomena. He states further that descriptive research involves attempting to define or measure a particular phenomenon, usually by attempting to estimate the strength or intensity of a behaviour or the relationship between two behaviours. Phillips & Pugh (2000) argue that in descriptive research one is trying to find the limits of previously proposed generalisations.

The relationship between participating in a quality award process and the performance of organisations has not been thoroughly studied from a Swedish perspective; i.e. Swedish organisations that participate in a quality award process in Sweden have not been thoroughly studied. Hence, this thesis is trying to find the limits of previously proposed generalisations. In particular, Hendricks & Singhal (1997) claim that American companies that have successfully implemented TQM outperform control companies regarding the financial performance. One part of this thesis describes, therefore, whether a successful implementation of TQM also improves the financial performance of Swedish companies.

Moreover, participation in a quality award process, through either a national quality award or an in-company quality award, has not yet been addressed fully. In particular, Swedish organisations that participate in a quality award process have not aroused great research interest. Hence, in this thesis, participation in quality award processes in Sweden is illuminated in order to evaluate whether previously proposed generalisations about quality award processes and self-assessment are also true of quality award processes in Sweden. Previously proposed generalisations about self-assessment are

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6 Phillips & Pugh (2000) use the term “testing-out research” for “descriptive research”. However, the meanings of these two terms are similar.
described in Section 2.4.1, while previously proposed generalisations concerning quality awards are described in Section 2.6.

**Explanatory Research**

Marshall & Rossman (1999) state that explanatory studies try to show relationships between events and the meaning of these events. Yin (1994) notes that in explanatory studies, the questions deal with operational links that need to be traced over time.

The studies that are described in this thesis are partly explanatory due to the fact that relationships between events or operational links are studied. In the first research question, the possible link between implementing TQM successfully and the financial performance of companies is explained. Furthermore, participating in an in-company quality award and a national quality award process and the possible effect on the organisational performance are studied. The explanatory part of this thesis is presented in Figure 3.1.

![Figure 3.1 The possible links or relationships between events that are explained in this thesis.](image)

### 3.1.2 Positivism or Hermeneutics

Historically, positivism and hermeneutics are the names of two dominant and contradictory traditions of research in the science dealing with people and society, see Andersson (1979) and Thurén (1991). Hermeneutics can be translated into the “art of interpretation” or “interpretation science”. Positivism, on the other hand, is built upon experimentation, quantitative measures and logical discussion, see Wiedersheim-Paul & Eriksson (1992).

Arbnor & Bjerke (1977) argue that there are three different views of methodology within the area of business economics: the analytical view, which is positivistic, the system view, which to some extent is positivistic, and the actor view, which is anti-positivistic. The analytical view assumes that knowledge is independent of the individual and that the world can be understood in an objective way in which the whole is the sum of the parts.
The system view, however, assumes that knowledge is system-dependent, that the whole differs from the sum of the parts, and that the parts are dependent on the system. Finally, the actor view assumes that knowledge is dependent on the individual, and that the actors explain the whole.

The author of this thesis has a background in natural science. Instead of using interpretation and understanding, as perhaps a hermeneutic researcher would do, the approach of the author involves using quantitative measures in order to understand a problem objectively. This view of research is mainly a positivistic and an analytical approach to research. Specifically, the author’s intention in writing this thesis is to try objectively to apply measures of performance and by logical discussion to describe a possible relationship, see Figure 3.1, between participating in a quality award process and the performance of companies. In particular, research questions 1 and 2 illuminate such possible relationships.

However, some of the research conducted in this thesis is based on an actor view and has a more hermeneutic approach. For example, the author of this thesis makes interpretations and draws conclusions to some extent on the basis of values and experience that the author possesses. Furthermore, it is the author’s opinion that, in order to understand fully the value of participating in a quality award process, one is dependent on the actors involved, and that these actors explain the whole. For instance, the experience that has been derived from working with in-company quality and the value of participating in a national quality award process are explained by many actors.

In order to illuminate research questions 3 and 5, the author also accepts a constructivist paradigm, which means that realities are multiple and dependent on the individual persons or groups that hold the constructions. Constructivism is thoroughly described in Guba & Lincoln (2000).

### 3.1.3 Induction or Deduction

When conducting research, one normally distinguishes between induction and deduction. Molander (1988) states that the idea of induction is the generation of general conclusions from the specific case. Deduction, on the other hand, deals with the explanation of a specific case from a general rule. Wiedersheim-Paul & Eriksson (1992) explain induction as follows: “from separate phenomena in reality we derive general statements”. On the other hand, they state that, when we perform deduction, “from theory we form hypotheses, which are testable statements about reality. Through logical conclusion we derive the result”. Figure 3.2 shows graphically Wiedersheim-Paul & Eriksson’s (1992) theory about inductive and deductive research.
This thesis includes both deductive and inductive parts, and has many similarities to Figure 3.2. One part of the study is mainly deductive. From the theory of the link between working with quality awards and performance, hypotheses are formed. For example, one hypothesis is that implementing TQM successfully affects financial performance. Another hypothesis is that working with in-company quality awards affects the performance of units. However, these hypotheses are not explicitly used in this thesis as a method to collect data. Rather, these hypotheses are formulated with the intention of illustrating the deductive parts of this thesis and the research concerned. Another part of the study is mainly inductive. Units that have applied for in-company quality awards, companies that have received a quality award, organisations that have participated in a national quality award process are studied in order to make generalisations to form theoretical propositions about TQM in general, and quality awards and self-assessment in particular, and hence contribute to the theory about the value of participating in a quality award process. The research described in this thesis also has many similarities to abduction, which is a combination of inductive and deductive research, see Alvesson & Sköldberg (1994).

3.1.4 Quantitative or Qualitative

Today two major categories of research methodologies exist, namely quantitative and qualitative methods. According to Merriam (1994), information brought by words is qualitative, while information brought by numbers is quantitative. Qualitative research implies an emphasis on the qualities of entities, and on processes and meanings that are not experimentally examined or measured (if measured at all) in terms of quantity, amount, intensity, or frequency. In contrast, quantitative studies emphasise the measurement and analysis of causal relationships between
variables, not processes, see Denzin & Lincoln (2000). However, Allwood (1999) maintains that this distinction between quantitative and qualitative methods is not appropriate, because research methods in general consist of both qualitative and quantitative elements.

It is therefore the author's intention to use both qualitative and quantitative elements in this thesis, without arguing that one is better than the other. In research question 1, 2 and 4, however, quantitative methods are used mainly, since these questions set out to describe quantitatively the performance or value of organisations that have been working with quality awards. Research questions 3 and 5 are more qualitative in nature and set out to study how units experience participation in an in-company quality award process and how organisations have utilized participation in a national quality award process.

Moreover, Holme & Solvang (1991) argue that there are many benefits to be gained by combining qualitative and quantitative methods. Specifically, a qualitative study can be a follow-up activity of a quantitative study, and a qualitative study can serve as a preparatory study prior to a quantitative study. Due to the fact that research questions 2 and 3 illuminate in-company quality awards, the quantitative study performed to illuminate question 2 serves as a preparatory study to the qualitative study illuminating question 3. Similarly, the quantitative study based on research question 4 serves as a preparatory study to the qualitative study based on research question 5. Both studies illuminate a national quality award process. Figure 3.3 shows which research questions are mainly quantitative and qualitative in nature, respectively, and which studies serve as a preparatory study to another study.

<table>
<thead>
<tr>
<th>Quantitative Studies</th>
<th>Qualitative Studies</th>
</tr>
</thead>
</table>
| **Study & Research Question 1**  
What is the value of a successful implementation of TQM for the financial performance of Swedish companies? | |
| **Study & Research Question 2**  
What are the effects of working with in-company quality awards on the performance of the participating units? | **Study & Research Question 3**  
How do units experience working with in-company quality awards? |
| **Study & Research Question 4**  
What is the organisational value of participating in a national quality award process? | **Study & Research Question 5**  
How have organisations utilized their participation in a national quality award process in order to improve performance? |

Figure 3.3 The studies and research questions that are quantitative and qualitative in nature, respectively. Also shown is that the studies illuminating research question 2 and 4 serve as preparatory studies to studies 3 and 5.
3.2 Research Strategy

According to Holme & Solvang (1991) and Merriam (1994), the choice of a research strategy depends on which research question is being posed. Moreover, the type of strategy depends on whether one is striving for control of the events or focusing on temporary events, see Yin (1994) and Table 3.1. The research situation in this thesis does not require control over behavioural events, but it does focus on contemporary events. Hence, a survey, archival analysis and a case study are appropriate research strategies in this thesis, according to Table 3.1. Case studies are most appropriate when one wishes to answer “Why” and “How” questions (research question 3 and 5 in this thesis), while “What” questions (research questions 1, 2 and 4 in this thesis) are most appropriately answered by surveys or archival analysis, according to Table 3.1.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Form of research question</th>
<th>Requires control over behavioural events?</th>
<th>Focuses on contemporary events?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment</td>
<td>how, why</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Survey</td>
<td>who, what, where, how many, how much</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Archival analysis</td>
<td>who, what, where, how many, how much</td>
<td>no</td>
<td>yes/no</td>
</tr>
<tr>
<td>History</td>
<td>how, why</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Case study</td>
<td>how, why</td>
<td>no</td>
<td>yes</td>
</tr>
</tbody>
</table>

The author of the thesis chose to perform an archival analysis in order to illuminate research question 1, because data regarding financial performance is available through archival analysis in the form of annual reports. A survey was selected as the most appropriate strategy in order to try to answer research question 2 and 4. Case studies were chosen in order to try to answer research question 3 and 5, in accordance with Yin (1994). Table 3.2 shows the number and type of the research questions and the strategies chosen to illuminate each research question. Furthermore, Table 3.2 presents the number of the study that illuminates a specific research question, and the Paper in which the study is presented.
Table 3.2 The strategies used to illuminate the research questions. Furthermore, the number of the study that illuminates a specific research question, and the paper in which the study is presented.

<table>
<thead>
<tr>
<th>Number of Research Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Research Question</td>
<td>What</td>
<td>What</td>
<td>How</td>
<td>What</td>
<td>How</td>
</tr>
<tr>
<td>Number of Study</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Strategy</td>
<td>Archival Analysis</td>
<td>Survey</td>
<td>Case Study</td>
<td>Survey</td>
<td>Case Study</td>
</tr>
<tr>
<td>Number of Paper</td>
<td>I</td>
<td>II</td>
<td>III</td>
<td>IV</td>
<td>V</td>
</tr>
</tbody>
</table>

3.3 Research Process

In Figure 3.4, the research process is presented. The studies that are presented in this thesis were initiated in the August of 2001 with the study of in-company quality awards. Study 2 serves as a preparatory study to study 3. Hence, the conclusions reached in study 2 are input to study 3. Simultaneously with the studies on in-company quality awards, the study of quality award recipients, study 1, was performed. After the completion of the author’s licentiate thesis in December 2003, the studies on national quality awards were initiated. Input to these studies came mainly from the similar studies on in-company quality awards, study 2 and 3. Furthermore, study 4 was used in order to identify organisations that could serve as case studies in study 5.

Figure 3.4 The research process.
In study 2 and 3, the concept “working with an in-company quality award” is sometimes used instead of the concept “participating in an in-company quality award”. The concepts convey, however, the same meaning in this thesis, i.e. the phases that are described in Figure 2.2.

### 3.4 Sampling and Other Selections

Kumar (1996) states that when selecting a sample, one should always try to achieve maximum precision in one’s estimates within a given sample size and avoid bias in the selection of one’s sample. How the sample selections and other relevant selections were performed for the different studies is described below. The different selected data collection methods are not discussed in detail below. For a thorough discussion concerning the strengths and weaknesses and important issues to consider with regard to the selected data collection methods, see Ejvegård (1993), Befring (1994), Patel & Davidsson (1994), Andersen (1998) or Dahmström (2000).

#### 3.4.1 Research Question 1 and Study 1

The following research question is illuminated in this study: “What is the value of a successful implementation of TQM for the financial performance of Swedish companies?”

**Definition of Successful Implementation of TQM**

One of the first issues to be solved, when studying the impact of TQM on financial performance, is what a successful implementation of TQM constitutes. Hackman & Wageman (1995) have, for example, provided a measuring framework which can be used to test whether TQM has been properly implemented. This framework was used in a qualitative study by McAdam & Bannister (2001) in order to determine whether the framework of TQM was perceived to be implemented. Hendricks & Singhal (1997) and Ghobadian & Gallear (2001) use the receipt of a quality award as a criterion for a successful implementation of TQM. The same proxy was used in this study, because the qualitative case study approach by McAdam & Bannister (2001) was considered to be inappropriate due to the subjective judgement of what a successful implementation of TQM constitutes. Also, it was the present author's intention to make a comparison of the results of the present study with those of the Hendricks & Singhal (1997) study. Furthermore, as shown in Figure 2.9, quality award recipients show a TQM maturity, and one can therefore argue that these companies have successfully implemented TQM.
Selection of Companies
In this study, all the Swedish companies that had received the national, a regional or an in-company quality award were included. The regional and in-company quality awards are to a large extent based on the Swedish quality award criteria. The information about which companies had received a quality award in Sweden was collected from the Swedish Institute for Quality (SIQ), which is the organisation managing the Swedish Quality Award. Only companies that were profit-driven were included in the study, because non-profit organisations do not always strive to increase the financial performance due to other business incentives. A total number of twenty-one companies conformed to these criteria. In some cases a unit of a larger company had received a quality award. In these cases the whole company was included in the study if the unit that had received the award had 40% or more of the total number of employees of the company. This limitation was set to get as many of the award recipients as possible included in the study and yet not decrease the reliability of the study. It can be argued that if 40% of the company has implemented a TQM programme, the rest of the company should to some extent also have been working with TQM. Further, since the author wished to study the development of the financial performance after the award announcement, only companies that received an award in the year 1999 or before were included in the study (for quality award recipients from later than 1999, no sufficient data were at the time of the study available). Seventeen companies conformed to the above-described criteria. The exclusions that were made were due to the following factors:

- One award recipient was closed down by its foreign owner and the production was moved abroad.
- One award recipient presented the financial figures in a way that made comparisons impossible.
- Two award recipients constituted less than 40% of the company that provided the financial figures.

The companies that were included in the study came mainly from the manufacturing industry and had a relatively large number of employees, see Table 3.3. The classification applied by the Commission of the European Communities regarding the size of companies was used (0-9 employees, 10-49 employees, 50-249 employees and 250 or more employees).
Table 3.3  The years in which the companies in the study received the quality award, as well as the type of business and the number of employees.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of companies</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>0-9 employees</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>10-49 employees</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>2</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>50-249 employees</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>250 employees or more</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>7</td>
</tr>
<tr>
<td>Manufacturing industry</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>Service industry</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>7</td>
</tr>
</tbody>
</table>

**Selection of Comparisons**

To assess the financial benefits of implementing TQM, it would be ideal to compare the performance of the companies in question with the performance that would have been the case if the companies had not implemented TQM. Since in this study it was impossible to find or construct such ideal comparisons, two other comparisons were chosen.

First, each company that had received a quality award in Sweden was individually compared to the branch index concerned in order to make a valid comparison regarding the financial performance. Different branch indices for different sizes of companies regarding the total number of employees were available through Statistics Sweden (SCB). Each company that had received a quality award was therefore classified according to its size (based on the number of employees) and branch.

Second, a comparison was performed with the award recipients’ stated competitors, i.e. each award recipient was individually compared with one of its competitors on the market. The person within each quality award recipient identified as the most suitable to state the award recipient’s competitor was contacted. The role of these persons differed from case to case. This person was asked to estimate the quality award recipient’s major competitor at the beginning of the implementation period of TQM. This comparison gives an idea of how the quality recipients have developed in relation to their competitors. In those cases where a competitor could not be identified or the competitors of the company were non-Swedish companies, no competitor was included in the study. In those cases where the award recipient stated that the company had many competitors, the competitor that was closest in size was selected. These two comparisons give an indication of the benefit of a successful implementation of TQM.
Selection of Indicators

The following indicators were used in order to study the performance development for the companies included in the study:

- Percentage change in sales.
- Return on assets, which is the result after the financial income and financial costs divided by 0.7 multiplied by the non-taxed reserves plus the assets. This indicator is, according to Hendricks & Singhal (1997), an efficiency indicator, which is based on the assumption that implementing an effective TQM programme increases the revenues.
- Return on sales, which is the operating income divided by the sales. This indicator is based on the assumption that an effective TQM programme will increase the revenues. Lemak & Reed (1997) discuss the advantage of using the operating income instead of the net income to ascertain the impact on financial performance of TQM. They state that the operating income is a better measure of performance than the net income, since it is not greatly affected by accounting methods, tax strategies, or financial structure.
- Percentage change in the total assets.
- Percentage change in the number of employees. The opinions differ among TQM experts regarding what impact TQM has on this indicator, as well as the change in the total assets. Some claim that TQM requires investment in people and capital, resulting in an increase in employment and the total assets. Others believe that TQM programmes increase the effective productive capacity of the company because of process improvements and reductions in defects, rework, and waste, among other things. This improvement could result in a decrease in employment and the total assets, see Hendricks & Singhal (1997).

The indicators chosen and the approach for calculating them and comparing them with the control groups differ to some extent compared to the study by Hendricks & Singhal (1997). The change in the operating income was not included in this study, since some of the companies, both award recipients and their competitors, showed a negative operating income on some occasions. Due to the fact that it is impossible to calculate a change in the operating income from a negative result, expressed in percentages, this indicator was excluded. If the change in the operating income, expressed in percentages, were to be studied, and the companies that showed a negative operating income were to be excluded on the occasions when they developed positively from a negative point of departure, the result from the operating income indicator would be biased. However, the return on sales, which was included in this study, is defined as the operating income divided
by the sales. Hence, the change in the operating income is, to some extent, reflected in this indicator. Hendricks & Singhal (1997) excluded, when calculating the operating income, the years when the companies showed a negative operating income. However, one can argue that this gives a biased result. The number of companies included in this study is far smaller than the number included in Hendricks & Singhal (1997), since the number of award recipients is much smaller in Sweden than in the USA, and the bias of excluding companies would therefore turn out to be even more severe for this study.

The same problem of calculating change, expressed in percentages, with negative numbers as one’s point of departure also concerned the indicators return on sales and return on assets. The annual change in these indicators was not calculated. Instead, the results (the actual “value” for return on sales and return on assets) for the competitor and the branch index were subtracted from the indicator of the particular award recipient. Thereafter, a median value of the differences was calculated. This procedure was used for all the years included in the study. The use of medians when comparing the performance indicators was based on the fact that the medians are more robust than average values to problems concerning outliers, wide tails or different forms of skewness.

The other indicators, change in sales, change in the total assets and change in the number of employees, were calculated in the same way as by Hendricks & Singhal (1997). The change in these indicators for the competitor and branch index was subtracted from the change in these indicators for the award recipient concerned. Further, the median value of the difference between the award recipient and its stated competitor and branch index was calculated to give a general reflection of the development.

The indicators of the award recipients and the competitors concerned were found in annual reports available mainly from the companies and the Swedish Patent and Registration Office (PRV).

Selection of Comparison Periods
A six-year period, divided into one implementation period and one post-implementation period, was studied regarding these indicators. The implementation period was defined as starting four years before the company received the quality award and ending two years before the award, see Figure 3.5. Since the applicants for the quality award start describing their activities and results approximately one year before the announcement of the recipient in order to hand in the application on time and give examiners and judges time to evaluate the application, it can be argued that the activities and results described in the application should be in place one
year before the announcement of the recipient of the award. Hence, it is most appropriate to start the post-implementation period one year before the announcement of the recipient of the award. The post-implementation period started one year before the award was received and ended one year after the award, see Figure 3.5.

![Figure 3.5](image)

Figure 3.5 The years included in the implementation period and the post-implementation period.

In the GAO (1991) study, 20 companies that were among the highest-scoring applicants in 1988 and 1989 for the Malcolm Baldrige National Quality Award were evaluated. The companies in the GAO study realised the initial benefits of TQM after two and a half years. Hence, after a three-year implementation period, the companies in this study should be able to show possible benefits of TQM regarding the studied indicators. Moreover, the indicators were collected, if possible, after the post-implementation period until the year 2000, in order to see possible progress after the post-implementation period (i.e. it is possible to study the development of the indicators after the post-implementation period for the companies that received a quality award before 1999). Consequently, in some cases the development of the indicators can be presented up to two years after the award announcement.

**Exclusions of Observations**

Some observations were excluded for the following reasons:

- Two quality award recipients of the year 1999 were excluded for the year after the post-implementation period due to the fact that no current data were available.
- No Swedish competitor could be identified for four of the award recipients.
- No branch indices could be constructed for two of the award recipients within the insurance and real estate business.
- No branch indices were available between the years -5 and -4 for the indicators of number of employees and total assets.
- No branch indices were available for one award recipient for the year -4 and for one award recipient for the year -3, because there were few companies in the branch indices.

Tables 3.4 and 3.5 present the number of comparisons made for the different indicators and for the different years.

Table 3.4  The number of comparisons performed for the different years for the indicators of return on assets and return on sales.

<table>
<thead>
<tr>
<th>Year</th>
<th>-4</th>
<th>-3</th>
<th>-2</th>
<th>-1</th>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Award Recipient - Competitor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return on Assets</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>Return on Sales</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>Award Recipient - Branch Index</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return on Assets</td>
<td>15</td>
<td>14</td>
<td>14</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>Return on Sales</td>
<td>15</td>
<td>14</td>
<td>14</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>14</td>
</tr>
</tbody>
</table>

Table 3.5  The number of comparisons performed for the different years for the annual percentage change in the number of employees, the total assets and the sales.

<table>
<thead>
<tr>
<th>Year</th>
<th>-5 to -4</th>
<th>-4 to -3</th>
<th>-3 to -2</th>
<th>-2 to -1</th>
<th>-1 to 0</th>
<th>0 to 1</th>
<th>1 to 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Award Recipient - Competitor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Employees</td>
<td>10</td>
<td>12</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>Total Assets</td>
<td>10</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>Sales</td>
<td>10</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>Award Recipient - Branch Index</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Employees</td>
<td>-</td>
<td>14</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>Total Assets</td>
<td>-</td>
<td>14</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>Sales</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>14</td>
</tr>
</tbody>
</table>
3.4.2 Research Question 2 and Study 2

The following research question is illuminated in this study: “What are the effects of working with in-company quality awards on the performance of the participating units?”

Selection of Companies
In Sweden, there are five companies that have or have had an in-company quality award. One of these companies, Swedish Telecom (“Telia”), ended its in-company quality award in 1995. This company was not included in the study due to the difficulties for the people within the company to remember and estimate the effects of the in-company quality award. Further, Vattenfall, which has had an in-company quality award, was not included in the study due to large re-organisations. In this case, the re-organisations had made it impossible to reconstruct the original units that had once applied for the in-company quality award. Hence, this study covers in total three different companies, the Swedish National Road Administration (“Vägverket”), Sydkraft (a supplier of electricity) and the Swedish Post Office (“Posten”). Within these three companies 77 units were surveyed with a mailed questionnaire. The respondents of the questionnaire were the heads of these units.

Selection of Indicators
When evaluating performance, it is crucial to identify appropriate key-indicators. Input regarding appropriate key-indicators came mainly from the General Accounting Office study, GAO (1991), which is often referred to in the literature discussing benefits of TQM. In the GAO study, 20 companies that were among the highest-scoring applicants in 1988 and 1989 for the Malcolm Baldrige National Quality Award were evaluated according to four different groups of key-indicators:

- customer satisfaction indicators (called key-indicators for customers in this study)
- operating indicators (called key-indicators for processes in this study)
- employee indicators (called key-indicators for employees in this study)
- financial performance indicators (called key-indicators for owners in this study).

Similar areas of key-indicators are used in the Balanced Scorecard, see Kaplan & Norton (1996), Bergquist & Ramsing (1999) and Zairi et al. (1994) also use these key-indicators in order to study the effects of TQM practice on performance. See also Shetty (1993), who presents a thorough discussion concerning the results of the GAO study.
In order to find out whether the key-indicators from the GAO study were appropriate in this study, the quality managers of the surveyed companies were used as a reference group. As a result, some of the key-indicators from the GAO study were excluded in the questionnaire, while others were added to describe better the companies’ activities and results. However, the groups of key-indicators remained the same.

**Time Period**

Two surveyed companies had in 1998 initiated their in-company quality award and one company had started in 1997. To be able to study the same time period for all the surveyed companies, 1998 was chosen as an approximate starting time for the development of the key-indicators. Hence, the respondents of the questionnaire were asked to estimate the development of the key-indicators from 1998 until the end of 2001. It took an average of two and a half years for the companies in the GAO study to notice the benefits of TQM. Therefore, a period of four years was considered to be enough time to study the results from the use of the in-company quality award.

**The Structure and Analysis of the Questionnaire**

The rate of response to the questionnaire was 66%. The effects of in-company quality awards on performance were analysed, by studying units that had applied for an in-company quality award and by comparing these units with units that had not applied for an in-company quality award concerning the effects on performance.

The surveyed units that had applied for the in-company quality award were also asked to estimate the work effort performed in each of the four phases suggested by Svensson & Klefsjö (2000). In addition to these phases, training was included in the questionnaire. In order to apply for an in-company quality award, the unit had to train its employees in TQM and self-assessment. Training was therefore identified as a fifth phase. Hence, the phases or costs that were included in the questionnaire were planning, training, description of activities, analysis of descriptions and improvements.

The questionnaire was divided into four parts. First, all the respondents were asked to estimate the development of the key-indicators within the four groups of customers, processes, employees and owners, from the beginning of 1998 until the end of 2001. Second, the respondents who had worked with an in-company quality award were asked to state some effects of the in-company quality award and estimate the importance of the effects on customers, processes, employees and owners. Third, the respondents who had worked with the in-company quality award were asked to estimate the costs of applying for an in-company quality award with the phases
suggested by Svensson & Klefsjö (2000). Fourth, all the respondents were asked to give some general opinions about in-company quality awards.

A non-response analysis was also performed. The main purpose of the non-response analysis was to investigate whether the opinions of the respondents who did not answer in the first place differed from those of the respondents who answered the questionnaire. Fifteen units that did not answer the questionnaire were randomly selected and asked if they could fill in the questionnaire. A higher percentage of the respondents in the non-response analysis stated that their unit had not applied for the in-company quality award. However, there was no clear evidence that the managers who did not answer the questionnaire in the first place differed in their opinion, regarding the key-indicators and their attitude to the in-company quality award, from the group that did answer.

For a thorough presentation of the results from the questionnaire, including the development of all the key-indicators, see Eriksson (2002a). The introductory letters that followed the questionnaires are presented in Appendix 1. The questionnaires for the respective companies are presented in Appendix 2.

3.4.3 Research Question 3 and Study 3

The following research question is illuminated in this study: “How do units experience working with in-company quality awards?”

Case Selection
Units that were working with an in-company quality award and had been doing so for some time were prioritised in the case selection due to the fact that such units have a greater experience of the in-company quality award. A single case study, instead of a multiple case study, was chosen due to a restriction of resources and because the case study would also serve as a prelude to further studies on the subject, see Yin (1994). Finally, a unit within the Swedish National Road Administration that had been working with an in-company quality award since 1998, and had written three award applications was chosen as an appropriate case study.

Selection of Units of Analysis
Before initiating a case study, one also has to decide how many units of analysis one wishes to investigate. In a holistic design one unit is examined, while in an embedded design more than one unit of analysis are examined. The sensitivity of the study increases as more units within the case are used, see Yin (1994). Hence, an embedded single-case design was chosen. To understand the experiences better and to obtain a broader picture of the
work connected with the in-company quality award, and thus increase the sensitivity of the study, employees who had different levels of involvement in the self-assessment process and different levels of responsibility at the unit were interviewed and analysed on the basis of which perspective they possessed. This analysis was performed because employees with different perspectives, or in other words with different levels of involvement and responsibility, probably look upon the work connected with the in-company quality award differently. In total, five semi-structured interviews were held. Four of the employees who were interviewed were taking an active part in working with the in-company quality award, while one did not participate in the work. Two of the employees who were interviewed had during different periods had the responsibility of managing the work at the unit connected with the in-company quality award. The other two had mainly taken an active part in the description of activities ("Do" in Figure 2.2) and in the plan for improvements ("Act" in Figure 2.2). Further, one of the respondents was the head of the unit, while another one was the head of a division within the unit. The answers from the employees were analysed and compared on the basis of which perspective the employees possessed; e.g. their involvement in the self-assessment process and their level of responsibility at the unit. For example, the head of the unit was considered to have a high degree of responsibility at the unit, but only a medium involvement in the self-assessment process. The employee who did not participate in the self-assessment process was considered to have a low degree of involvement and a low degree of responsibility at the unit.

Selection of Inquiries
The results of study 2 served as an input for deciding which questions were going to be asked. One intention of study 3 was to determine whether some of the results of study 2 could be verified. Therefore, some of the questions were similar to those asked in study 2, while others were added to understand better the respondents’ experience of the in-company quality award. The studied experience of the in-company quality award can be divided into three different consecutive steps or areas of questions, see Figure 3.6. First, what are the purpose and goal of working with the in-company quality award? Second, what does the self-assessment process of an in-company quality award look like? Third, and the main focus of this study, what is the perceived outcome of the work connected with the in-company quality award? The perceived outcome of the in-company quality award was divided further into four different areas of questions, see Figure 3.6, and compared with other identified effects of the in-company quality award, mainly derived from the study of documents on the work connected with the in-company quality award. For a detailed description of the questions and answers of this case study, see Eriksson (2002b). The questions are also presented in Appendix 3.
3.4.4 Research Question 4 and Study 4

The following research question is illuminated in this study: “What is the organisational value of participating in a national quality award process?”

The intention of this study was to describe the organisational value of participating in a quality award process. Hence, the first methodological issue to be solved concerned which one of the many quality award processes should be studied. Since the Swedish Quality Award, which is the national quality award and the most frequently applied quality award in Sweden, had not aroused great interest before among researchers, its process was chosen as a relevant quality award process to study. It was originally the author’s intention to study all the organisations that had participated in the Swedish Quality Award process. However, it has been possible for organisations to apply for the Swedish Quality Award since 1992. Due to the fact that a long time had passed since the first organisations had applied for the award, the employees within these organisations had difficulties in remembering facts and details about the work involved with the quality award. Furthermore, many of the employees within the organisations that had applied during the first years of the quality award had changed jobs and were no longer at the organisations. Hence, the study was limited to organisations that had applied between 1998 and 2002. This limit was set to include as many of the organisations as possible, and yet not decrease the reliability of the study due to the arguments above.

Selection of a Data Collection Method and Organisations

A total of 46 organisations applied for the Swedish Quality Award between 1998 and 2002. The organisations are located all over Sweden, which would have made face-to-face interviews very resource-consuming. A mail survey was also rejected due to the fact that the non-response rate probably would have been too high. Therefore, phone interviews were chosen as the most appropriate method of data collection.

Not all of the 46 identified organisations were included in the study for different reasons. Three of the organisations that had applied were not
allowed to participate in the quality award process, because these organisations did not fulfil the general requirements for award participation defined by SIQ, which administrates the award. An additional nine organisations were excluded from the study because they did not currently exist in the form in which they had done when they had applied. They had performed a major re-organisation or had been purchased by or merged with another organisation. Hence, it was considered too difficult for these respondents to estimate the organisational value of the quality award process. Furthermore, two organisations did not want to participate in the study, due to a lack of time. In another two organisations, key persons for the study no longer worked at the organisations. It would have been possible to locate these persons, but it would have been very difficult for them to estimate the effects on the organisations of participating in the quality award, since they were no longer at the organisations. Finally, one organisation was excluded because it did not fulfil the quality award process and therefore did not receive a feedback report. Hence, the total number of award-participating organisations studied was 29. In this group some quality award recipients were also included.

Table 3.6 presents how many times the organisations that were included in the study had applied for the Swedish Quality Award. Table 3.6 also states whether the organisation was privately or publicly owned and large or small (a large organisation is considered to have more than 200 employees by SIQ) and the type of business (i.e. whether it was a manufacturing or a service organisation).

<table>
<thead>
<tr>
<th></th>
<th>One time</th>
<th>Two times</th>
<th>Three times</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
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<td>4</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>Public</td>
<td>8</td>
<td>4</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>Large</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>12</td>
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<tr>
<td>Small</td>
<td>9</td>
<td>7</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Service</td>
<td>15</td>
<td>6</td>
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<td>23</td>
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<tr>
<td>Total</td>
<td>19</td>
<td>8</td>
<td>2</td>
<td>29</td>
</tr>
</tbody>
</table>

As shown in Table 3.6, 19 of the organisations had applied once, while eight had applied twice. Only two organisations had applied on three different occasions between 1998 and 2002. If the organisation had applied more than once, the overall experience from participating in the award process
was requested during the interviews. Two of these 29 organisations that had applied once had used the EFQM Excellence Model in their application. The results concerning the core values and the criteria for these two organisations are therefore not presented in this study, as the criteria and the core values differ slightly between the models.

Selection of Respondents
The intention of the study was to obtain an overarching view of the organisational value of participating in the quality award process. Hence, the person with the overall responsibility for each organisation’s application for the Swedish Quality Award was chosen as the most appropriate person to interview. Such a person would be able to present an overview of the work and estimate the overall perceived organisational value of participating in the quality award process. In many cases, the person responsible for the work involved with the quality award was also the CEO of the organisation. One may argue that such a person is biased and unable to present a complete picture of the benefit for the organisation, and that this could influence the results of the study. On the other hand, no other person within the organisation would have been able to present such a complete picture. One way to overcome this problem would have been to interview a number of persons within each organisation. However, this would have been very resource-demanding.

Selection of Inquiries
The questions used in the phone interviews were developed from questions previously used in the studies on internal quality awards, see study 2 and study 3. One of the findings from study 2 shows that the main effects of participating in a quality award are connected to the different core values of the model used. For example, the organisations studied in study 2 believed that one effect of internal quality awards was that customer satisfaction was improved. This effect could be linked to the core value of “customer orientation” of the SIQ Model for Performance Excellence. The core values were also illuminated in study 3, and were perceived by the author as a good instrument to discover the organisational value of participating in a quality award process. Core values have also been used to illuminate TQM implementation aspects, see Hansson (2003). Hence, the organisational value of participating in a quality award process was measured in the present study through asking about the effects on the core values of the SIQ Model for Performance Excellence. In particular, the study illuminated which core values were affected and which were not due to the organisations’ participation in the quality award process. In this study, it is also important to distinguish the organisational value, which includes both advantages and disadvantages, from the core values, which are the basis of the model used in the quality award process.
In addition, some general opinions on participating in a quality award process were requested from the respondents. Furthermore, the organisations’ way of working with the quality award process was investigated using the self-assessment procedure presented in Svensson & Klefsjö (2000). The major outcome of the award process, the work on improvements that should follow an application, was investigated using the improvement cycle. Questions were asked about each phase of the improvement cycle, see also Figure 2.3, in order to measure how the organisations had worked with the improvements.

The interviews were focused, see Yin (1994), and followed a certain set of questions and procedure. The actual phone interviews were performed during March 2003, and all the interviews were recorded. The questions and all the answers have been documented by Eriksson & Palmberg (2003a). The questions are also presented in Appendix 4.

3.4.5 Research Question 5 and Study 5

The following research question is illuminated in this study: “How have organisations utilized their participation in a national quality award process in order to improve performance?”

The intention of this study is to describe how organisations have utilized their participation in a quality award process in order to improve performance. A multiple case study, see Yin (1994), was chosen as the most appropriate research strategy. Input regarding case selections came from study 4, in which 46 organisations that had applied for the Swedish Quality Award between 1998 and 2002 were identified. For various reasons, 29 of these organisations were studied, see study 4. The organisations in the present study were selected from these 29 applicants. The following criteria were used during the case selection:

1. The organisations were to uphold systematic improvement work.
2. The organisations were to have used the SIQ Model for Performance Excellence in their application for the Swedish Quality Award.
3. The organisations were not to have gone through any major organisational changes subsequent to their latest participation in an award process.

One of the aims of this study is to transfer “best practice” regarding the improvement work that should follow participation in a quality award process. Therefore, the examined organisations must be successful and systematic in their work on improvements. The second criterion was chosen
because the study aims at analysing core values. Since the core values differ between the SIQ Model, the EFQM Model and the MBNQA Model, it would have been hard to make a comparison between organisations using different models. Most organisations participating in the Swedish Quality Award process have used the SIQ Model, see study 4. Therefore, the criterion that the included organisations were to have used the SIQ Model was established. The third criterion was chosen because effects on organisational performance due to participation in a quality award process would have been difficult to isolate, if major organisational changes had also been performed.

Three organisations conformed to the criteria above, namely: Sydkraft Vattenkraft, Agria Djurförsäkring, and Kronans Droghandel. Data was collected through the use of interviews, document studies and direct observations during site visits. The main reason for using many sources of data was to increase the validity of the study.

**Interviews**
To obtain a broad picture of the quality award process, and thus increase the sensitivity of the study, two employees, with different levels of responsibility, were interviewed in each organisation. One of the informants who were selected in each organisation had had an overall responsibility for the organisation’s participation in the quality award process. The other informant who was selected in each organisation had not had any overall responsibility for the application, but had instead been operationally involved in the quality award process. The interviews focused on how the organisations had utilized the quality award process, the improvement work and the core values of the SIQ Model for Performance Excellence. The interviews were focused, see Yin (1994), and followed a certain set of questions and procedures. All the questions and answers have been documented by Eriksson & Palmberg (2003b). The questions are also presented in Appendix 5.

**Direct Observations and Document Studies**
Direct observations were made during one day at each of the three examined organisations. The observations could be classified as fairly informal, see Yin (1994), and provided additional information about the selected cases. Document studies were also made concerning the three examined organisations. The documents that were requested from each organisation included:

- the latest application for the Swedish Quality Award
- the latest examiner feedback report
• annual reports of the organisation
• documents that describe improvement work performed in the organisation.

Documents that described the improvement work that had followed the participation in the quality award process were difficult to collect. However, other documents that described activities performed to improve organisational performance were examined.

**Cross-case Analysis**

In order to describe performance improvements resulting from the participation in the quality award process, all the identified improvements, values, methodologies and tools were categorized according to the core values of the SIQ Model. The informants were asked to describe what activities had been performed in order to strengthen the core values. In addition, direct observations, the organisations’ applications for the Swedish Quality Award, and the examiners’ feedback report were all used in the analysis to describe changes in each category. This data also served as input to the cross-case analysis. Methodologies and tools were considered in the cross-case analysis in order to illuminate how performance improvement had been achieved by the organisations.

**3.5 Analysis and Interpretation**

The interpretation and analysis of the empirical findings are not thoroughly discussed above and in the papers, and are therefore described to some extent in this section. There are many methods for analysing and interpreting quantitative data, see, for example, Eggeby & Söderberg (1999) and Dähmström (2000). Study 1, 2 and 4 were mainly analysed through descriptive statistical tools. In study 2, cluster analysis was also used in order to group the effects of the in-company quality awards. In study 1, confidence intervals, with a 95% confidence level, were created. The confidence intervals were non-parametric, and accordingly not based on any distributional assumptions. Furthermore, in study 2 and 4, it can be argued that it would have been possible to use multivariate data analysis, see Hair et al. (2002). However, multivariate data analysis was rejected in the studies due to the small number of respondents.

In study 3 and study 5, which are qualitative studies, several possibilities were available for interpreting and analysing the results. According to Yin (1994), there are two general strategies that one should rely on when analysing case study evidence. One should either rely on theoretical propositions or develop a case study description. Furthermore, there are
four dominant modes of analysis in qualitative research, namely pattern matching, explanation-building, time-series analysis, and programme logic models, see Yin (1994).

In study 3, the experience of working with an in-company quality award was studied. The main theoretical proposition which the study relies on is: the unit is affected by working with the in-company quality award, and the unit's work in connection with the in-company quality award has produced a certain amount of experience. This theoretical proposition was derived from a review of the theory concerning TQM in general, and self-assessment and quality awards in particular, see Chapter 2. The main dominant mode of analysis used in this study was pattern matching. Pattern matching compares an empirically based pattern with a predicted one, see Yin (1994). The predicted pattern that this study set out to illuminate was derived from the theory, and could in general be described by the theoretical proposition established. In more specific terms, the effect and the experience of working with an in-company quality award were divided into a number of patterns that were compared to the predicted pattern derived from the theory. These were:

- A purpose and a goal have been established for the unit's work connected with the in-company quality award.
- The unit's work in connection with the in-company quality award can be described with the four phases presented in Figure 2.2, and the resources spent within the unit can be divided into these four phases.
- The work connected with the in-company quality award affects the stakeholders and processes of the unit.
- The work connected with the in-company quality award affects the core values of the unit.
- The employees experience advantages and disadvantages with working with the in-company quality award.
- The employees have suggestions for improvements in the work connected with in-company quality awards.

These patterns were the ones analysed. Therefore, these patterns were also the areas of questions asked during the case study, see Figure 3.6. For a more detailed description of the comparison between the empirically based pattern and the predicted one derived from the theory, see Paper III.

In study 5, the main theoretical proposition was as follows: organisations have utilized their participation in a national quality award process in order to improve their performance. This theoretical proposition was also derived
from a review of the theory, see Chapter 2. Furthermore, pattern matching was used, as in study 3, in order to compare an empirically based pattern with a predicted one, see Yin (1994). The predicted pattern is reflected by the theoretical proposition and based on the theory. In more specific terms, a number of patterns were compared to the predicted pattern derived from the theory. These were:

- Participation in a national quality award process improves performance.
- The performance improvement can be categorized by the thirteen core values of the SIQ Model for Performance Excellence.
- Methodologies and tools of TQM have been utilized in order to improve the performance.

The results concerning these predicted patterns and the comparison with the theory are mainly presented in Paper V.

There are also three different types of less dominant modes, namely analysis of embedded units of analysis, repeated observations and the case survey approach. The strategy called embedded units of analysis was used in study 3 and 5, as different units were investigated and compared. For a further discussion of how the collected data was interpreted and analysed, see the paper concerned.

Moreover, there are mainly two different methods for displaying qualitative data, according to Miles & Huberman (1994). These two methods are networks and matrices. Matrices consist of rows and columns. Networks consist of nodes with related links. Matrices were used in Paper III and Paper V to present the answers from the different units of analysis.

### 3.6 Summary of Approach and Strategy

Table 3.7 illustrates and summarizes the methodological aspects considered and the research path followed during the illumination of the research questions and completion of the studies, and throughout the entire thesis. The purpose of the table is to summarize the main methodological aspects of the thesis according to the view of the author. Table 3.7 should not be looked upon as a complete or definite illustration of the research conducted in the thesis, but rather it illustrates the author’s main opinion of the research conducted in the thesis.
Table 3.7 A summary of the methodological considerations and the research path followed during the illumination of the different research questions and throughout the entire thesis.

<table>
<thead>
<tr>
<th>Research Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>The Entire Thesis</th>
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<td>What</td>
<td>How</td>
<td>What</td>
<td>How</td>
<td>What and How</td>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>-</td>
</tr>
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<td>Mainly Explanatory</td>
<td>Mainly Descriptive</td>
<td>Mainly Descriptive</td>
<td>Mainly Descriptive</td>
<td>Explanatory &amp; Descriptive</td>
</tr>
<tr>
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<td>Mainly Positivistic</td>
<td>Mainly Hermeneutic &amp; Constructivist</td>
<td>Mainly Positivistic</td>
<td>Mainly Hermeneutic &amp; Constructivist</td>
<td>Mainly Positivistic</td>
</tr>
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<td>Mainly Actor</td>
<td>Mainly Analytical</td>
<td>Mainly Actor</td>
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<td>Deductive &amp; Inductive</td>
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<td>Deductive &amp; Inductive</td>
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<tr>
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<td>Mainly Qualitative</td>
<td>Combined Approaches</td>
</tr>
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<td>Survey</td>
<td>Single Case Study</td>
<td>Survey</td>
<td>Multiple Case Study</td>
<td>Combined Strategies</td>
</tr>
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<td>Descriptive Statistical Tools &amp; Confidence Intervals</td>
<td>Descriptive Statistical Tools &amp; Cluster Analysis</td>
<td>Pattern Matching</td>
<td>Descriptive Statistical Tools</td>
<td>Pattern Matching</td>
<td>Combined Analysis</td>
</tr>
<tr>
<td>Number of Paper</td>
<td>I</td>
<td>II</td>
<td>III</td>
<td>IV</td>
<td>V</td>
<td>-</td>
</tr>
</tbody>
</table>
3.7 Model of Analysis

In summary, this thesis illuminates the value of participating in a quality award. Since the thesis is limited to Swedish organisations applying for different quality awards, the main values analysed are the thirteen core values of the SIQ Model for Performance Excellence. The methodology of the main research focus is the quality award process, while the main tool is the SIQ Model for Performance Excellence. Hence, these parts constitute the model of analysis in the thesis. The model of analysis used to study the organisational value of participating in a quality award process is presented in Figure 3.7.

To provide greater detail, it can be stated that study 3, 4 and 5 highlight the question of whether the methodology, the quality award process, and the tool, the SIQ Model for Performance Excellence, support and strengthen the core values. Which core values have been strengthened and how these core values have been strengthened are also questions illuminated in these studies. Furthermore, study 2 illuminates the effects of the use of the methodology and tool on the unit’s performance. Finally, study 1 investigates companies that have successfully implemented the tool, the methodology and the core values regarding their financial performance.

![Figure 3.7](image_url)

Figure 3.7 The model of analysis used to study the organisational value of participating in quality award processes.

In this thesis, it is important to distinguish between the different meanings of value and values. Value can refer to “the perceived worth of a product, service, process, asset, or function relative to cost and relative to possible alternatives”, see NIST (2003a). In this thesis, the organisational value or the perceived worth of participation in a quality award process is illuminated. On the other hand, values can also “refer to the guiding principles and/or behaviours that embody how your organisation and its people are expected
to operate”, see NIST (2003a). In the present thesis, the core values of TQM and quality awards are studied.

3.8 Reliability and Validity

Four tests have been commonly used to establish the quality of empirical social science research. These are: construct validity, internal validity, external validity and reliability. How these issues are treated decides the quality and the credibility of the study, see Yin (1994).

3.8.1 Construct Validity

Dane (1990) argues that assessing the construct validity involves determining the extent to which a measure represents the concepts that it should represent and does not represent the concepts that it should not represent. Moreover, construct validity deals with establishing correct operational measurements for the concept being studied, according to Yin (1994).

In the case of the present thesis, earlier studies on how TQM affects performance served as an input when deciding which indicators to use in order to study the performance of companies. Moreover, the author of this thesis aimed to use many combined methods to collect similar data, i.e. triangulation. For example, some questions in the questionnaire described in study 2 and in the case study, see study 3, were similar, in order to ascertain whether the results from study 2 could be validated. In addition, questions in study 4 and 5 were similar. Triangulation was also performed in the studies presented in Paper III and Paper V, as two or three different sources for data collection were used.

During the completion of the entire thesis and the separate papers, colleagues of the author also commented on different occasions on the work and the research design in order to ensure construct validity. Moreover, in an effort to guarantee construct validity in the study, all the questions of studies 2, 3, 4 and 5 were reviewed both internally and externally in order to improve the structure and the questions that were going to be asked, and remove possibilities of misinterpretation and other flaws. In addition, during the completion of the studies described in Paper I, IV and V, different reference groups were formed which continuously made comments and helped the author to improve the design of the study. Furthermore, after making a fair copy of the interviews described in study 5, the respondents were allowed to comment on their answers in order to eliminate misinterpretation before documenting the answers.
3.8.2 Internal Validity

Internal validity deals with establishing causal relations between factors, see Yin (1994). Internal validity is mainly an issue for explanatory studies, according to Yin (1994). Herzog (1996) states that internal validity refers to the validity of inferences about cause based on research findings.

The purpose of the thesis is to describe and explain the organisational value of participating in quality award processes. One issue to consider in explanatory studies is whether a relationship between factors that appears obvious can actually be dependent on additional factors. It is therefore crucial to discover as many as possible of the factors that can influence a given situation. One way to handle this issue is to try to keep other events (z) that could influence the performance of the companies (y) constant. When studying the performance of the companies in study 2, the units were divided into different groups: units that had not applied for the in-company quality award, units that had applied one time and units that had applied two or more times. It can be argued that units within the same company are influenced by the same directors and are in similar branches. Therefore, the units are influenced to some extent by other events (z) in the same way. In a similar way, in study 1, the companies that had received a quality award were compared with similar companies regarding size and branches in order to keep other events (z) as equal as possible.

Moreover, pattern matching, see Section 3.5, was used in study 3 and 5 in order to try to increase the internal validity, see Yin (1994).

3.8.3 External Validity

External validity refers to the validity of inferences about the generality of the research findings, according to Herzog (1996).

The research described in Paper II includes all the companies that have or have had an in-company quality award in Sweden, except for two companies. In study 1 almost all the companies that have received a quality award were included in the study. In study 4, 29 of the 48 organisations that had participated in the quality award process between 1998 and 2002 were investigated. As these three studies are close to involving all the units and organisations available in Sweden, it is possible, according to the belief of the author, to make statistical generalisations of the results that are valid for other quality award recipients and applicants, and other companies that have in-company quality awards.
Moreover, a non-response analysis was performed for study 2, in order to try to improve the external validity. In study 3 and 5, the case studies, an analytical generalisation is possible, but not a statistical generalisation, see Yin (1994).

3.8.4 Reliability

Bell (1993) states that the reliability of an investigation is satisfactory if another researcher can conduct the same research and draw the same conclusions; or, in other words, if the data collection procedures can be repeated with the same result, see Yin (1994).

One precondition for high reliability, a precondition that is fulfilled, is that the data collection procedures should be described. Therefore, the methods used in the studies were described in the different papers. Eriksson (2002a) also presents a thorough description of the questionnaire and the following results, which were presented in Paper II. Eriksson (2002b), Eriksson & Palmberg (2003a) and Eriksson & Palmberg (2003b) present all the questions and answers from the respondents for studies 3, 4 and 5.

Moreover, the central concepts of the studies, such as the quality award process and core values, were explained to the respondents in order to decrease the possibility of misinterpretation.

3.8.5 Summary of the Reliability and Validity

A summary of the actions performed in order to try to improve the validity and reliability of the different studies and the entire thesis is presented in Table 3.8.
<table>
<thead>
<tr>
<th>Construct Validity</th>
<th>Internal Validity</th>
<th>External Validity</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Study 1</strong></td>
<td>Use previously used indicators, Review study design (internal and external)</td>
<td>Try to keep other events equal</td>
<td>Include as many quality award recipients as possible</td>
</tr>
<tr>
<td><strong>Study 2</strong></td>
<td>Use previously used indicators, Review study design (internal and external)</td>
<td>Try to keep other events equal</td>
<td>Include as many units as possible, Non-response analysis</td>
</tr>
<tr>
<td><strong>Study 3</strong></td>
<td>Triangulation, Review study design (internal and external)</td>
<td>Pattern-matching</td>
<td>Purely analytical generalisation</td>
</tr>
<tr>
<td><strong>Study 4</strong></td>
<td>Use previously used indicators, Review study design (internal and external)</td>
<td>No actions</td>
<td>Include as many quality award applicants as possible</td>
</tr>
<tr>
<td><strong>Study 5</strong></td>
<td>Triangulation, Review study design (internal and external), Let respondents review their answers</td>
<td>Pattern-matching</td>
<td>Purely analytical generalisation</td>
</tr>
<tr>
<td><strong>The Entire Thesis</strong></td>
<td>Use previously used indicators, Triangulation, Review study design (internal and external)</td>
<td>Try to keep other events equal, pattern-matching</td>
<td>Include as many companies and units as possible, Non-response analysis</td>
</tr>
</tbody>
</table>
4 Summary of Studies
In this chapter, the background, the purpose and the methods of the studies are given a short presentation. Furthermore, the main results of the studies are presented. Finally, the main conclusions of each study are presented.

4.1 Study 1
The paper that describes this study is:


4.1.1 Background
The question of whether an adoption of Total Quality Management (TQM) improves financial performance has been discussed for several years. Various studies have been conducted to examine the impact of TQM on financial performance, but there is still disagreement concerning the effectiveness of TQM.

4.1.2 Purpose
The purpose of this study is to form an opinion as to whether companies in Sweden that have successfully implemented TQM have a better financial performance development than their stated competitors and median branch indices.

4.1.3 Method
This paper presents a study of Swedish quality award recipients, which are compared with the branch indices and with identified competitors. The comparison concerns the development of different financial performance indicators.

4.1.4 Main Results
Figures 4.1 and 4.2 present the median values of the indicators for the award recipients in comparison with the competitors and the branch indices during the implementation period and post-implementation period. For example, the difference between the award recipients and the competitors for the indicator of percentage change in sales during the implementation period was calculated by first subtracting all the percentage changes in sales for the competitors from those for the respective award recipients. Second, the
median difference was calculated, including all the differences between the award recipients and the competitors for the indicator of change in sales for all of the years in the implementation period. This median difference is represented by the first pile from the left in Figure 4.1. The same procedure was used for the other comparisons, indicators and periods.

![Implementation Period](image)

Figure 4.1 The median values of the differences between the award recipients and the competitors, and between the award recipients and the branch indices for the indicators during the implementation period. A positive percentage means that the median award recipient outperforms its competitor or branch index.

To investigate the precision of the median values shown in Figure 4.1, confidence intervals with a 95% confidence level were created. The confidence intervals are non-parametric, and accordingly not based on any distributional assumptions. These confidence intervals are presented in Table 4.1.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Sales</th>
<th>Total Assets</th>
<th>Number of Employees</th>
<th>Return on Sales</th>
<th>Return on Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Comparison</strong></td>
<td>Comp.</td>
<td>Index</td>
<td>Comp.</td>
<td>Index</td>
<td>Comp.</td>
</tr>
<tr>
<td><strong>Upper Limit</strong></td>
<td>8.64</td>
<td>10.30</td>
<td>5.50</td>
<td>3.66</td>
<td>2.75</td>
</tr>
<tr>
<td><strong>Lower Limit</strong></td>
<td>1.38</td>
<td>2.53</td>
<td>-1.98</td>
<td>-20.37</td>
<td>-4.29</td>
</tr>
</tbody>
</table>

The wider the confidence interval is, the less accurate is the estimation of the median value. If the interval contains 0, a significant difference between
the award recipients and the competitors, or between the award recipients and the branch indices cannot be shown. However, if the confidence interval does not contain 0, there is a significant difference between the award recipients and the competitors, or between the award recipients and the branch indices. Hence, for the indicator of change in sales, there is a significant difference, with a 95% confidence level, between the award recipients and the competitors, and the recipients and the branch indices, in the sense that the award recipients increase their sales more than the control groups during the implementation period. The same result is also shown for the indicators of return on sales and return on assets, when comparing the award recipients with the branch indices.

![Post-implementation Period Graph](image)

**Figure 4.2**  The median values of the differences between the award recipients and the competitors and between the award recipients and the branch indices for the indicators during the post-implementation period. A positive percentage means that the median award recipient outperforms its competitor or branch index.

As shown in Figure 4.2, the award recipients outperform their competitors and branch indices for all the studied indicators during the post-implementation period. Table 4.2 shows the confidence intervals, at a 95% confidence level, for the indicators presented in Figure 4.2.

**Table 4.2**  The confidence intervals with a 95% confidence level for the indicators and the comparisons with the competitors (Comp.) and the branch indices (Index) during the post-implementation period.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Sales</th>
<th>Total Assets</th>
<th>Number of Employees</th>
<th>Return on Sales</th>
<th>Return on Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Comp.</td>
<td>Index</td>
<td>Comp.</td>
<td>Index</td>
<td>Comp.</td>
</tr>
<tr>
<td><strong>Comparison</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Upper Limit</strong></td>
<td>7.83</td>
<td>8.45</td>
<td>8.31</td>
<td>7.50</td>
<td>10.34</td>
</tr>
<tr>
<td><strong>Lower Limit</strong></td>
<td>-3.51</td>
<td>1.26</td>
<td>-8.55</td>
<td>-2.43</td>
<td>-6.31</td>
</tr>
</tbody>
</table>
During the post-implementation period, and for the comparison between the award recipients and the branch indices, there is a significant difference in the sense that the award recipients outperform the branch indices for the indicators of change in sales, number of employees, return on sales and return on assets. However, there is only a significant difference for the indicator of return on assets, when comparing the award recipients with the competitors during the post-implementation period. On the other hand, one can argue that the comparison with the branch indices reflects reality better than the comparison with the competitors, since the branch indices include many companies from that specific branch.

4.1.5 Main Conclusions

During the implementation period, the award recipients did not necessarily perform better than their competitors and the branch indices. Roughly, the results can be interpreted as meaning that the benefits of the implementation are of the same magnitude as the investment. On the other hand, the award recipients performed better than their competitors and branch indices concerning all the studied indicators during the post-implementation period. For example, the award recipients showed a significantly higher return on assets than their competitors and the branch indices during the post-implementation period of TQM. Moreover, the indicators concerning change in sales, change in the number of employees and return on sales showed that the award recipients outperformed the branch indices during the post-implementation period. The findings indicate that the financial performance, measured according to the stated indicators, develops more advantageously for companies that have successfully implemented TQM than their branch indices and stated competitors.

4.2 Study 2

The paper that describes this study is:


4.2.1 Background

Today there are some companies in Sweden that are working with in-company quality awards. There are also companies that have ceased or are ceasing working with in-company quality awards. The literature studies indicate that no evaluation has been made to estimate the costs and effects
of in-company quality awards, and to investigate if in-company quality awards in fact increase the performance of units.

4.2.2 Purpose
The purpose of this study is to analyse the impact of in-company quality awards on performance by studying units that have applied for an in-company quality award and by comparing these units with units that have not applied for an in-company quality award concerning the effects on performance. The purpose of this paper is also to study other relevant effects and the costs associated with the work connected with in-company quality awards.

4.2.3 Method
The paper covers a questionnaire about the effects of in-company quality awards on the performance of units. The questionnaire was aimed at units within Swedish companies that used or had used in-company quality awards to stimulate TQM efforts and thereby to improve their performance.

4.2.4 Main Results
The respondents of the questionnaire were divided into three groups:

- units that have not applied for the in-company quality award
- units that have applied once for the in-company quality award
- units that have applied twice or more times for the in-company quality award.

The general development of the key-indicators and other relevant indicators that the unit used to measure the results within the four groups of customers, processes, employees and owners are displayed in Figures 4.3 to 4.6.
Figure 4.3  The percentage of the answers for each alternative regarding the general development of the key-indicators for customers. The units were divided into three groups: units that have not applied, units that have applied once and units that have applied twice or more times for the in-company quality award.

Figure 4.4  The percentage of the answers for each alternative regarding the general development of the key-indicators for processes. The units were divided into three groups: units that have not applied, units that have applied once and units that have applied twice or more times for the in-company quality award.
Figure 4.5 The percentage of the answers for each alternative regarding the general development of the key-indicators for employees. The units were divided into three groups: units that have not applied, units that have applied once and units that have applied twice or more times for the in-company quality award.

Figure 4.6 The percentage of the answers for each alternative regarding the general development of the key-indicators for owners. The units were divided into three groups: units that have not applied, units that have applied once and units that have applied twice or more times for the in-company quality award.

As displayed in Figures 4.3 to 4.6, only units that had applied one or more times perceived great improvements for the four groups of key-indicators.

One large positive effect stated by the respondents who had worked with the in-company quality award was increased customer orientation. To increase the customer satisfaction is also one of the main aims of TQM. Other effects that the respondents mentioned were an increased focus on
improvements, processes, quality and results, and an increased comprehensive view of the business. Some of the perceived effects have many similarities to the core values in the self-assessment model used in the in-company quality awards, such as customer orientation and a focus on improvements and processes.

In the questionnaire, the respondents who had worked with the in-company quality award were also asked to estimate the importance of the effects mentioned above for employees, processes, owners and customers. The respondents considered that the effects of the in-company quality award had greatest importance for employees, while the importance of the effects for owners was ranked second, the importance of the effects for processes third and the importance of the effects for the customers fourth.

The median costs for the units applying for the in-company quality award are displayed in Figure 4.7. The costs were divided into the different phases of the in-company quality award and into the different years for the application.

![Costs for the units due to the in-company quality award](Figure 4.7)

The largest costs connected with the in-company quality award, according to Figure 4.7, were considered to be those for the description of activities and the improvement work that followed. However, the spread of the costs was largest for the phase of improvements, although it was large for all the phases.
4.2.5 Main Conclusions

Even if this study includes units which were not necessarily among the highest-scoring applicants, some positive effects on performance have been identified. Some units that had applied for the in-company quality award experienced that the general development of the key-indicators was improved greatly concerning all four groups of key-indicators, while none of the units that had not applied stated the same positive development. However, one may argue that the development of the key-indicators does not differ much between the groups of units. Some perceived positive effects of the in-company quality award have been identified, such as an increased customer orientation. The identified effects were most important for the employees and not the customers, owners or processes of the company. The largest costs perceived by the respondents concerned the description of activities and the improvement work itself.

4.3 Study 3

The paper that describes this study is:


4.3.1 Background

One way of working with TQM and its values, methodologies and tools, and hence trying to increase customer satisfaction, is to apply for a quality award. The Swedish Quality Award has influenced the establishment of several regional, branch-wise and in-company quality awards in Sweden. Today, there are mainly two companies in Sweden, the Swedish Post Office (“Posten”) and the Swedish National Road Administration (“Vägverket”), which are working with an in-company quality award. However, in-company quality awards have not aroused great research interest, according to the performed literature studies.

4.3.2 Purpose

The purpose of this case study was to investigate how a unit experienced and was affected by the work connected with an in-company quality award.

4.3.3 Method

In order to perform an in-depth study of how a unit experienced and was affected by working with an in-company quality award, an embedded single-
case design was chosen as the most appropriate research strategy. Moreover, interviews and document studies were performed in order to collect data.

4.3.4 Main Results

Purpose and Goal

It has been mandatory for the units within the Swedish National Road Administration ("Vägverket") to work with the SIQ Model for Performance Excellence since 1998, and it has been possible to apply for the in-company quality award three times. The purpose of this work is to find areas where future improvements can be made in the units’ activities. Some respondents claim further that they have succeeded in many of the improvement projects which were identified and prioritised on the basis of the feedback report, and thus fulfilled the goals of working with the in-company quality award.

Quality Award Process

All the respondents agreed that the diagram of the award procedure presented in Figure 2.2 provides a true picture of the work connected with the in-company quality award, and that the description of activities was the phase in the award procedure that needed most resources, see Table 4.3.

Table 4.3  The phases which, in the employees’ view, needed most work, the next greatest amount of work, the next smallest amount of work, and least work in connection with the in-company quality award. The interviewed employees’ degree of involvement in the self-assessment and responsibility at the unit are shown in the first two rows.

<table>
<thead>
<tr>
<th>Involvement</th>
<th>Responsibility</th>
<th>High</th>
<th>High</th>
<th>Medium</th>
<th>Medium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most work</td>
<td>Low</td>
<td>Medium</td>
<td>Low</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>Description</td>
<td>Description</td>
<td>Description</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>Analysis</td>
<td>Improvement Plan</td>
<td>Planning</td>
<td>Improvement Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improvement Plan</td>
<td>Analysis</td>
<td>Improvement Plan</td>
<td>Analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning</td>
<td>Planning</td>
<td>Analysis</td>
<td>Planning</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The respondent who was the head of the unit (high responsibility) and the respondent who was the head of a division of the unit (medium responsibility) also considered that the plan for improvements, the analysis of the description and the planning were the phases that required the next greatest amount of work, the next smallest amount of work, and least work, respectively, after the description of activities, see Table 4.3. One of the respondents did not have an active role in the work connected with the in-company quality award and hence did not answer this particular question. The results in Table 4.4 were strengthened further by the document studies.
The unit performed an estimation of how many hours the unit had spent working with each phase per year. The result of this estimation is displayed in Table 4.4.

Table 4.4  The estimated number of hours during which the unit worked with the in-company quality award in each year and phase. The percentages within parentheses indicate what proportion of the total work connected with the in-company quality award each phase constituted.

<table>
<thead>
<tr>
<th>Phase/Year</th>
<th>Planning</th>
<th>Description</th>
<th>Analysis</th>
<th>Improvement Plan</th>
<th>Total for the year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>50 (4%)</td>
<td>850 (72%)</td>
<td>120 (10%)</td>
<td>160 (14%)</td>
<td>1180</td>
</tr>
<tr>
<td>1999</td>
<td>16 (1%)</td>
<td>720 (48%)</td>
<td>300 (20%)</td>
<td>460 (31%)</td>
<td>1496</td>
</tr>
<tr>
<td>2000</td>
<td>16 (1%)</td>
<td>740 (62%)</td>
<td>265 (22%)</td>
<td>180 (15%)</td>
<td>1201</td>
</tr>
<tr>
<td>Total for the phase</td>
<td>82 (2.1%)</td>
<td>2310 (59.6%)</td>
<td>685 (17.7%)</td>
<td>800 (20.6%)</td>
<td>3877</td>
</tr>
</tbody>
</table>

The results displayed in Table 4.3 and Table 4.4 verify one of the main findings of study 2, which showed that the description of activities and planning for improvements require most work of units that apply for in-company quality awards, with the difference that this study shows that the description of activities is the phase that clearly requires most work. A large amount of resources was spent on planning for improvements, as the unit had to agree on which improvement areas were to be prioritised and transformed into improvement projects. The improvement projects were thereafter communicated to the Director-General of the Swedish National Road Administration and included in the plan of action for the unit. Furthermore, the unit claimed that on average only about 2% of the total work connected with the in-company quality award was spent on this phase. Moreover, all the sources for data collection – the estimation of the work connected with the in-company quality award on a yearly basis, displayed in Table 4.4, the interviews, displayed in Table 4.3, and study 2 – indicate that most work is required the second time the units apply for the in-company quality award, while two of these sources indicate that the third time required least work.

**Core Values**
One of the findings in study 2 is that the work connected with the in-company quality award has positive perceived effects on the acceptance of the core values within the organisations. Hence, the core values were analysed further in this study, see Table 4.5.
The three core values that the employees perceived to permeate the unit the most. One star indicates that the respondents perceived that the core value that permeated the unit partly depended on the work connected with the in-company quality award. Two stars indicate that the respondents perceived that the core value that permeated the unit depended on the work connected with the in-company quality award. The interviewed employees' degree of involvement in the self-assessment and responsibility at the unit are shown in the first and second row, respectively.

<table>
<thead>
<tr>
<th>Involvement</th>
<th>Core Value</th>
<th>Core Value</th>
<th>Core Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Competence Development</td>
<td>Competence Development</td>
<td>Competence Development</td>
</tr>
<tr>
<td>Medium</td>
<td>Competence Development*</td>
<td>Participation by Everyone*</td>
<td>Competence Development*</td>
</tr>
<tr>
<td>Low</td>
<td>Management by Facts</td>
<td>Interaction*</td>
<td>Management by Facts</td>
</tr>
<tr>
<td>Medium</td>
<td>Customer Orientation*</td>
<td>Customer Orientation*</td>
<td>Committed Leadership</td>
</tr>
<tr>
<td>Low</td>
<td>Management by Facts</td>
<td>Participation by Everyone*</td>
<td>Customer Orientation**</td>
</tr>
<tr>
<td>High</td>
<td>Participation by Everyone*</td>
<td>Public Responsibility**</td>
<td></td>
</tr>
</tbody>
</table>

The involvement in the self-assessment or the responsibility at the unit does not influence, at least according to Table 4.5, which core values are perceived to permeate the unit. On the whole, competence development, management by facts and customer orientation are the core values that are perceived by the respondents to permeate the unit the most. The core value of customer orientation seems to be the core value that is perceived to be affected most by the work connected with the in-company quality award. The feedback report from the examiners from the three different years also strengthens this picture, as the examiners are more and more positive in their reports to the customer orientation of the unit.

Advantages and Disadvantages
Table 4.6 presents the perceived advantages and disadvantages of working with the in-company quality award. The respondents who have a high degree of involvement in the in-company quality award perceive that one of the main advantages is an increased comprehensive view of the business, while the respondents who have a medium involvement in the in-company quality award perceive that the work connected with the award is a good learning experience for the employees involved. The work connected with the in-company quality award is also perceived to initiate improvement projects, which can result in an increased customer orientation, as well as an increased process orientation. These positive effects verify the findings in study 2. The main criticism of the work connected with the in-company quality award is that it is resource-demanding, and hence requires a great deal of work from the employees who are involved in the self-assessment.
Table 4.6  The perceived advantages and disadvantages of the work connected with the in-company quality award. The interviewed employees’ degree of involvement in the self-assessment and responsibility at the unit are shown in the first and second row, respectively.

<table>
<thead>
<tr>
<th>Involvement</th>
<th>Responsibility</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Low</td>
<td>An increased comprehensive view of the unit. The initiation of improvement projects, which results in an increased customer orientation</td>
<td>Resource-demanding.</td>
</tr>
<tr>
<td>High</td>
<td>Medium</td>
<td>An increased customer orientation and process orientation. A good learning experience</td>
<td>Resource-demanding.</td>
</tr>
<tr>
<td>Medium</td>
<td>Medium</td>
<td>A good learning experience. The start of systematic improvement work</td>
<td>Resource-demanding.</td>
</tr>
<tr>
<td>Medium</td>
<td>High</td>
<td>Resource-demanding</td>
<td>Resource-demanding.</td>
</tr>
</tbody>
</table>

**Suggestions for Improvements of the In-Company Quality Award**

Both the respondents who were involved in the work connected with the in-company quality award and the respondent who did not take an active part in the work stated that the information about the work connected with the in-company quality award did not reach the whole unit. Hence, one should pay attention to the lack of communication between different parties within the unit, if one wants to improve the way in which the unit works with the in-company quality award. Moreover, as shown previously in some areas of questions, the respondents experienced the work connected with the in-company quality award differently. This could be due to the fact that no common set of beliefs concerning the work connected with the in-company quality award has been communicated. By putting more emphasis on and devoting more work to the phase of planning, it is possible that communication problems can be prevented.

In addition, the SIQ Model for Performance Excellence received criticism from several respondents. The SIQ Model for Performance Excellence is perceived to be too bureaucratic and extensive, and other ways of working to identify improvement areas could be applied by using other methodologies and tools requiring a smaller amount of resources, according to two of the respondents.
4.3.5 Main Conclusions

The main conclusion of this paper is that, even if the work connected with the in-company quality award requires a great deal of effort, especially in the phase of description of activities, the customer orientation is perceived to increase as a result of working with the in-company quality award. Some other positive effects were also recognised, such as an improved comprehensive view gained by the employees, a higher degree of participation by everyone and the initiation of systematic improvement work. These perceived positive effects are also reflected in an improvement in the average score from the examiners. The main areas of criticism, and thereby possible improvement areas, concerning working with the in-company quality award are a lack of communication, and the bureaucratic and extensive SIQ Model for Performance Excellence.

4.4 Study 4

The paper that describes this study is:


4.4.1 Background

Many of the studies published so far which recognise the organisational value of participating in a quality award process have investigated quality award recipients. However, most of the organisations that apply for a quality award never receive any award. An interesting issue for quality award applicants is whether they also, like quality award recipients, benefit from the award process. However, it is not clear how quality award applicants utilize the participation in the quality award process, and how they actually benefit from the performed improvement work. Moreover, what the organisational value is for the quality award applicants that execute improvements successfully and how much the organisations gain or profit from the improvement work are questions that have not been completely investigated.

4.4.2 Purpose

The purpose of this study is to explore the organisational value, including both the advantages and the disadvantages, of participating in a quality award process.
4.4.3 Method
Phone interviews were chosen as the most appropriate method of data collection. The total number of organisations studied was 29. The person with overall responsibility for each organisation’s application for the Swedish Quality Award was chosen as the most appropriate person to interview.

4.4.4 Main Results

Advantages
One major benefit of participating in a quality award process was, according to the respondents, that one obtained an external evaluation of the business, and a confirmation and assessment of the current position of the business in comparison with, for example, the organisation’s goals, competitors and best-in-class organisations. Furthermore, the participation in the award process in itself resulted in a stronger participation by everyone and a common goal to work towards. Moreover, an increased focus on improvements was mentioned as one result of participating in the quality award process. The process was also an important learning experience for the employees who were involved in the quality award process.

Another advantage of participating in a quality award process, according to the respondents, was a better structure in the business’ activities, which in return resulted in a more comprehensive and systematic approach. The SIQ Model was believed to be complete, to cover the whole business, and to ensure that no area or issue was neglected. Furthermore, many award applicants that were beginners, i.e. organisations that had no extensive previous knowledge about TQM, believed that the SIQ Model resulted in a new mode of thinking in the organisations. This was due to the fact that the employees were trained in and were required to work with the SIQ Model. Furthermore, experience of the SIQ Model was considered to be an advantage when working with other standards, for example ISO 9000:2000 and Investor In People (IIP), as the threshold was not that high once one had worked with TQM. The new ISO standard, ISO 9000:2000, has a stronger focus on processes in comparison with the previous version. Through the work performed with the SIQ Model, which has a strong focus on processes, the transition to ISO 9000:2000 was easier according to one of the respondents.

Core Values
When asking and analysing whether the different core values had improved at all as a result of the participation in the award, some core values were considered to have been improved, while others were not. The results for all
the core values included in the SIQ Model are presented in Figures 4.8, 4.9 and 4.10. Two organisations were not included in this analysis due to the fact that they had used the EFQM Model in their application. In addition, one organisation was excluded from this analysis because the respondent was not able to estimate whether the core values were improved or not.

As shown in Figures 4.8, 4.9 and 4.10, all the organisations in the analysis believed that the organisation’s process orientation had improved due to the participation in the quality award process. Furthermore, customer orientation and continuous improvement were also considered to have been improved by most of the organisations. Committed leadership, participation by everyone and management by facts were by a relatively high number of respondents also considered to have been improved. The core value long-range perspective, on the other hand, was only considered to have been improved by a few organisations. Public responsibility and faster response were also only considered by a few organisations to have been improved as a result of the participation in the award process.

The impact on the criteria due to the participation in a quality award process was also illuminated. The criteria of customer satisfaction, process management and strategic planning were the criteria considered to be most improved as a result of the participation in the quality award process. These results reinforce the picture that it is in the areas of processes and customers that the greatest impact is achieved when applying for a quality award. Surprisingly, strategic planning was also considered as a criterion that was affected to a large extent. This might have been due to the fact that the respondents were in many cases the CEO. The CEO often works with strategic planning, and therefore may see the impact largely in this area. Strategic planning is also strongly related to systematic and structured work, which was considered as one of the main advantages of participating in a quality award process.

Figures 4.8, 4.9 and 4.10 also present which type of organisation experienced the greatest benefit from participating in a quality award process when considering the core values. In Figure 4.8, public organisations are compared to private organisations. Public organisations believed to a larger extent that the core values had improved. This is especially true of the core values of competence development and learning from others. All the public organisations also believed that the core value participation by everyone was affected by the quality award process. On the other hand, the public organisations did not believe to a large extent that public responsibility had improved, even though improvement of public responsibility should be one of their main objectives.
When studying the impact of participating in the quality award process on the core values, it seems that the size of the organisation does not matter, see Figure 4.9. Large organisations and small organisations believed, to a relatively large extent, that the same core values were improved as a result of the quality award process.

Figure 4.10 also compares differences concerning the improvement of core values between the manufacturing and the service organisations. With small
differences, both types of organisations believed that the same core values were affected by the quality award process.

![Percentage of the organisations perceiving an improvement of core values](image)

**Figure 4.10** The percentage of the 26 organisations, the manufacturing organisations and the service organisations, perceiving the core values to have been improved as a result of participating in the quality award process.

As reflected in Figure 4.8, 4.9 and 4.10, different core values are impacted differently by the award process. Some core values are considered to have been improved by almost all the organisations, while only some organisations consider other core values to have been improved. These differences can depend on either the model or the organisations adopting the model. The SIQ Model may emphasise some core values more than others, even if no core value is expressed to be more important explicitly in the model. Similarly, the organisation can neglect some core values and favour others during the quality award process. The organisation's pre-understanding of TQM and the core values may also influence which of the core values the organisation believes were improved as a result of the quality award process.

**Disadvantages**

The main disadvantage of participating in the Swedish Quality Award was the resource-demanding and time-consuming work that organisations were required to perform when participating in the quality award process. In particular, the time-consuming phase of description of activities took the focus away from the operational activities. As a result of this time-consuming phase, the improvement work that should follow was also neglected, according to a few respondents.

The SIQ Model also received criticism for being too abstract and elaborate, and difficult to use for beginners. Furthermore, the language and the
definitions were hard to understand, according to the respondents. As a result, the work performed with the SIQ Model was difficult to communicate to the employees who were not involved with the work. Consequently, some employees within the organisations had difficulties in following the process, and instead chose to be very critical. Two organisations claimed further that the SIQ Model did not fit all organisations. For example, one public organisation stated that the SIQ Model did not fit the public sector. Instead that organisation preferred the EFQM Model, as a better tool for public organisations. Another organisation claimed that the SIQ Model did not fit non-profit-driven organisations within the service sector. Two organisations also believed that the SIQ Model only fitted manufacturing organisations.

Two organisations that had applied with the one incentive of receiving an award also felt that they had been misunderstood by the examiners, when they did not receive the award. The disappointment among the employees spread, which led to quality issues not being prioritised any longer. The quality assurance of the examiners evaluating the organisations was another area that received criticism from the participating organisations. Two organisations that had applied more than once for the quality award perceived that the feedback report differed too much, and that the grading system was not reliable. They claimed further that it was hard to find improvement areas based on the feedback report from one group of examiners. Furthermore, they believed that the level of knowledge of the examiners had to be increased. Another quality award applicant made a comparison with the European Quality Award, and stated that the feedback report from the examiners for this award was a more powerful tool to use in order to improve one's business.

The quality award recipients did not always consider the quality award announcement beneficial to the organisation. If an organisation receives the award, the organisation is obligated to perform certain activities, such as having an open house and holding seminars. Furthermore, many other organisations want to benchmark the organisation. Two small organisations that had received the quality award expressed that the work that followed the quality award announcement was too much for small organisations, as they did not have enough resources to handle this extra work. Everyday activities were therefore to some extent neglected within these organisations, and it was impossible to find time for improvement work. One quality award applicant claimed that the whole idea about learning from others was neglected, as one could not benchmark other organisations that had participated in the quality award process, except for the quality award recipients, because the organisations applying for the award were anonymous.
4.4.5 Main Conclusions
The quality award applicants experienced a great benefit from participating in the award process. The main conclusion from this study is that most of the organisations considered the process orientation, customer orientation and improvement work to have been improved as a result of the participation in the quality award process. However, there are also obstacles to surmount in order to benefit fully from the process. Two main obstacles are difficulties in finding resources within the organisation to perform mandatory work and implement identified improvements, and difficulties in applying the elaborate model used in the quality award process.

4.5 Study 5
The paper that describes this study is:


4.5.1 Background
Little is known about how organisations work with and benefit from quality award processes, and what their critical success factors are. There has not yet been any systematic examination of how organisations actually should make use of their participation in a quality award process, and what there is to gain from such a process. In particular, what activities are performed in order to strengthen the organisational performance is an issue that has not been fully illuminated.

4.5.2 Purpose
The purpose of this study is to describe how organisations have utilized their participation in a quality award process in order to improve performance.

4.5.3 Method
A multiple case study (see Yin, 1994) was chosen as the most appropriate research strategy. Three organisations conformed to the criteria set, namely Sydkraft Vattenkraft, Agria Djurförsäkring, and Kronans Droghandel (KD). Data were collected through the use of interviews, document studies and direct observations during site visits. To obtain a broader picture of the quality award process, and thus increase the sensitivity of the study, two
employees, with different levels of responsibility, were interviewed at each organisation.

4.5.4 Main Results

Customer Orientation
The informants of Sydkraft and Agria believed that the customer orientation was one of the core values that were strengthened the most due to the participation in the quality award process. Also in KD this core value was thought to have been strengthened over time, but the informants at KD were not sure if this core value, or any of the others, had been strengthened due to the participation in a quality award process or as a result of other factors. All six informants claimed that the understanding of the concept of customer orientation had changed significantly over time in their organisations. For example, one informant at Sydkraft claimed, “We were forced to identify our customers in order to be able to initiate the work with the SIQ Model. At that time the thought of using this approach was born.” At the time of the case study all three organisations were using a number of methodologies in order to strengthen their customer orientation. They had, for example, developed methodologies supporting comprehensive dialogues with their customers in order to understand fully their needs and expectations. The external examiners all thought that the organisation that they had studied had been strongly customer-oriented. Comments from the examiners included, for instance, that the organisations had developed and introduced systematic tools for measuring customer satisfaction.

Committed Leadership
According to the informants, the commitment of leaders was crucial in order to be able to experience benefits of the participation in the quality award process. According to one informant at Agria, committed leadership is “a requirement for this to work”. A number of methodologies and tools were initiated in order to strengthen this area. The organisations have, according to their award applications, initiated regular employee surveys, leader development programmes, and more systematic strategic and business planning. According to their external examiners, the commitment among leaders was strong in all three organisations. In particular, leaders in the organisations were systematic in defining and following up goals both for individuals and for the whole organisation.

Participation by Everyone
According to the informants at Sydkraft and Agria, the top managers of these companies tried actively to involve all the personnel in the quality award processes. The informants also claimed that more employees had become involved in the strategic and business planning as a result of their
participation in an award process. One informant at Agria claimed that, after having participated in the award process, it had become almost impossible not to involve employees in any larger changes. The employees had reached a state where they did not accept being uninvolved. One of Agria’s characteristics, concerning the participation by everyone, was that all the employees had participated in the development and improvement work in the organisation. Moreover, the employees at Sydkraft seemed to have the opportunity of influencing the direction of the organisation, mainly through the use of cross-functional teams. Furthermore, in the process of strategic planning at Sydkraft, “nearly 100 percent of the employees are involved”. According to the examiners, the employees at KD had the opportunity of influencing the setting up of goals and the selection of indicators to be measured.

Competence Development
At the time of the study Agria was using a number of tools for competence development in the organisation, for example Investors In People and Competence Analysis Tool. KD had developed a methodology, or training system, that was called the Kronans Droghandel University (KDU), in order to support competence development. In this forum “We are trying to identify areas where the employees, the group and the whole company can be developed”, one of the informants stated. At the time of the study competence development was not a prioritized area at Sydkraft. The external examiners concluded that the organisations had approached the issue of competence development in a systematic way. However, concerning both Agria and KD, the examiners indicated that the results of the competence development were an improvement area.

Long-range Perspective
All the informants claimed that the process of strategic planning had been improved and had thereby provided a more long-range perspective. According to the external examiners, all three organisations operated with long-range perspectives. Specifically, Agria was praised for using methodologies such as interviews with customers, focus groups and a comprehensive world analysis in order to be prepared for the future. Furthermore, Agria had started a separate company that was to work with development issues that did not directly concern insurance activities. The already long-term perspective of Sydkraft had not been developed further by their participation in the quality award process.

Public Responsibility
All three organisations demonstrated clear signs of strong public responsibility and also had strong links with society. They were all sponsors of different forums and were all working with and disseminating
information on quality development in the country. According to the examiners, it was beyond doubt that these organisations showed strong public responsibility. According to the applications for the Swedish Quality Award, the methodologies and tools of the environmental management system of ISO 14000:1996 were used continuously in all three organisations to make sure that environmental concerns were considered. However, tangible results concerning environmental and social improvements had been difficult to determine.

**Process Orientation**
All three studied organisations were largely process-oriented. At Sydkraft, one of the informants argues, “The fact that we choose to design our organisations in a way that supports process orientation indicates the importance of process orientation.” All the organisations had started using the tool of process maps in the middle of the 1990s and were now recognising the benefits of having focused on their processes. Most processes in the organisations were running effectively and efficiently at the time of the study, with clearly assigned teams and roles. Specifically, KD had identified “process owners”, “process improvement teams” and “work groups” responsible for different parts of their process management. All the organisations had identified connections between process orientation and the core value of continuous improvement. Most of the improvements were made within the process framework. According to the external examiners, the organisations were characterized by their high degrees of process orientation. The most significant improvement potentials found with regard to process orientation were associated with the systems for measurement and control.

**Prevention**
In order to prevent failures, all the studied organisations had developed well-documented routines. The informants at Agria claimed that they were working more proactively now. By using the tool of a customer model, threats and risks for customers were identified in order to prevent failures. KD had begun working with the methodology of Risk Management, and Sydkraft claimed that “The largest difference today is that we involve customers and suppliers in the work of planning and actions” in order to prevent failures. According to the examiners of Agria, it was not clear how they used their experiences to prevent future defects and deviations.

**Continuous Improvement**
The improvement work in the organisations was found to be both systematic and continuous. An informant of Agria stated, “We work all the time with improvements, which is a word that permeates our organisation.” Agria had also, to a larger extent than the other companies, given the
employees authority, not only to identify improvements, but also to execute some of them through a tool called the “Initiative Ladder”. A similar approach was used at Sydkraft. All the organisations had developed different methodologies for improvement. For example, Sydkraft used IT-support for handling the improvement work. They set goals for the improvement work and followed up the work continuously. The improvements made were at many different levels, ranging from small specific improvements to large improvement projects. Sydkraft claimed, “Today we receive and perform about 200 improvements annually.” Continuous improvement was, according to the examiners, systematic in the organisations, and of great help primarily in the process work. However, results and trends in this area had not been presented to a sufficient extent, according to the examiners.

**Learning from Others**

Through the methodology of benchmarking, different activities were performed in all the organisations. Sydkraft claimed, however, that the core value of learning from others had not been prioritised during the planning phase. Agria benchmarked earlier quality award recipients and organisations that were not necessarily in the insurance business. One informant of Agria stated, “It is important to understand that you cannot copy everything straight off, rather you have to create the tools and involvement in your own organisation.” KD claimed that learning from others took place all the time and at different levels in the organisation. The organisations were, to different extents, systematic in their way of learning from others. However, neither Agria nor KD could show direct comparisons with competitors and leading organisations, according to the examiners.

**Faster Response**

Faster response was not prioritized at Sydkraft at the time of the case study, and the informants stated that there was an improvement potential concerning this core value. KD has daily contact with its customers and its customers’ customers to be able to react quickly if there is any problem. The informants emphasised, “We need to have fast responses to everything.” As previously mentioned, Agria had developed a tool called the Initiative Ladder, which gave the employees an opportunity to react fast to problems that were not necessarily an issue for the management. According to the external examiners, the intentions of the organisations were to react quickly to customer feedback, but it was not fully clear what actions had been performed in order to support this core value.

**Management by Facts**

Sydkraft had developed a number of indicators that were continuously monitored. In particular, they claimed, “We measure more, and are thereby able to improve.” However, they also stated that this core value was not
prioritized. The informants at Agria stated that they had more of an "emotional organisation" and that they combined emotions with facts when they were making decisions. Agria and KD claimed that information was distributed effectively to the employees in order to support them in their decision-making. The organisations had, to different extents, extensive, systematic and structured management by facts, according to their award applications and the external examiners.

Interaction
Sydkraft interacted to a large extent with different divisions, customers and suppliers. In particular, they stated, "Today we interact significantly more between different plants and learn more from each other." Agria had partner cooperation with all kinds of businesses, not only with insurance and animal organisations, and also had good cooperation with its owners. KD worked with the methodology of cross-functional teams and with a close relationship with its customers. Furthermore, the interaction with customers and suppliers had been recognized by the external examiners of all the companies.

Summary of Core Value Changes Observed in the Cases
On the whole, the organisations show many good examples, both systematic and integrated, of how organisational core values can be strengthened. In general, the main improvement potentials were found in the results area. According to the external examiners, the organisations needed to improve measurement, to analyse trends and to perform comparisons with other leading organisations and competitors. None of the studied organisations claimed that they had, in monetary terms, been able to estimate how much they had earned or saved due to the improvements made.

Table 4.7 shows which core values were considered by the informants to have been most improved due to the participation in the quality award process. Furthermore, the results of the cross-case analysis, with regard to which core values have been most improved due to the participation in the quality award process, are presented in Table 4.7. The core values of customer orientation, committed leadership, participation by everyone, process orientation and continuous improvement were considered to be most strengthened. The organisations have developed different methodologies and tools in order to strengthen these five core values. Some of the other studied core values have also been strengthened, but not to the same extent as those mentioned. The results of this study indicate that use of the SIQ Model strengthens certain core values more than others. This is in accordance with the findings of study 4, which also found that the five previously mentioned core values had been improved due to organisations having participated in quality award processes. In contrast to the findings of
the present study, management by facts was also considered to have been strengthened by a large number of the informants who participated in study 4. This difference between the studies might be due to the fact that the methods used in this study were not able to show a great impact on management by facts or that the organisations in this study were already relatively good at management by facts.

The two informants at Sydkraft seemed to have similar views on which core values had primarily been strengthened due to the participation in the quality award process, see Table 4.7. The informants at the other two organisations, however, had different views internally on which core values had been improved. The informants that had overall responsibility in the organisation for the quality award process all indicated that leadership commitment was one of the core values that had been most strengthened. This was not the case for the informants with no overall responsibility.

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4.5.5 Conclusions

Examples of the application of methodologies and tools in order to improve organisational performance are provided in a number of areas. Specifically, the areas of customer orientation, process orientation, improvement work, committed leadership and participation by everyone have been strengthened
through the participation in the quality award process. The studied organisations may serve as good examples of how to perform an organisational change. In particular, the studied organisations have been successful in developing and communicating their vision, thereby empowering their employees. Like the studied organisations, other organisations considering participation in a quality award process need to have strong long-term commitment. Participating in a quality award process only once seems to be an ineffective use of resources. The first time one participates in an award process one mainly learns the craft. Often benefits cannot be measured until the second participation. It is also of importance to have enough time in between the applications to be able to complete as many as possible of the improvement projects.
5 Conclusions and Discussions

In this chapter, the findings with respect to the different research questions are discussed. An analysis comparing the studies and comparing the studies and the theory is presented. Some general conclusions are also presented. Furthermore, the strengths and weaknesses of the studies and the entire thesis, and a discussion are presented. This chapter also consists of ideas for further research which have evolved during the research process.

5.1 Introduction

The purpose of the thesis is to describe and explain the organisational value of participating in quality award processes. The following research questions were formulated:

1. What is the value of a successful implementation of TQM for the financial performance of Swedish companies?
2. What are the effects of working with in-company quality awards on the performance of the participating units?
3. How do units experience working with in-company quality awards?
4. What is the organisational value of participating in a national quality award process?
5. How have organisations utilized their participation in a national quality award process in order to improve performance?

5.1.1 Findings concerning Research Question 1

Companies that have successfully implemented TQM and received a quality award outperform the control groups used in this thesis regarding financial performance. In particular, the award recipients outperform the branch indices and the competitors with regard to a number of indicators during the post-implementation period. For example, the award recipients show a significantly higher return on assets than their competitors and the branch indices during the post-implementation period. Moreover, the indicators concerning change in sales, change in the number of employees and return on sales show that the award recipients outperform the branch indices significantly during the post-implementation period. The main findings concerning this research question support the conclusion that there is a great value regarding the development of financial performance for companies that successfully implement TQM.
5.1.2 Findings concerning Research Question 2

The same positive development as that for the quality award recipients, concerning organisational performance, cannot be identified for quality award applicants or units that have applied for an in-company quality award. Even if only award applicants, and none of the units that did not apply for the in-company quality award, perceive the studied key-indicators of organisational performance to be improved greatly during the studied time period, the evidence is not very strong. This fact is, however, not very surprising. Quality award applicants are still in the implementation period of TQM, in contrast to quality award recipients, if one uses receiving a quality award as a proxy for successful implementation of TQM. Consequently, it is difficult to see results yet, such as improved organisational performance, for the group of award applicants. Many of the applicants for the in-company quality award also claimed that working with TQM was based on a long-range perspective and the positive effects of working with TQM, such as improved organisational performance, were still to come. The main costs and the most resource-demanding activities associated with participating in an in-company quality award were the description of activities and the improvement work that followed.

5.1.3 Findings concerning Research Question 3

Even if the applicants for in-company quality awards do not yet see any positive development concerning their organisational performance, other positive effects of working with TQM are perceived to exist. For example, the customer orientation is perceived to increase within the organisation, as a result of participation in an in-company quality award process. Further, an increased comprehensive view of the business, a higher degree of participation by everyone and the initiation of systematic improvement work are other positive effects, according to the applicants for the in-company quality award. The main disadvantage of the work connected with quality awards concerns the resource-demanding tasks that are mandatory when working with in-company quality awards. The phase of description of activities especially requires a great deal of resources. The SIQ Model for Performance Excellence and the lack of communication during the work connected with in-company quality awards also received criticism.

5.1.4 Findings concerning Research Question 4

The quality award applicants experienced a great value through participating in the award process. The main conclusion from the study that illuminates research question 4 is that most of the organisations consider the process orientation, customer orientation and improvement work to be enhanced as
a result of the participation in the quality award process. However, there are also obstacles to surmount in order to benefit fully from the process. Two main obstacles are difficulties in finding resources within the organisation to perform mandatory work and implement identified improvements, and the application of the elaborate model used in the quality award process.

5.1.5 Findings concerning Research Question 5

Good examples of the application of methodologies and tools in order to improve organisational performance within a number of areas are provided in a cross-case analysis. Specifically, the areas of customer orientation, process orientation, improvement work, committed leadership and participation by everyone have been strengthened through the participation in the quality award process.

The studied organisations could also act as good examples of how to perform a major change, like introducing a quality programme. In particular, the organisations have been successful in developing and communicating their vision, thereby empowering their employees. Other organisations considering participation in a quality award process need, like the studied organisations, to have a strong long-term commitment. Participating in a quality award process only once is not an efficient use of resources. The first time the organisation participates in an award process, one mainly learns the craft. Often benefits cannot be measured until the second participation. Moreover, it is of importance to have enough time in between the applications to be able to complete as many as possible of the improvement projects.

5.2 Analysis comparing the Studies

The conclusions of the studies show many similarities. It is clear that there is a great deal to gain from participation in a quality award process. The financial evaluation of quality award recipients and two different control groups, see study 1, indicates that recipients outperform the latter with respect to a number of indicators. However, the improvements recognized as a result of a quality award for quality award recipients do not only concern hard indicators. This fact is confirmed by study 5, which includes one quality award recipient. This recipient demonstrates a number of improvements in many different areas, such as an increased customer and process orientation. The recipient also performs systematic improvement work that involves all the employees at the organisation.
It is also clear that quality award applicants experience that a number of areas are improved, for example the customer orientation, process orientation and the improvement work; see study 2, 3, 4 and 5. However, the quality award applicants that do not receive the award cannot yet demonstrate any significant impact on their performance indicators, see study 2. Furthermore, the resource-demanding work involved in participating in a quality award process is experienced to be the main disadvantage of participation in such a process, see study 3, 4 and 5. This is probably the most significant barrier for organisations in their pursuit of performance excellence, and the reason why organisations cease working with the quality award process. Furthermore, the elaborate SIQ Model for Performance Excellence received criticism, see study 3 and 4.

As presented in Section 2.6.3, a national quality award process and in-company quality award process have many similarities. In summary, it seems that organisations participating in a national quality award process, see study 4 and 5, and units participating in an in-company quality award process, see study 2 and 3, also experience similar value regarding the advantages and disadvantages of the participation. This should come as no surprise considering the similarities between the processes.

5.3 Analysis comparing the Studies and Theory

5.3.1 TQM and Performance

Study 1 shows many similarities to Hendricks & Singhal (1997), concerning both the methodology and the conclusions. Even if the number of quality award recipients, the time periods, the model used by the organisations in the studies and the culture within the organisations in the two countries differ somewhat, the main conclusion is similar for both studies: the quality award recipients outperform the control groups.

The results of study 2 also indicate that units applying for in-company quality awards outperform similar units that have not applied. However, as argued in study 2, the evidence for this conclusion is not strong. Key indicators for performance similar to those used in the well-recognised GAO study, see GAO (1991), were used in study 2. However, one difference between the two studies was that the GAO study included the highest-scoring applicants, while study 2 did not necessarily include the highest-scoring units. This could be one explanation why study 2 has not been able to show the same results as the GAO study.
5.3.2 Self-assessment

In accordance with earlier studies on self-assessment, the major benefits of participating in a quality award process, which are recognised in Paper II, III, IV and V, are a greater focus on improvement work, see Finn & Porter (1994) and van der Wiele et al. (1996), processes, see Gadd (1995), and customers, see Brown & van der Wiele (1996). In addition, participation in a quality award process is also perceived to have an impact on committed leadership, participation by everyone and management by facts. These six areas or core values are also considered to be the essence of TQM today, see Bergman & Klefsjö (2003). Moreover, the studies strengthen earlier published results, see, for example, Brown & van der Wiele (1996) and Finn & Porter (1994), who claim that companies benefit from the use of self-assessment. Furthermore, study 3 and 4, and the study on self-assessment by Ghobadian & Woo (1994) show that the major disadvantage is the resource-demanding and time-consuming work involved. In summary, previously proposed generalisations about quality award processes and self-assessment are also true of quality award processes in Sweden.

5.3.3 Core Values

Another comparison which it is valid to illuminate in this thesis is the one dealing with core values. Reviewing the theory, Kennerfalk (1995), Hellsten (1997), Sila & Ebrahimpour (2002) and Bergman & Klefsjö (2003) argue, as described in Section 2.3, that the core values of TQM are considered to be focus on customers, base decisions on facts, focus on processes, improve continuously, let everybody be committed. On the other hand, in practice, most organisations participating in a quality award process in Sweden use the SIQ Model for Performance Excellence, which is based on 13 core values (see Section 2.5.3). One could argue that some of the core values identified in the theory and some of the core values used in practice are somewhat similar, with a clear difference concerning the number. Organisations participating in a quality award process experience that the main improvements with regard to the core values concern the ones that are established in the theory. In particular, the organisations experienced an improvement of customer orientation, process orientation, continuous improvement, committed leadership and participation by everyone, see study 5. In addition to these, study 4 identifies a major improvement of management by facts. These six core values are roughly the same as those recognised in the theory. Hence, one could question whether the SIQ Model for Performance Excellence really supports the other seven core values in the model, and discuss whether one should consider changing the core values in the SIQ Model for Performance Excellence to fit better the theory and the real experience for organisations of participating in a quality award process.
process. A reduction of the number of core values in the SIQ Model for Performance Excellence might also make it easier to comprehend for the organisations using it. As a result, the organisations might not experience the SIQ Model for Performance Excellence as elaborate and difficult.

5.3.4 Continuous Improvement

Both Loomba & Johannessen (1997) and Conti (2001) argue that participating in a quality award process can divert organisations from the mission of continuous improvement. In study 4, the organisations’ systematic improvement work was studied on the basis of the PDSA cycle. Certainly, some organisations with little experience of a quality award process had difficulties in initiating improvements based on the plan for improvement. In addition, some organisations that had initiated improvements had difficulties in following up the improvements. On the other hand, some more experienced applicants did actually perform systematic improvement work based on the feedback report from the examiners, see also study 5. Furthermore, one of the main values of participation in a quality award process was a strengthening of the continuous improvement at the organisations. In summary, it seems that Loomba & Johannessen (1997) and Conti (1997) make an important point. Organisations with little experience of the quality award process have difficulties in performing systematic improvement work based on the feedback from the examiners, but organisations with more experience are more successful with such work.

5.3.5 Success and Failure of TQM Implementations

As argued in Section 2.7, developing cultures and performing changes within an organisation are troublesome. Participating in a quality award process implies some kind of change in the organisation’s way of working and culture. In study 5, organisations that have systematically worked with improvements were illuminated. These organisations have to some extent also successfully changed the way in which they work and their organisational culture. This supports the view that organisational cultures can be changed, in accordance with the belief of Schein (1992) and Dahlgaard et al. (1998). Some explanations that may have influenced their success are discussed below.

One explanation for these successful examples is that they have been able to involve all the employees within the organisations to a different extent in the quality award process. Consequently, the possible harm resulting from the existence of subcultures, see Morgan (1997) and Hatch (2000), has been avoided. Furthermore, employees have not resisted the change, as can be the
case for TQM implementations and as emphasised by Reger et al. (1994) and Vermeulen (1997). Instead, it seems that the employees who have been involved in the change process have been supporting the change.

Another explanation for the success of these organisations is the committed leaders. In particular, both Schein (1992) and Bruzelius & Skärvad (2000) are of the opinion that leaders must be able “to walk the talk”. The leaders within these organisations are committed to the quality award process and have been able to show this, not only with pure talk, but also by devoting time to the quality award process.

A third explanation, emphasised by Bardoel & Sohal (1999), could be that these organisations have understood that the effect of TQM on an organisation’s culture is indeed a radical change and that a holistic approach is needed. Specifically, Lau & Anderson (1998) are of the opinion that, when implementing TQM, the philosophical, strategic and measurement dimensions of TQM must be emphasised in order to be successful. This implies that the organisations have not implemented “partial quality management”, but rather “Total Quality Management”.

5.3.6 Types of Organisations

Dean & Helm (1996), Huq & Stolen (1996) and Ghobadian & Gallear (1997) investigate different types of organisations and conclude that TQM fits all organisations. However, both Ghobadian & Gallear (1997) and Shin et al. (1998) state that specific requirements are needed during the implementation depending on the type of organisation. Both, Erlingsdóttir (1999) and Hasselbladh & Bejeroth (2002) state, on the other hand, that using ideas from one type of organisation on a completely different organisation constitutes quite a risk. In study 4, the value of the quality award process for different types of organisation was illuminated; i.e. small or large, service or manufacturing, and publicly or privately owned organisations. The results showed that the value for different organisations, when considering the core values, is somewhat similar for all types of organisations. This fact supports the idea that any type of organisation can work with TQM. However, it is important to notice the culture within each organisation and adjust TQM when implementing it in order to maximise the returns of the investment, see Ghobadian & Gallear (1997) and Shin et al. (1998). The results of study 5 support this idea. One of the organisations in this multiple case study claims that it has customized the methodologies and tools so that they better fit the organisation.
5.4 Conclusions of the Thesis

The main conclusion of the thesis, which is in agreement with earlier published results, is that, if companies successfully implement TQM, the financial performance is affected positively. Good examples are also identified of the application of methodologies and tools, based on participation in a quality award process, in order to improve organisational performance within a number of areas.

Moreover, the results of this thesis have not been able to show strong evidence proving that the organisational performance of units which have worked with in-company quality awards, but not yet successfully implemented TQM, are affected by this work. However, such units experience that working with in-company quality awards has positive effects on the customers, as well as the employees.

The same is also true of organisations participating in a national quality award process. The main value of participation in a quality award process is an improved customer orientation, process orientation and improvement work. On the other hand, the main drawbacks of quality award participation are the resource-demanding activities involved and the elaborate model for participation in the quality award process.

5.5 Reflections upon the Studies

The research presented in this thesis and in the different studies has many strengths and weaknesses. Some of these strengths and weaknesses are discussed below. The strengths and weaknesses are also summarised in Table 5.1.

5.5.1 Study 1

One main strength of this study is that almost all the profit-seeking companies that had received a quality award in Sweden until 1999 were included. Another strength of this study is that two control groups and a multiplicity of indicators were used. Both the comparison between the quality award recipients and the competitors, and that between the quality award recipients and the branch index indicate that the quality award recipients outperformed the respective control groups during the post-implementation period. Similarly, the quality award recipients outperformed

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7 Four quality award recipients were excluded due to unreliable data, see Section 3.4.1.
the control groups concerning a number of indicators during the post-
implementation period.

As shown in study 1, the quality award recipients outperformed the control
groups during the post-implementation period, but not necessarily during
the implementation period. Hansson (2003) argues that the reason for a
non-advantageous development for quality award recipients in comparison
with the control groups during the implementation period might be the fact
that the implementation process requires financial resources which subdue
the possible gains of implementing TQM. In fact, the quality award
recipients might already perform better than the control groups before the
implementation period. The implementation of TQM may have required a
great deal of resources, and hence the quality award recipients may have
experienced a depression in performance during the implementation period.
During the post-implementation period the quality award recipients,
however, do not have to spend a great deal of resources on maintaining the
TQM efforts, and can therefore outperform the control groups. In order to
study if this fact is relevant, one has to study the performance of the quality
award recipients and the control groups before the implementation period.

Another weakness of this study is that the competitors and the companies in
the control groups may actually have worked systematically with TQM and
may have implemented TQM successfully, although they had not received a
quality award. Consequently, the comparison between the quality award
recipients and the control groups may not reflect an ideal situation between
companies that have successfully implemented TQM and companies that
have not. However, one can also argue that this fact strengthens the findings
from study 1, due to the fact that a more ideal comparison would have been
able to show even larger differences in performance between the quality
award recipients and the control groups.

Another disadvantage of this study is that some of the companies included
in the group of quality award recipients had received a regional quality award
which was only partly based on the SIQ Model for Performance Excellence.
For example, the regional quality award of Gotland is based on 17 of the 29
criteria of the SIQ Model for Performance Excellence. Two companies that
had received “The Quality Award of Gotland” were included in this study.
Furthermore, two companies that had received “The Quality Award of
Northern Sweden” were included in the study. This quality award is based
on a tool called the Springboard, see Hellsten (1997). The tool is aimed at
small organisations and is not as comprehensive as the SIQ Model for
Performance Excellence. However, one can argue, also in this case, that this
in fact strengthens the findings of this study, due to the fact that, if an even
more comprehensive tool had been used for the regional quality awards, an
even larger difference in performance between the quality award recipients and the control groups would have been present.

Finally, it is possible that the companies that constituted the group of quality award recipients may not have received the award if they had not been able to show a good financial performance in their application. If only companies that show a good financial performance receive an award, the results of this study may be biased. However, financial performance is not an extensive part of the result criteria in the SIQ Model for Performance Excellence that highlight the companies’ performance.

5.5.2 Study 2

One main strength of this study is that units that had applied for the in-company quality award were compared to units within the same company. These units were in a similar branch of industry and were influenced by the same external factors. Hence, one could argue that the factors influencing the organisational performance were somewhat similar, with the exception that some units worked with the in-company quality award and some did not. Therefore, one might also argue that the comparison concerning the organisational performance is as close to being ideal as possible.

Another strength is that a relatively high response rate was obtained (66%) and that a non-response analysis was performed. In the non-response analysis, no differences were discovered between the units that had answered the questionnaire in the first place and the units that had not done so.

One experience from conducting study 2 was that the costs were difficult to estimate. The spread concerning the costs for the different phases was also high. Consequently, the findings concerning the costs are not very reliable. In addition, the phases used to identify the work and costs connected with the in-company quality award were slightly different from the ones used in the other studies. For instance, training was added as a fifth phase, and improvement work was used instead of the phase of planning for improvements. This fact makes comparison between this study and the other studies difficult concerning the estimation of the costs and the work involved with in-company quality awards.

Another weakness of this study may be that the indicators used, derived from the GAO (1991) study, might not have been able to reflect the unit’s performance, because the units were unique in the sense that they used different indicators to monitor their organisational performance. However, the intention of the study was to make comparisons and it would have been
difficult to perform the comparisons if different indicators had been used for different units.

A third weakness of this study is that it was the manager’s opinion of the organisational performance that was monitored. The manager’s opinion of the performance may not have been the same as the actual performance. However, data on the actual organisational performance of all the units would have been extremely resource-demanding to collect.

A fourth weakness is that all the companies that had or had had an in-company quality award were not studied. Two companies that had had an in-company quality award were not studied for different reasons, see Section 3.4.2. In addition, there may also have been other companies or organisations which performed similar work to the work described in the in-company quality award and which were not included in this study, simply because the author was not aware of them. No extensive records of companies that have an in-company quality award are available, to the knowledge of the author.

5.5.3 Study 3

One main strength of this study is that multiple sources of evidence, five interviews and document studies, were used to strengthen the results.

One main weakness of this study is that only one case was analysed. This case may not be representative of units participating in in-company quality award processes. However, the intention of this study was not to perform statistical generalisations.

Furthermore, in this study the experience of the unit’s participation in the in-company quality award process was studied. When performing interviews, there is always a risk that the interviewer may influence the respondents, and that the respondent may be eager to present a more positive picture than the actual one. If this was the case, the actual experience of the work connected with the in-company quality award was not revealed. However, it is the author’s belief that the respondents described honestly the situation at their unit.

5.5.4 Study 4

The main strength of this study is that all possible organisations were illuminated. Some organisations were excluded from this study. The exclusions were valid, however, and only two organisations actually said explicitly that they did not want to participate in the study. The
organisations included also represent Swedish industry and society, as manufacturing and service organisations, publicly and privately owned organisations, and small and large organisations were studied.

In this study, the respondents were asked to estimate the improvement or strengthening of the core values of the SIQ Model for Performance Excellence. One main disadvantage may be that it is difficult to study improvement or strengthening of core values, as this is a rather subjective phenomenon. However, it is the author’s experience that the respondents did not have problems in estimating the effects on the core values.

Another disadvantage of this study is that only one person per organisation, the person responsible for the application, was interviewed. This person was in many cases the CEO of the organisation. The CEO probably has a good overview of the organisation, but is of course not able to give a complete picture of the organisation’s participation in the national quality award process. Interviewing more persons within each organisation would have been advantageous, but was not possible due to a restriction of resources.

Another difficulty with this study was that it was hard to isolate the participation in the national quality award process from other similar activities. For example, some organisations used other methodologies and tools within TQM. It was therefore difficult to know whether it was the participation in the quality award process or other activities that had led to a strengthening or an improvement of the core value.

5.5.5 Study 5

The main strength of this study is that, like study 3, multiple sources of evidence were used in order to illuminate the organisations’ participation in the national quality award process. Specifically, interviews, document studies and observations were used in order to perform the cross-case analysis.

The main disadvantages of this study are similar to the ones described in study 4. Specifically, it was hard to isolate the participation in the quality award process from other activities, and studies of core values can be experienced as problematic. To provide contrast, two persons were interviewed at each organisation in this study. In addition, as in study 3, a limitation of this study is that the respondents may have been influenced by the interviewer and the interview situation.
5.5.6 Entire Thesis

One main strength of the entire work that is described in this thesis is that five studies have been performed, and that many of the findings from these studies show similar results.

One main weakness of the studies described in this thesis is that the work was performed by someone from the "inside". Due to the fact that the author works at a university division that teaches and promotes TQM, it can be argued that different conclusions would have been reached if someone who was not, to such a large extent, involved in quality management had performed the studies. However, it has been the author's intention to study participation in a quality award process objectively.
<table>
<thead>
<tr>
<th>Study</th>
<th>Strengths</th>
<th>Weaknesses</th>
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<tr>
<td>Study 1</td>
<td>• All the possible quality award recipients were studied.</td>
<td>• Quality award recipients may have a depression in performance during the implementation period.</td>
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<td></td>
<td>• A number of indicators were used.</td>
<td>• Companies that constitute the control groups may have successfully implemented TQM.</td>
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<td></td>
<td>• Two control groups were used.</td>
<td>• The quality awards studied are based on different tools.</td>
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<td>• Only companies that show good results, including financial performance, may have received the award.</td>
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<tr>
<td>Study 2</td>
<td>• The units were in the same branch of industry and were influenced by the same external factors.</td>
<td>• Costs were difficult to estimate, and different phases were used to estimate work and costs in this study in comparison with the other studies</td>
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<td></td>
<td>• Relatively high response rate.</td>
<td>• The indicators used may not have been appropriate for all the units.</td>
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<td>• Non-response analysis was performed.</td>
<td>• The managers' opinion of the performance was studied, not the actual performance.</td>
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<td>Study 3</td>
<td>• Multiple sources of evidence were used.</td>
<td>• Only one case was studied.</td>
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<td>Study 4</td>
<td>• All the possible quality award applicants were studied.</td>
<td>• Study of improvement or strengthening of core values may be problematic.</td>
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<td>• High response rate among the organisations possible to study.</td>
<td>• Only one person within each organisation was interviewed.</td>
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<td>• It was difficult to isolate the quality award process.</td>
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<td>Study 5</td>
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<td>• Study of improvement and strengthening of core values may be problematic.</td>
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<td>• Respondents may have been influenced by the interviewer and the interview situation.</td>
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<tr>
<td>Entire Thesis</td>
<td>• Multiple data collections through five studies</td>
<td>• The work was performed by someone from the “inside”.</td>
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5.6 Discussion

In this section, two areas related to a quality award process are discussed. First, the value of participating in a quality award process is illuminated depending on the applicants' previous knowledge. Second, some critical success factors for participation are presented.

5.6.1 Value of Participating in Quality Award Processes

The author's experience from performing five studies of the value of participating in quality award processes is that organisations experience the value differently depending on their previous knowledge, see Figure 5.1. If an organisation has no extensive previous knowledge about TQM in general and the tools used in the quality award process in particular, the main value of the participation is that the organisation starts to recognise the values of TQM. This can result in the establishment of a culture that supports TQM. A culture that supports TQM within this context is an organisational culture that is permeated by the core values of TQM.

In study 4, some organisations claimed that they did not have any particular previous knowledge of the issues highlighted in the quality award process. These organisations were not conscious of the core values of TQM, and hence did not work systematically with issues highlighted in the core values. However, the participation in the quality award process made the organisations conscious of the core values of TQM and their importance. Hence, the main value for these organisations was the establishment of a culture that supports TQM. Since they had not worked systematically with the core values highlighted through the participation, these organisations had difficulties in transforming the suggested improvements into real improvement projects that yielded significant returns.

However, if the organisations are able to establish a TQM culture which supports repeated participation in a quality award process, the organisations are more likely to succeed with the improvement areas identified in the quality award process. Hence, real improvements for customers, employees, processes and owners can be executed. If the organisations are successful with the improvements and continue to participate in the quality award process, the quality applicant can in fact also receive an award. As shown in study 1, the value of a successful implementation of TQM is, among other things, an improved financial performance.

This journey, from the first contact with the core values of TQM to a successful implementation of TQM, is not without obstacles. In particular, the resources within the organisations may be too limited to be able to reach
the next level. Of course, the time period of this journey is different between different organisations, depending on the existing organisational culture, including the ability to perform change, and many other aspects. However, there are also a number of critical success factors that make this journey easier for organisations.

5.6.2 Critical Success Factors for Participation

This thesis has illuminated the organisational value of participating in quality award processes. The value of participation has been discussed for quality award recipients and applicants, with regard to both national and in-company quality awards. The author has gained a belief about how organisations should perform their participation in a quality award process, even if this was not the main objective of the studies. In particular, it is the author’s belief that a number of critical success factors exist if organisations want to gain as much as possible from participation in a quality award process.

First of all, the organisations need to have a long-range perspective on the participation. The first time one participates in an award process, one mainly learns the craft. Specifically, it seems that beginners in TQM experience the organisational value of the quality award process differently compared to more experienced users of TQM (see also above). Beginners benefit largely from the introduction of TQM, as it results in a new way of thinking and a
valuable experience for the employees involved, which is of great use in a longer perspective. It also seems that organisations that already have great experience of TQM benefit to a larger extent from the actual outcome of the quality award process, the improvement work. In addition, often real benefits cannot be measured until the second participation. It is also of importance to have enough time in between the applications to be able to complete as many as possible of the improvement projects identified from the process. Hence, a continuous participation every second year might be a suitable recommendation.

Furthermore, participation in a quality award process should not been seen as a separate activity, but rather as an integrated part of the organisations’ work performed to enhance their performance. The ideal situation is to integrate participation in a quality award process into the process of business and strategic planning. Specifically, organisations also have to invest a great deal of resources in the phase of planning for participation in a quality award process. The goals and purposes of the participation are crucial, as well as follow-up activities to ensure that the goals and purposes are fulfilled.

Moreover, it is difficult to gain from participation in a quality award process unless the CEO or his or her equivalent and managers within the organisation are dedicated to the cause of the participation and familiar with the work. In addition, in an ideal organisation, all the employees are to a different extent and in different phases involved in the participation in the quality award process. The organisations described in study 5 show how one can actually enhance the participation of everyone.

Another issue to raise within the organisation before initiating the work is the selection of tools. Some respondents in study 3 and some organisations in study 4 believed that the SIQ Model for Performance Excellence is too comprehensive. A challenge for research is to develop new and better-suited tools for awards and self-assessment, which also fit organisations in the start-up phase. If one represents a small organisation, the Springboard, see Hellsten (1997), might be a good selection. If one does not want detailed questions such as the ones in the SIQ Model for Performance Excellence, the EFQM Excellence Model may be a more appropriate tool.

The organisations in study 5 were selected partly because they were known to carry out systematic improvement work. Hence, one could argue that these organisations have, to some extent, been successful in implementing TQM and the work that is included in a quality award process. One of the organisations is also a quality award recipient. An interesting issue in this context is what makes these organisations unique when it comes to the
transformation into a TQM organisation (in the context, an organisation that has to some extent successfully implemented TQM). The explanation could be that the organisations have successfully, consciously or unconsciously, followed parts or the whole path of the change process described by Kotter (1996). The stages described by Kotter (1996) include (1) establishing a sense of urgency, (2) creating the guiding coalition, (3) developing a vision and strategy, (4) communicating the change vision, (5) empowering broad-based action, (6) generating short-term wins, (7) consolidating gains and producing more change and (8) anchoring new approaches in the culture. In particular, the organisations in study 5 have successfully developed a vision and strategy (3), communicated the change vision (4) and empowered broad-based actions (5). The quality award recipient has more or less passed through all the stages in the process described above, since the organisation has been able to reach the last step, (8) anchoring new approaches in the culture.

5.7 Further Research

When starting one’s doctoral studies, one normally has a limited number of research questions which one intends to illuminate concerning a specific subject. However, after studying the initial questions, one normally ends up having even more questions concerning the subject studied. This output, in the form of new research questions, is illuminated under the headings of further research.

One possibility of further research is to perform a follow-up study on how the financial performance will develop for the quality award applicants in comparison with the branch indices and the competitors for the years to come. One could also study award recipients in other countries in comparison with branch indices and competitors, in order to make comparable studies between countries and different types of awards. In addition, Hansson (2003) is of the opinion (see Section 5.5.1) that by studying a period before the implementation period, one could discover if quality award recipients experience a depression in performance during the implementation period. Moreover, a financial analysis, using a similar methodology to that in study 1, of units within companies that have applied for an in-company quality award is another possible future area of research.

Case studies analysing the experience of in-company quality awards, using a similar methodology to that in study 3, represent another possibility for future research. Study 3 is based on a case study concerning a unit within a company that still has an in-company quality award. By also studying a unit
within a company that has ended its in-company quality award, a more complete picture of in-company quality awards would be obtained.

Furthermore, an interesting area of research would be to compare different methodologies for performance improvement with each other. It is clear that participation in a quality award process generates improvement suggestions. However, the organisations do not always have resources to perform the identified improvements. Organisations participating in a quality award process also have difficulties in translating the improvements into monetary units. However, organisations working with Six Sigma, see, for example, Magnusson et al. (2003), claim that the improvement performed has a tremendous economic impact. An interesting issue to study is whether introducing a Six Sigma programme generates more improvements and has a greater impact on performance than participation in a quality award process.
References


Paper I

The impact of TQM on financial performance


Measuring Business Excellence
Vol 7 No 1, pp. 36-50
The impact of TQM on financial performance

Henrik Eriksson and Jonas Hansson

Abstract: The question whether an adoption of total quality management (TQM) improves the financial performance has been discussed for several years. Various studies have been conducted to examine the impact of TQM on financial performance, but there is still disagreement concerning the effectiveness of TQM. This paper presents a study of Swedish quality award recipients, which are compared to branch indices and to identified competitors. The comparison concerns the development of different financial performance indicators. The study indicates that the award recipients as a group outperform the branch index and their identified competitors on most of the studied indicators.

Keywords: Total quality management, Implementation, Performance

Background

Total quality management (TQM) has been acknowledged as an important subject in management theory and practice during the last decades. The use of TQM among many Western organizations has been relatively high during the nineties, see for example Lawler et al. (1995). However, the relationship between TQM practices and improved financial performance is discussed frequently in the TQM literature. Results have been published, which argue that TQM investments result in an improved financial performance, see, for instance, Shetty (1993), Hendricks and Singhal (1997), Easton and Jarrell (1998), Handsfield et al. (1998), Samson and Terziokski (1999), Reed et al. (2000), Allen and Kilmann (2001), Tena et al. (2001) and Wrolstad and Krueger (2001). Bergquist and Ramsing (1999) argue, on the other hand, that it is difficult to establish a relationship between TQM and the performance of the company. Results have also been published, presenting a more negative picture of TQM implementation benefits. Eskildson (1994) states, based on survey results, that many organizations do not succeed with their TQM efforts. The two main reasons are here argued to be vague definitions of TQM and inappropriate implementation. Also, Harari (1993) argues, based on his own experience, that TQM programs are ineffective, and that at best one third of the TQM programs have achieved significant improvements.
The differentiation among research conducted, to outline financial benefits of TQM implementation, imply that the area needs further investigation. The approaches used to determine the benefits of TQM programs, and to find a relationship between TQM and the financial performance, also differ between the different studies. One approach to measure the effects of TQM investment on financial performance is to compare companies that have received a quality award against companies that have not received any quality award, see, for example, Hendricks and Singhal (1997). These two researchers use American companies in order to measure the effects of successful TQM implementations on financial performance. The approach to study the financial performance development of quality award recipients has not been used, according to extensive literature, on Swedish quality award recipients. Such a study would be a complement to earlier studies, also considering the facts that Sweden and the US have different company cultures and that the award models are somewhat different.

As many still argue whether TQM programs are profitable, the purpose of this study is to form an opinion if companies in Sweden that successfully have implemented TQM have a better financial performance development than median branch indices and their stated competitors.

Theory

TQM is frequently mentioned in discussions concerning quality and, according to Hodgetts (1996), all enterprises, regardless of size and financial status, are involved in the quality revolution. There exist many descriptions of the concept of TQM, but few clear definitions. For example, Oakland (1989), describes TQM as “an approach to improve competitiveness, efficiency and flexibility for a whole organization”. Dale (1994) and Huxtable (1995) describe TQM as an important management philosophy, which sustains the organizations in their efforts to obtain satisfied customers. Some argue that TQM is a management approach, while others state that TQM is a management system. In this article, the definition by Hellsten and Kefsjö (2000) is used. They define TQM as “a management system in continuous change, which is constituted of values, methodologies and tools, the aim of which is to increase external and internal customer satisfaction with a reduced amount of resources”. For example, the core values of TQM are values, such as, customer orientation and committed leadership. Core values are also the basis of the quality award models. Self-assessment that is used when applying for an award can be seen as a methodology, and the criteria booklet of the Malcolm Baldrige National Quality Award and the Swedish Quality Award can be considered as examples of tools.

Lascelles and Dale (1991) identified six levels of adoption of TQM[1]. These levels are uncommitted, drifters, tool pushers, improvers, award winners and world-class, see Figure 1.

It is argued by Lascelles and Dale (1991) that these levels are not necessarily the stages through which organizations pass on their TQM journey, rather they are characteristics and behaviors which organizations display in reaction to TQM. In level 5, award winners, the organizations have reached the stage of being able to compete for a quality award and some recipients of quality awards can be found in this level. At this stage the organizations have reached a point in their total quality maturity where they have developed the kind of cultures, values, trust, capabilities, relationships and employee involvement in the business that are required to receive a quality award (Lascelles and Dale, 1991). Gobadian and Gallear (2001) use among other criteria, the receiving of a quality award as a measurement for a successful implementation of TQM. Hendricks and Singhal (1997) also use the receiving of quality awards as a criterion for a successful implementation of TQM programs. According to Lascelles
and Dale (1991), the last level, world-class, which is only reached by a handful of organizations, is characterized by the total integration of quality improvement and business strategy to creatively delight the customer.

There are many similarities between the existing national quality awards. Almost all of the existing national quality awards are carried out in the three evaluation dimensions of approaches, deployment and results, see Chuan and Soon (2000). The Swedish Quality Award model, which was inspired by the Malcolm Baldrige National Quality Award model, has many similarities with the latter. However, there are also differences between the two award models. For example, the Swedish Quality Award model puts more emphasis on the evaluation and improvement in all the criteria addressed and on the practice of TQM principles in all organizational activities. There is also relatively more emphasis on the organization’s impact on society, and on the organization’s commitment to the customers compared to most other national quality award models (Chuan and Soon, 2000).

Performance can, as well as TQM, be defined in many different ways. The definition, provided by EFQM (1999) is used in this article. EFQM (1999) defines performance as a measure of attainment achieved by an individual, team, organization or process. There are many different indicators to measure the performance. This article sets out to measure TQM’s impact on financial performance. In Hendricks and Singhal (1997), six indicators of the financial performance were used to illuminate the impact of TQM. These were: change in operating income, change in sales, change in return on assets, change in return on sales, change in total assets and change in number of employees. Easton and Jarrell (1998) also use similar indicators, net income, operating income, sales and inventory, to evaluate the impact of TQM on the financial performance.

Methodology

Definition of successful implementation of TQM

One of the first issues to be solved, when studying the impact of TQM on the financial performance, is what a successful implementation of TQM constitutes. Hackman and Wageman (1995) have, for example, provided a measuring framework, which can be used to test if TQM has been properly implemented. This framework was used in a qualitative study by McAdam and Bannister (2001) in order to determine if the framework of TQM was perceived to be implemented. Hendricks and Singhal (1997)
and Ghobadian and Gallear (2001) use the receiving of a quality award as a criterion for a successful implementation of TQM. The same proxy was used in this study because the qualitative case study approach by McAdam and Bannister (2001) was considered to be inappropriate due to the subjective judgement of what a successful implementation of TQM constitutes. Also, it was the intention to make a comparison with the results of this study with those of the Hendricks and Singhal (1997) study. Further, as shown in Figure 1, quality award recipients show a TQM maturity (Lascelles and Dale, 1991), and one can therefore argue that these companies have successfully implemented TQM.

Selection of companies

In this study, all Swedish companies that have either received the national, a regional or an in-company quality award were included. The regional and in-company quality awards are to a large extent based on the Swedish quality award criteria. The information about which companies that had received a quality award in Sweden was collected from the Swedish Institute for Quality (SIQ), which is the organization managing the Swedish Quality Award. Only companies that are profit-driven were included in the study, because non-profit organizations do not always strive to increase the financial performance due to other business incentives. A total number of 21 companies conformed to these criteria. In some cases a unit of a larger company had received a quality award. In these cases the total company was included in the study if the unit that had received the award had 40 percent or more of the total number of employees of the company. This limitation was set to get as many of the award recipients as possible included in the study and yet not decrease the reliability of the study. It can be argued that if 40 percent of the company has implemented a TQM program, the rest of the company should to some extent also have been working with TQM. Further, since the authors wish to study the development of the financial performance after the award announcement, only companies that received an award in year 1999 or before were included in the study (for quality award recipients later than 1999 no sufficient data are yet available). A total of 17 companies conformed to the above-described criteria. The exclusions that were made were due to the following reasons:

- One award recipient was closed down by their foreign owner and the production was moved abroad.
- One award recipient presented the financial figures in a way that made comparisons impossible.
- Two award recipients constituted less than 40 percent of the company that provided the financial figures.

The companies that were included in the study came mainly from the manufacturing industry and had a relatively large number of employees, see Table I. The classification by the Commission of the European Communities regarding the size of companies was used (0-9 employees, 10-49 employees, 50-249 employees and 250 or more employees).

Selection of comparisons

To assess the financial benefits of implementing TQM, it would be ideal to compare the actual companies’ performance with the performance that would have been the case if the companies had not implemented TQM. Since, in this study, it was impossible to find or construct such ideal comparisons, two other comparisons were chosen.
First, each company that had received a quality award in Sweden was individually compared to respective branch index in order to make a valid comparison regarding the financial performance. Different branch indices for different sizes of companies regarding total number of employees were available through Statistics Sweden (SCB). Each company that had received a quality award was therefore separated into different sizes (based on the number of employees) and branches.

Second, a comparison was performed with the award recipients’ stated competitors, i.e. each award recipient was individually compared with one of its competitors. This comparison gives an idea how the quality recipients have developed in relation to their competitors. Only one competitor was identified for each company that had received a quality award. In those cases, when a competitor could not be identified or the competitors to the company were a non-Swedish company, no competitor was included in the study. In those cases, when the award recipient stated that they had many competitors, the competitor that was closest in size was selected. These two comparisons give an indication of the benefit of a successful implementation of TQM.

Selection of indicators

The following indicators were used in order to study the performance development for the companies included in the study:

1. **Percentage change in sales.**

2. **Return on assets**, which is the result after financial income and financial costs divided by 0.7 multiplied by non-taxed reserves plus assets. This indicator is, according to Hendricks and Singhal (1997), an efficiency indicator, which is based on the assumption that implementing an effective TQM program increases the revenues.

3. **Return on sales**, which is the operating income divided by sales. This indicator is based on the assumption that an effective TQM program will increase the revenues. Lemak and Reed (1997) discuss the advantage of using operating income instead of net income to ascertain the impact on financial performance of TQM. They state that operating income is a better measure of performance than net income since it is not greatly affected by accounting methods, tax strategies, or financial structure.

4. **Percentage change in total assets.**

5. **Percentage change in number of employees.** The opinions differ among TQM experts regarding what impact TQM has on this indicator, as well as change in total assets. Some claim that TQM requires investment in people and capital, resulting in

<table>
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<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of companies</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>0-9 employees</td>
<td>–</td>
<td>1</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>1</td>
</tr>
<tr>
<td>10-49 employees</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>2</td>
<td>2</td>
<td>–</td>
<td>4</td>
</tr>
<tr>
<td>50-249 employees</td>
<td>–</td>
<td>–</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>250+ employees</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>–</td>
<td>7</td>
</tr>
<tr>
<td>Manufacturing industry</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>–</td>
<td>10</td>
</tr>
<tr>
<td>Service industry</td>
<td>–</td>
<td>1</td>
<td>–</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>7</td>
</tr>
</tbody>
</table>
an increase in employment and total assets. Others believe that TQM programs increase the effective productive capacity of the company because of process improvements and reduction in defects, rework, and waste among other things. This improvement could result in a decrease in employment and total assets (Hendricks and Singhal, 1997).

The indicators chosen and the approach for calculating and comparing them with the control groups differ to some extent compared to the study by Hendricks and Singhal (1997). Change in operating income was not included in our study, since some of the companies, both award recipients and their competitors, showed a negative operating income on some occasions. Due to the fact that it is impossible to calculate a change in operating income from a negative result, expressed in percentages, this indicator was excluded. If change in operating income, expressed in percentages, would be studied, and the companies that showed a negative operating income would be excluded on the occasions when they developed positively from a negative point of departure, the result from the operating income indicator would be biased. However, return on sales, which was included in this study, is defined as operating income divided by sales. Hence, the change in operating income is, to some extent, reflected in this indicator. Hendricks and Singhal (1997) excluded, when calculating the operating income, the years that the companies showed a negative operating income. However, one can argue that this gives a biased result. The number of companies included in our study is far less than in Hendricks and Singhal (1997), since the number of award recipients is much less in Sweden than in the USA, and the bias of excluding companies would therefore turn out to be even more severe for this study.

The same problem of calculating change, expressed in percentages, with negative numbers as departure also concerned the indicators return on sales and return on assets. The annual change of these indicators was not calculated. Instead, the results (the actual ‘value’ in return on sales and return on assets) for the competitor and the branch index were subtracted from the indicator of the particular award recipient. Thereafter, a median value of the differences was calculated. This procedure was used for all the years included in the study.

The use of medians when comparing the performance indicators was based on the fact that the medians are more robust than average values to problems concerning outliers, wide tails or different forms of skewness.

The other indicators, change in sales, change in total assets and change in numbers of employees were calculated in the same way as by Hendricks and Singhal (1997). The change of these indicators for the competitor and branch index was subtracted from respective change of these indicators of the award recipient. Further, the median value of the difference between the award recipient and their stated competitor and branch index was calculated to give a general reflection of the development.

The indicators of the award recipients and respective competitor were found in annual reports available mainly from the companies and the Swedish Patent and Registration Office (PRV).

Selection of comparison periods

A six-year period, divided into one implementation period and one post implementation period, was studied regarding these indicators. The implementation period was defined as starting four years before the company received the quality award and ending two years before the award, see Figure 2. Since the applicants of the quality award start
describing their activities and results approximately one year before the announce-
ment of the recipient in order to hand in the application on time and give examiners
and judges time to evaluate the application, it can be argued that the activities
and results described in the application should be in place one year before the
announcement of the recipient of the award. Hence it is most convenient to start
the post implementation period one year before the announcement of the recipient
of the award. The post implementation period started one year before the award was
received and ended one year after the award, see Figure 2.

In the GAO (1991) study, 20 companies that were among the highest-scored
applicants in 1988 and 1989 for the Malcolm Baldrige National Quality Award were
evaluated. The companies in the GAO study realized the initial benefits with TQM
after two and a half years. Hence, after a three-year implementation period, the
companies in this study should be able to show possible benefits with TQM regarding
the studied indicators. Also, the indicators were collected, if possible, after the post
implementation period until year 2000, in order to see possible progress after
the post implementation period (i.e. it is possible to study the development of the
indicators after the post implementation period for the companies that received
a quality award before 1999). This results in the fact that the development of the
indicators can be presented up to two years after the award announcement.

Exclusions of observations

Some observations were excluded due to the following reasons:

- Two quality award recipients of the year 1999 were excluded for the year after the
  post implementation period due to the fact that no current data were available.
- No Swedish competitor could be identified for four of the award recipients.
- No branch indices could be constructed for two of the award recipients within the
  insurance and real estate business.
- No branch indices were available between five and four for the indicators of number
  of employees and total assets.
- No branch indices were available for one award recipient for four and for one award
  recipient for three, due to few companies in the branch indices.
Tables II and III present the number of comparisons made for the different indicators and for the different years.

**Results**

Two main types of results are presented below. First, the development of the indicators of the award recipients in comparison with the competitors and the branch indices is presented on an annual basis (see Figures 3 to 7). Second, the indicators of the award recipients in comparison with the competitors and the branch indices are presented as a median during the implementation period and the post implementation period (see Figures 8 and 9).

**Annual comparisons**

In Figures 3 to 5 the indicators, change in sales, change in total assets and change in numbers of employees are presented.

As shown in Figures 3 to 5 the award recipients outperform their competitors and branch indices for the indicators of change in sales, change in total assets and change in total number of employees for most of the studied years. The indicator, change in sales, shows the largest difference between the award recipients and the competitors and the branch indices. Also, between the year of the announcement and one year after the announcement (”0to1”), the award recipients outperform their competitors and branch indices for all three indicators.

In Figures 6 and 7 the return on sales and return on assets are presented.

<table>
<thead>
<tr>
<th>Table II</th>
<th>The number of comparisons performed for the different years for the indicators of return on assets and return on sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>–4</td>
</tr>
<tr>
<td>Award recipient – competitor</td>
<td></td>
</tr>
<tr>
<td>Return on assets</td>
<td>13</td>
</tr>
<tr>
<td>Return on sales</td>
<td>13</td>
</tr>
<tr>
<td>Award recipient branch index</td>
<td></td>
</tr>
<tr>
<td>Return on assets</td>
<td>15</td>
</tr>
<tr>
<td>Return on sales</td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table III</th>
<th>The number of comparisons performed for the different years for the annual percentage change in number of employees, change in total assets and change in sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>–5 to –4</td>
</tr>
<tr>
<td>Award recipient – competitor</td>
<td></td>
</tr>
<tr>
<td>Number of employees</td>
<td>10</td>
</tr>
<tr>
<td>Total assets</td>
<td>10</td>
</tr>
<tr>
<td>Sales</td>
<td>10</td>
</tr>
<tr>
<td>Award recipient branch index</td>
<td></td>
</tr>
<tr>
<td>Number of employees</td>
<td>–</td>
</tr>
<tr>
<td>Total assets</td>
<td>–</td>
</tr>
<tr>
<td>Sales</td>
<td>14</td>
</tr>
</tbody>
</table>
The award recipients outperform their competitors and branch indices for most of the years, see Figure 6 and 7. A positive trend for the award recipients can also be identified for the indicator of return on assets in comparison with their competitors.

Period comparisons

Figures 8 and 9 present the median value of the indicators of the award recipients in comparison with the competitors, and the branch indices during the implementation period and post implementation period. As an example, the difference between the award recipients and the competitors for the indicators of percentage change in sales and total assets are shown in Figures 3 and 4.

**Figure 3** The piles show the median differences of change in sales between the award recipients and the competitors, and between the award recipients and the branch indices, during different years.

**Figure 4** The piles show the median differences of change in total assets between the award recipients and the competitors, and between the award recipients and the branch indices, during different years.

Zero indicates the year of the award announcement. A positive percentage means that the median award recipient outperforms its competitor or branch index.
sales during the implementation period was calculated by, first, subtracting all the percentages changes in sales of the competitors from respective award recipients. Second, the median difference was calculated, including all the differences between the award recipients and the competitors for the indicator of change in sales for all of the years in the implementation period. This median difference is represented in the first pile from the left in Figure 8. The same procedure was used for the other comparisons, indicators and periods.

Figure 5 The piles show the median differences of change in number of employees between the award recipients and the competitors, and between the award recipients and the branch indices during different years.

Figure 6 The piles show the median differences of return on sales between the award recipients and the competitors, and between the award recipients and the branch indices, during different years.
Figure 7 shows that the award recipients outperform both the competitors and the branch indices for the indicators of return on assets, during different years. Confidence intervals, with a 95 percent confidence level, were created. The confidence intervals:

-4 -3 -2 -1 0 1 2

Year

Zero indicates the year of the award announcement. A positive percentage means that the median award recipient outperforms its competitor or branch index.

Figure 8 shows that the award recipients outperform both the competitors and the branch indices for the indicators of change in sales and return on sales during the implementation period. On the other hand, this is not the case for the other indicators.

To investigate the precision of the median values, reflected in Figure 8, confidence intervals, with a 95 percent confidence level, were created. The confidence intervals:

A positive percentage means that the median award recipient outperforms its competitor or branch index.
are non-parametric, and accordingly not based on any distributional assumptions. These confidence intervals are presented in Table IV.

The wider confidence interval, the less accurate is the estimation of the median value. If the interval contains 0, a significant difference between the award recipients and the competitors, or between the award recipients and the branch indices cannot be shown. However, if the confidence interval does not contain 0, there is a significant difference between the award recipients and the competitors, or between the award recipients and the branch indices. Hence, for the indicator of change in sales, there is a significant difference, with a 95 percent confidence level, between the award recipients and the competitors, and the branch indices, in that sense that the award recipients increase their sales more than the control groups during the implementation period. The same result is also shown for the indicators of return on sales and for the return on assets, when comparing the award recipients with the branch indices.

As shown in Figure 9, the award recipients outperform their competitors and branch indices for all the studied indicators during the post implementation period.

Table V shows the confidence intervals, at a 95 percent confidence level, for the indicators presented in Figure 9.

![Table IV](image-url)

The table shows the confidence intervals with a 95 percent confidence level for the indicators and the comparisons with the competitors (comp.) and the branch indices (index) during the implementation period.

<table>
<thead>
<tr>
<th>Indicators Comparison</th>
<th>Sales</th>
<th>Total assets</th>
<th>Number of employees</th>
<th>Return on sales</th>
<th>Return on assets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Comp.</td>
<td>Index</td>
<td>Comp.</td>
<td>Index</td>
<td>Comp.</td>
</tr>
<tr>
<td>Upper limit</td>
<td>8.64</td>
<td>10.30</td>
<td>5.50</td>
<td>3.66</td>
<td>2.75</td>
</tr>
<tr>
<td>Lower limit</td>
<td>1.38</td>
<td>2.53</td>
<td>-1.98</td>
<td>-20.37</td>
<td>-4.29</td>
</tr>
</tbody>
</table>
During the post implementation period, and for the comparison between the award recipients and the branch indices, there is a significant difference, in that sense, that the award recipients outperform the branch indices for the indicators of change in sales, number of employees, return on sales and return on assets. However, there is only a significant difference for the indicator of return on assets, when comparing the award recipients with the competitors during the post implementation period. On the other hand, one can argue that the comparison with the branch indices reflects the reality better than the comparison with the competitors, since the branch indices include many companies from that specific branch.

Discussion

One of the incentives with this study was to investigate the development of financial performance of quality award recipients compared to their stated competitors and median branch indices. Figures 8 and 9 show an improvement between the implementation period and the post implementation period for all of the studied indicators except for the indicator change in sales. However, the differences between the two periods are not that large. This could be due to the fact that quality award recipients might have been high performing companies even before the implementation of TQM.

This study does not reflect an ideal comparison between companies that have successfully implemented TQM (award recipients) with companies that have not (competitors). When looking at the comparison between the award recipients and their competitors, the quality work of the competitors is a possible bias. This is due to the fact that at least some of the companies are known to have been working with TQM, although they have not applied for any type of award. The same situation is also a possibility for the companies that constitute the branch indices.

The exclusions discussed in the methodological section might also have influenced the result of this study. Yet the exclusions are relatively small and should not have influenced the results to a large extent.

For the branch indices, there was another problem that might have influenced the result of this study. For manufacturing companies with fewer than 20 employees and service companies with fewer than 50 employees, for the years before 1996, the branch indices are based on random samples of companies. This result in the fact that the companies included in the branch indices vary up to year 1996 for five of the award recipients[2]. However, according to the authors of this article, the negative effect of this is limited since the branch indices still should reflect the general picture.

Conclusion

During the implementation period the award recipients do not necessarily perform better than their competitors and the branch indices. On the other hand, the award
recipients perform better than their competitors and branch indices on all studied indicators during the post implementation period. For example, the award recipients show a significantly higher return on assets than their competitors and the branch indices during the post implementation period of TQM. Also, the indicators, change in sales, change in number of employees and return on sales, show that the award recipients outperform the branch indices during the post implementation period. The findings indicate that the financial performance, measured by the stated indicators, develop more advantageous for companies that have successfully implemented TQM, than their branch indices and stated competitors.

Acknowledgment

The authors like to acknowledge the financial support of The Association of Swedish Engineering Industries and the Swedish Institute for Quality (SIQ). The authors are also grateful to Professor Bengt Klefsjö, Anna Sjödahl (Quality and Environment director at SCANIA CV AB) and Torsten Olsson (Project manager at SIQ) for valuable comments. This project has been conducted at the division of Quality Technology and Statistics at Luleå University of Technology, and is a part of a larger project concerning quality and profitability, which will be conducted in cooperation with SIQ and Stockholm School of Economics.

Notes

1 Lascelles and Dale (1991) use the term of total quality improvement (TQI) instead of total quality management (TQM). TQI is, according to the authors, an enabling mechanism based on continuous improvement that incorporates the strategic components that drive the entire business organization. TQI are required to reach the vision of TQM.

2 I.e. in year four all companies that constitute the branch indices are included, but for the following years, up to year 1996, the branch indices only constitute those that happened to be included in the random sample. The minimum number of “four year companies” that constitute the branch indices is five since that is a requirement set by SCB to compute the median values.

References


Paper II

Effects of in-company quality awards on organizational performance


Total Quality Management & Business Excellence
Vol 14 No 2, pp. 235-242

This paper was also presented at the Seventh World Congress for Total Quality Management: Business Excellence. Make It Happen, Verona, Italy, 25-27 June 2002. The paper was published in the conference proceedings, Vol 2, pp. 197-204.
Effects of in-company quality awards on organizational performance

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ABSTRACT  The relationship between total quality management (TQM) practices and improved performance has been frequently discussed in the literature. In this paper, the costs and the effects of in-company quality awards on performance are discussed and analysed. The paper covers a survey of Swedish companies that use or have used in-company quality awards to stimulate TQM efforts and thereby to improve performance. The study cannot show any strong evidence of improved performance for units that applied for the in-company quality award. However, in contrast to units that have not applied, some units that have applied for the in-company quality award considered that the results related to performance have improved greatly. One large positive effect perceived by the participating units was increased customer orientation while the largest costs were put on the description of activities and the improvement work itself.

Introduction

The relationship between total quality management (TQM) practices and performance is frequently discussed. For example, some researchers state that TQM programmes are ineffective (Harari, 1997). Bergquist & Ramsing (1999) and Przasnyski & Tai (1999) argue that it is difficult to establish a relationship between TQM and the profitability of the organization. On the other hand, results have also been published that state that a successful implementation of TQM resulted in increased performance of the organisation, e.g. Lemak & Reed (1997) and Hendricks & Singhal (1999). Some of the research into the relationship between performance and systematic TQM efforts is conducted by comparing companies that have made quality investments—often quality award recipients—with other ‘control companies’, which have not made such an investment, e.g. Hendricks & Singhal (1997) and Bergquist & Ramsing (1999).

One way to stimulate a company culture based on the core values of TQM is to work with a quality award. Today, the spectrum of different quality awards is quite large and covers international, national, regional, branch-wise and in-company quality awards. Some examples of quality awards that have been used by many organizations and are relatively widespread are the Malcolm Baldrige National Quality Award (MBNQA) and the European Quality Award (EQA). In many countries, however, the development of national quality awards is still new or non-existent (Chuan & Soon, 2000). For a thorough list of quality...
awards and a comparison between different awards, see for example Hagen (2000) or Vokurka et al. (2000).

Svensson & Klefsjö (2000) have suggested different phases of the award process. They argue that the self-assessment that is used in the award process has four phases, similar to the Deming cycle. The first phase, ‘planning’, includes asking questions such as: why should we perform a self-assessment? When should the work be done? Who should be involved? Which model should be used as a basis for the description? The second phase, ‘do’, consists of obtaining a description of the organization’s way of working. The third phase, ‘study’, consists of the analysis of the description and the forth phase, ‘act’, consists of planning for improvements. These phases are similar in the different kinds of awards, e.g. international, national, regional, branch-wise and in-company quality awards.

The main difference between these awards is the group of units and companies at which the award is aimed. For example, only units within an organization can apply for an in-company quality award, while the national quality award is open to all organizations/units in the country. One possible benefit of an in-company quality award in comparison with a national quality award is that it is easier for units to benchmark and learn the best practices since access to the recipient of an in-company quality award is easier. Further, van der Wiele et al. (1996) claim that both internal and external learning in terms of best practices and transfer of ideas is taking place when performing self-assessment, and this procedure contributes to the improvement of the performance of organizations.

Myers & Heller (1995) claim that 80% of the organizations within AT&T have used its in-company quality award, called the Chairman’s Quality Award (CQA), to assess each other. Based on the processes and criteria of the Malcolm Baldrige National Quality Award, the CQA process consists of site visits and award criteria such as leadership, strategic quality planning and customer focus. The in-company quality award of AT&T shows a great increase in average scores from the units that applied over the years (Myers & Heller, 1995). However, it is not clear whether the increase in average scores for the in-company quality award of AT&T comes from improved bottom line results or if the units improve the process, including writing skills, when applying for the award a second and third time. In another paper, Hannukainen & Salminen (1998) discuss Nokia’s current state analysis programme, which has many similarities to the in-company quality awards in this paper. This programme is tailored to fit Nokia and consists of five different areas; leadership, customer, planning, process and people. By this successful programme, Nokia asks its people around the globe to establish the most challenging performance targets based on their self-assessment of process capability.

Today, there are some companies in Sweden that are working with in-company quality awards. There are also companies that have ended or are ending their work with in-company quality awards. Our literature studies indicate that no independent evaluation has been made to estimate the costs and effects of in-company quality awards, and to investigate whether in-company quality awards in fact increase the performance of the company. In this paper, the impact of in-company quality awards on performance is analysed by studying units that have applied for an in-company quality award and by comparing these units with units that have not applied for an in-company quality award. In addition, other relevant effects of the in-company quality award are studied and the costs associated with the work of in-company quality awards are estimated.

Method

In Sweden, there are five companies that have, or have had, an in-company quality award. One of these companies, the Swedish Telecom operator (Telia), ended its in-company quality
EFFECTS OF QUALITY AWARDS ON PERFORMANCE

award in 1995. This company was not included in the study due to the difficulties for the people within the company remembering and estimating the effects and costs of the in-company quality award. Furthermore, Vattenfall, which had had an in-company quality award, was not included in the study owing to large reorganizations. In this case, the reorganization made it impossible to reconstruct the original units that once applied for the in-company quality award.

A questionnaire was prepared in order to collect the data. The questionnaire will also serve as an input to further qualitative studies, on the effects of in-company quality awards, which will validate the results from this study. In total, this study covers three different companies—the Swedish National Road Administration (‘Vägverket’), Sydkraft (a supplier of electricity) and the Swedish Post (‘Posten’). The questionnaire was sent to 77 units within these three companies. The respondents of the questionnaire were heads of these units. The response rate to the questionnaire was 66%.

When evaluating the performance it is crucial first to identify appropriate key-indicators. Input regarding appropriate key-indicators came mainly from the General Accounting Office study (GAO, 1991), which is often referred to in the literature discussing benefits of TQM. In the GAO study, 20 companies that were among the highest-scored applicants in 1988 and 1989 for the Malcolm Baldrige National Quality Award were evaluated in four different groups of key-indicators:

- customer satisfaction indicators (called key-indicators of customers in this study)
- operating indicators (called key-indicators of processes in this study)
- employee indicators (called key-indicators of employees in this study)
- financial performance indicators (called key-indicators of owners in this study).

Similar areas of key-indicators are also used in the Balanced Scorecard (Kaplan & Norton, 1996). Bergquist & Ramsing (1999) and Zairi et al. (1994) also use these key-indicators in order to determine the effects of TQM practice on the performance. See also Shetty (1993), who makes a thorough discussion concerning the results of the GAO study. The main result from the GAO study, and from articles discussing the results from the GAO study, is that TQM practices do improve bottom line results. The GAO study further showed that better employee relations, improved operating procedures, greater customer satisfaction and an increased financial performance were achieved through TQM practices.

In order to find out if the key-indicators from the GAO study were appropriate in this study, the quality managers of the surveyed companies were used as a reference group. As a result, some of the key-indicators from the GAO study were not included in the questionnaire, while others were added to describe better the companies’ activities and results. However, the groups of key-indicators remained the same.

In 1998, two of the surveyed companies initiated their in-company quality award and one company started in 1997. To be able to study the same time period for all the surveyed companies, 1998 was chosen as an approximate starting time for the development of the key-indicators. Hence, the respondents of the questionnaire were asked to estimate the development of the key-indicators from 1998 until the end of 2001. It took an average of two and a half years for the companies in the GAO study to notice the benefits with TQM. Therefore, a period of four years was considered to be enough time to study the results from the use of the in-company quality award.

The surveyed units that applied for the in-company quality award were also asked to estimate the work effort performed in each of the four phases identified by Svensson & Klefsjö (2000). In addition to these phases, training was included in the questionnaire. In order to apply for an in-company quality award the unit has to train its employees in TQM
and self-assessment. Training was therefore identified as a fifth phase. Hence, the phases or costs that were included in the questionnaire were planning, training, description of activities, analysis of descriptions and improvements.

Results

The questionnaire was divided into four parts. First, all the respondents were asked to estimate the development of the key-indicators within the four groups of customers, processes, employees and owners, from the beginning of 1998 until the end of 2001. Second, the respondents that have worked with an in-company quality award were asked to state some effects of the in-company quality award and estimate the importance of the effect on customers, processes, employees and owners. Third, the respondents that worked with the in-company quality award were asked to estimate the costs of applying for an in-company quality award with the phases suggested by Svensson & Klefsjö (2000). Fourth, all the respondents were asked to give some general opinions about in-company quality awards. The respondents of the questionnaire were divided into three groups:

(a) units that have not applied for the in-company quality award,
(b) units that applied once for the in-company quality award,
(c) units that applied twice or more times for the in-company quality award.

For a thorough presentation of the results from the questionnaire, including the development of all the key-indicators, see Eriksson (2002). However, the general development of the key-indicators and other relevant indicators that the unit used to measure the results within the four groups (customers, processes, employees and owners) are displayed in Figs 1–4.

As shown in Figs 1–4, only units that applied one or more times perceived great improvements for the four groups of key-indicators.

Part two of the questionnaire was used to analyse other relevant effects of the work with in-company quality awards. One large positive effect stated by the respondents that worked with the in-company quality award was increased customer orientation. Increasing customer satisfaction is also one of the main aims with TQM. Other effects that the respondents mentioned were increased focus on improvements, processes, quality, results and an increased

![Figure 1](image-url)

Figure 1. The figure shows the percentage of the answers for each alternative regarding the general development of key-indicators of customers. The units were divided into three groups: units that have not applied, units that applied once and units that applied twice or more times for the in-company quality award.
EFFECTS OF QUALITY AWARDS ON PERFORMANCE 239

**Figure 2.** The figure shows the percentage of the answers for each alternative regarding the general development of key-indicators of processes. The units were divided into three groups: units that have not applied, units that applied once and units that applied twice or more times for the in-company quality award.

**Figure 3.** The figure shows the percentage of the answers for each alternative regarding the general development of key-indicators of employees. The units were divided into three groups: units that have not applied, units that applied once and units that applied twice or more times for the in-company quality award.

comprehensive view of the business. Some of the perceived effects have many similarities to the core values in the self-assessment model used in the in-company quality awards, such as customer orientation, a focus on improvements and processes.

In the questionnaire, the respondents that have worked with the in-company quality award were also asked to estimate the importance of the effects mentioned above for employees, processes, owners and customers. The respondents considered that the effects of the in-company quality award had the largest importance to employees, while owners were ranked second, processes third and the smallest effect was on the customers. The strong impact that the effects had on the employees should be able to increase the TQM-culture within those units that applied for the in-company quality award, which can result in long-term advantages for those units.

Part three of the questionnaire included an estimation of the costs for the units with the in-company quality award. The median costs for the units applying for the in-company
quality award are displayed in Fig. 5. The costs were divided into the different phases of the in-company quality award and into different years for the application.

The largest costs with the in-company quality award, according to Fig. 5, were considered to be the description of activities and the improvement work that followed. However, the spread was largest for the phase of improvements, but also quite large for all the phases. The median cost for a unit to apply for an in-company quality award in the first year was considered to be €58 000. The median cost increased to €64 000 the second year, while it decreased to €46 000 the third year the unit applied for the in-company quality award.

In part four, questions regarding the respondents’ general opinions of the in-company quality award were asked. Overall, 77% of the respondents that applied for the in-company quality award stated that they have a positive attitude towards the in-company quality award, while 62% of the respondents that have not applied stated that they have a positive attitude towards the in-company quality award. Only 4% of the respondents that applied for the in-company quality award had a negative attitude, and 15% of the respondents that did not
apply stated the same attitude. The rest of the respondents had neither a positive nor a negative attitude.

Furthermore, 68% of the respondents that applied for the in-company quality award considered that the in-company quality award is profitable, while 42% of the respondents that have not applied considered, even if they did not apply, that the in-company quality award is profitable. In addition, 20% of the respondents that applied for the in-company quality award did not perceive any profitability, and 25% of the respondents that have not applied shared that opinion. The rest of the respondents did not have an opinion regarding the profitability of the in-company quality award.

Discussion

In order to increase the reliability of this study and to make it possible for other people to repeat the study, the questionnaire and a more detailed description of the study is presented in Eriksson (2002). To increase the validity of the study, two main activities were performed. First, the questionnaire was reviewed both internally and externally in order to correct for misinterpretations and other flaws. Second, a non-response analysis was performed. The main purpose of the non-response analysis was to investigate whether the opinion of respondents that did not answer differed from the ones that answered the questionnaire. Fifteen units that did not answer the questionnaire were randomly selected and asked if they could fill in the questionnaire. A higher percentage of the respondents in the non-response analysis stated that their unit had not applied for the in-company quality award. However, there was no clear evidence that the managers that did not answer the questionnaire in the first place differed in their opinion, regarding the key-indicators and their attitude to the in-company quality award. However, there was no clear evidence that the managers that did not answer the questionnaire in the first place differed in their opinion, regarding the key-indicators and their attitude to the in-company quality award, compared with the group that did answer.

Conclusions

Even if this study includes units that were not necessarily among the highest-scored applicants, such as those included in the GAO study, some positive effects on the performance have been identified. Some units that applied for the in-company quality award experienced that the general development of the key-indicators were improved greatly for all the four groups of key-indicators, while none of the units that have not applied stated the same positive development. However, one may argue that the development of the key-indicators does not differ much between the groups of units. Some perceived positive effects of the in-company quality award have been identified, such as an increased customer orientation. The remarkable thing is that the identified effects had the largest importance to the employees and not to the customers, owners or processes of the company. The largest costs perceived by the respondents were the description of activities and the improvement work itself. Further qualitative studies will be performed in order to validate the results from this study and to understand better the effects of in-company quality awards.

Acknowledgements

The authors would like to acknowledge the financial support of the Swedish National Road Administration (‘Vägverket’) and the Swedish Institute for Quality (SIQ). The authors would also like to thank Professor Bengt Klefsjö for valuable comments.
References


Paper III

Experiences of working with in-company quality awards. A case study


The TQM Magazine
Vol 15 No 6, pp. 397-407
### Background

Total quality management (TQM) has become a recognised and frequently discussed term in management literature. Some argue that TQM is a management approach, see, for example, Dale (1999), while others state that it is a management system, see, for example, Shiba et al. (1993) and Hellsten and Klefsjö (2000). The latter authors define TQM as a management system in continuous change, which consists of values, methodologies and tools, the aim of which is to increase external and internal customer satisfaction with a reduced amount of resources.

One way to work with TQM and its values, methodologies and tools, and thus try to increase customer satisfaction, is to apply for a quality award. Some examples of the criteria of quality awards that have been used by many organisations and are widespread are the criteria of the Malcolm Baldrige National Quality Award (MBNQA) and the European Quality Award (EQA). In many countries, however, the development of national quality awards is still new or non-existent, see Chuan and Soon (2000). For a thorough list of national and international quality awards and a comparison between different awards, see, for example, Vokurka et al. (2000) and Johnson (2002).

The Swedish Institute for Quality (SIQ), which was established in 1990, has had a large impact on quality development in Sweden. In 1992 the Swedish Quality Award was launched by the SIQ. The Swedish Quality Award has influenced the establishment of several regional, branch-wise and in-company quality awards in Sweden. Most of these quality awards in Sweden are also based on the whole or parts of the SIQ model for performance excellence. One main difference between the quality awards is the group of units and companies that the award is aimed at, or in other words, who are allowed to participate in the award process. For example, only units within an organisation can apply for an in-company quality award, while a national quality award is open for most of the organisations/units of the country. Today,
there are mainly two companies in Sweden, the Swedish Post Office and the Swedish National Road Administration, which are working with an in-company quality award. There are also companies in Sweden that have ceased working with in-company quality awards. These include Swedish Telecom, and two electricity suppliers, Vattenfall and Sydkraft.

Due to the fact that in-company quality awards have not aroused great research interest, according to literature studies, a project is now in progress in order to study the effects of in-company quality awards. Earlier results of this project based on a questionnaire study (see Eriksson et al., 2002) showed that some units that had applied for an in-company quality award experienced that the general development of some studied key indicators were improved greatly, while none of the units that had not applied stated the same positive development. To understand better how a unit experiences and is affected by the work connected with an in-company quality award, as well as to determine whether the results from Eriksson et al. (2002) could be verified, an in-depth analysis needed to be performed. Hence, the purpose of this study is to create an understanding of how a unit experiences and is affected by the work connected with an in-company quality award.

Theory

In this section, the main methodology and tool that are used in the in-company quality awards are presented. Hellsten and Klefsjö (2000) argue that methodologies are “ways to work within the organisation to reach the values” and that a methodology “consists of a number of activities performed in a certain way”. Hellsten and Klefsjö (2000) define tools as “rather concrete and well-defined tools, which sometimes have a statistical basis, to support decision-making or facilitate analysis of data”.

Self-assessment

Self-assessment can be regarded as a methodology, see Hellsten and Klefsjö (2000). Self-assessment has many similarities to the phases that an organisation goes through when applying for a quality award. Hence, self-assessment is used in this paper to describe the work connected with in-company quality awards. According to EFQM (1996), self-assessment is “a comprehensive, systematic and regular review of an organisation’s activities and results referenced against a model of business excellence”.

Svensson and Klefsjö (2000) have suggested different phases of self-assessment (see Figure 1). They argue that the self-assessment procedure has four phases, similar to the four phases of the improvement cycle. The first phase, “plan”, includes asking questions like: “Why should we perform a self-assessment?”, “When should the work be carried out?”, “Who should be involved?” and “Which excellence model should be used as a basis for the description?”. This phase is developed further in Conti (2002), who claims that the organisation has to ask three questions (“Why?”, “How?” and “What?”) before initiating self-assessment. The second phase, “do”, consists of obtaining a description of the organisation’s way of working. The third phase, “study”, consists of the analysis of the description, often resulting in some form of feedback report based on the description. The fourth phase, “act”, consists of planning for improvements.

The effects and experiences of working with self-assessment have been studied earlier. For example, van der Wiele et al. (1996) identified, on the basis of data from 117 organisations that had experiences of self-assessment, the five most important reasons for organisations taking the initiative to start the process of self-assessment. These are:

**Figure 1** The self-assessment procedure consists of four phases, which together correspond to the four phases of the improvement cycle “plan-do-study-act”
(1) to find opportunities for improvement;
(2) to create a focus on the TQM model portrayed by the award criteria;
(3) to direct the improvement process;
(4) to provide new motivation for the improvement process;
(5) to manage the business.

Moreover, Brown and van der Wiele (1996) show, on the basis of a national postal survey of self-assessment practices in Australia, that the reasons for using self-assessment are mainly to find opportunities for improvement and to direct the improvement process, while the goals for introducing self-assessment are to improve business performance, to drive continuous improvement and to increase quality awareness in all aspects of the business. According to Brown and van der Wiele (1996), the organisations are positive in general to the results of self-assessment. Moreover, Finn and Porter (1994) state, according to a survey study, that companies are increasingly using self-assessment and that benefits from this approach are quickly realised.

Samuelsson and Nilsson (2002) state, after studying nine large organisations, that there is no universal methodology for self-assessment. On the contrary, their findings indicate that several approaches to self-assessment are successful, as long as they fit the organisation, are used continuously, and foster participation. Moreover, van der Wiele et al. (1996) state that organisations use self-assessment both on an internal basis, meaning that no external people are involved in the assessment, and on an external basis.

**SIQ model for performance excellence**

Many different tools have been developed in order to support self-assessment. Swedish organisations have to a relatively large extent been using the booklet with the SIQ model for performance excellence, which is based on 13 core values and consists of seven criteria, which are divided further into 27 sub-criteria. The general framework and the criteria of the SIQ model are displayed in SIQ (2002) and in Figure 2. The booklet with the criteria can be regarded as a tool (see Hellsten and Klefsjö, 2000). The criteria are based on core values that are the foundation of TQM. The core values of the SIQ model for performance excellence are: customer orientation, committed leadership, participation by everyone, competence development, long-range perspective, public responsibility, process orientation, prevention, continuous improvement, learning from others, faster response, management by facts and interaction.

The SIQ model for performance excellence, which was inspired by the MBNQA model, has many similarities to the latter. However, there are also differences between the two award models. For example, the SIQ model for performance excellence puts more emphasis on the evaluation of and improvement in all the criteria addressed and on the practice of TQM principles in all organisational activities. There is also relatively more emphasis on the organisation’s impact on society and on the organisation’s commitment to the customers compared with most other national quality award models, see Chuan and Soon (2000).

**Methodology**

**Case selection**

In order to perform an in-depth study of how an organisational unit experiences and is affected by the work connected with in-company quality awards, a case study by Yin (1994) was chosen as the most appropriate strategy to collect data. Yin (1994) discusses relevant situations for different research strategies. Further, units that are and have been working with an in-company quality award for some time were prioritised in the case selection due to the fact that such units have a greater experience of the in-company quality award. A single case study, instead of a multiple case study, was chosen due to a restriction of resources and because the case study will also serve as a prelude to further studies on the subject (see Yin, 1994). Finally, a unit within the Swedish National Road Administration that has been working with an in-company quality award since 1998, and has written three descriptions was chosen as an appropriate case study.

**Selection of units of analysis**

Before initiating a case study, one also has to decide how many units of analysis one wishes to investigate. In a holistic design one unit is examined, while in an embedded design more than one unit of analysis are examined. The sensitivity of the study increases as more units
within the case are used (see Yin, 1994). Hence, an embedded single-case design was chosen. To understand the experiences better and to obtain a broader picture of the work connected with the in-company quality award, and thus increase the sensitivity of the study, employees who had different levels of involvement in the self-assessment process and different levels of responsibility at the unit were interviewed and analysed on the basis of which perspective they possessed. This analysis was performed because employees with different perspectives, or in other words with different levels of involvement and responsibility, probably look upon the work connected with the in-company quality award differently. In total, five semi-structured interviews were held. Four of the employees who were interviewed were taking an active part in working with the in-company quality award, while one did not participate in the work. Two of the employees who were interviewed had during different periods the responsibility of managing the work at the unit connected with the in-company quality award. The other two had mainly taken an active part in the description of activities (“Do” in Figure 1) and in the plan for improvements (“Act” in Figure 1). Further, one of the respondents was the head of the unit, while another one was the head of a division within the unit. The answers from the employees were analysed and compared on the basis of which perspective the employees possessed, e.g. their involvement in the self-assessment process and their level of responsibility at the unit. For example, the head of the unit was considered to have a high degree of responsibility at the unit, but only a medium involvement in the self-assessment process. The employee who did not participate in the self-assessment process was considered to have a low degree of involvement and a low degree of responsibility at the unit.

Selection of inquiries
The results of Eriksson et al. (2002) served as an input for deciding which questions were going to be asked. As mentioned earlier, one intention of this study was to determine whether some of the results of Eriksson et al. (2002) could be verified. Therefore, some of the questions were similar to those asked in that study, while others were added to better understand the experiences of the in-company quality award. The studied experiences of the in-company quality award can be divided into three different consecutive steps or areas of questions (see Figure 3). First, what are the purpose and goal of working with the in-company quality award? Second, what does the self-assessment process of an in-company quality award look like? Third, and the main focus of this paper, what is the perceived outcome of the work connected with the in-company quality award? The perceived outcome of the in-company quality award was divided further into four different areas of questions (see Figure 3), and compared with other identified effects of the in-company quality award, mainly derived from the document studies of the work connected with the in-company quality award. For a detailed

![Organisation Diagram](image-url)
Results and discussions of the case study

The Swedish National Road Administration is the central administrative agency charged with the overall responsibility for the entire road transportation system in Sweden. The unit studied within the Swedish National Road Administration, the Northern Region, is assigned the administration of the road transportation system in Northern Sweden, and has about 160 employees. In the following section, the results of the case study are presented and compared with earlier published results.

Purpose and goal of the in-company quality award

It has been mandatory for the units within the Swedish National Road Administration to work with the SIQ model for performance excellence since 1998, and it has been possible to apply for the in-company quality award three times. The purpose of the work is to find areas where future improvements can be made in the unit’s activities. This purpose of self-assessment is also stated by many other organisations, see for example Brown and van der Wiele (1996) and van der Wiele et al. (1996). Some respondents claim further that they have succeeded in many of the improvement projects which were identified and prioritised on the basis of the feedback report, and thus fulfilled the goals of working with the in-company quality award.

Self-assessment process of the in-company quality award

All the respondents agreed that the diagram of the award procedure presented in Figure 1 provides a true picture of the work connected with the in-company quality award, and that the description of activities was the phase in the award procedure that needed most resources (see Table I).

Different groups of employees were responsible for different criteria during the description of the activities. All the divisions within the unit were required to contribute at least one employee to this work, and these employees formed an internal quality network. During meetings, specially arranged for description of the activities, the different criteria were linked together to give a better picture of the activities and results of the unit. One then ensured that the whole document containing the description of activities received the support of the rest of the unit, before applying for the in-company quality award.

The respondent who was the head of the unit (high responsibility) and the respondent who was the head of a division of the unit (medium responsibility) also considered that the plan for improvements, the analysis of the description and the planning were the phases that required the next greatest amount of work, the next smallest amount of work, and least work, respectively, after the description of activities (see Table I). One of the respondents did not have an active role in the work connected with the in-company quality award and hence did not answer this particular question. The results in Table I were strengthened further by the document studies. The unit performed an estimation of how many hours the unit worked with each phase per year. The result of this estimation is displayed in Table II.

The results displayed in Tables I and II verify one of the main findings of Eriksson et al. (2002), which showed that the description of activities and planning for improvements require most work of units that apply for in-company quality awards, with the difference that this study shows that the description of activities is the phase that clearly requires most work. A large amount of resources was spent on planning for improvements, as the unit had to agree on which improvement areas were to be prioritised and transformed into improvement projects. The improvement projects were thereafter communicated to the director-
Effects of the in-company quality award on the stakeholders and processes

Examiners have, on the basis of the SIQ model for performance excellence, evaluated the unit on the three different occasions when the unit worked with the in-company quality award. The examiners have reached a consensus about the final score for each criterion. In Figure 4, the scores are presented which the examiners awarded the unit for the different criteria in the SIQ model for performance excellence and for the different years. The examiners vary from year to year, and hence different examiners can be more or less generous in their scoring. Moreover, the employees who describe the activities probably improve the process, including their writing skills, the second and third time they are working with the quality award. Hence, it is not clear whether an increase in the average scores from the examiners is due to improved bottom line results. Due to these facts, one can discuss the possibility of a lack of reliability and validity concerning the examiners’ scoring. On the other hand experiences show that examiners have a tendency to be tougher in their judgement over time, see Heaphy and Gruska (1995).

However, Figure 4 shows that the unit has improved the results for each criterion, except...
between the first and the second year for the criterion of process management. Myers and Heller (1995), who discuss AT&T’s in-company quality award, called the Chairman’s Quality Award (CQA), conclude also that units which had previously applied for and worked with the CQA show great improvement in the average scores from examiners.

One of the respondents believed that organisations need to map and work with processes for some time in order to be successful in the work connected with a quality award. This could be one explanation for the negative trend concerning process management that is displayed in Figure 4. However, some respondents claim that they have reached an increased process orientation, that the work is more systematic now, and that this could be an effect of the work connected with the in-company quality award.

The results for customer satisfaction and human resource development are displayed in two different sub-criteria. The other results are presented in one result criterion. The development of the scores that the units received from the examiners for these result criteria for the different years is displayed in Table III.

Table III shows that the other results (results for main and support processes, cooperation with suppliers, and involvement in society and environmental considerations) improved in both years, while the percentages given by the examiners for the criteria of customer satisfaction and human resources development were only improved between the first and the second year of the self-assessment. Moreover, it was in the second year that the unit performed most of the work, and this improvement in the score could therefore be a result of that extensive work. The respondents claim that the unit has become more customer-oriented, even if that is not supported in Table III, and a better dialogue with the customers has been reached. However, some of the respondents state that it is difficult to see the positive effects for the customer yet. The customers of the unit are mainly the citizens that use the road transportation system. In the long run, however, an improved customer orientation should also have a positive impact on the owner, in this case the Swedish state, according to some of the respondents.

Effects of the in-company quality award on the core values

One of the findings in Eriksson et al. (2002) is that the work connected with the in-company quality award has positive perceived effects on the acceptance of the core values within the organisations. Hence, the core values were analysed further in this study (see Table IV).
The involvement in the self-assessment or the responsibility at the unit does not influence, at least according to Table IV, which core values are perceived to permeate the unit. On the whole, competence development, management by facts and customer orientation are the core values that are perceived by the respondents to permeate the unit the most. The core value of customer orientation seems to be the core value that is perceived to be affected most by the work connected with the in-company quality award. The feedback report from the examiners from the three different years also strengthens this picture, as the examiners are more and more positive in their reports to the customer orientation of the unit. Studies have shown that customer satisfaction, one of the main aims of TQM, also has a significant positive impact on market value as well as accounting returns, see for example Andersson and Fornell (1994).

The involvement in the self-assessment or the responsibility at the unit is shown in the first and second row, respectively

Table IV The three core values that the employees perceived to permeate the unit the most

<table>
<thead>
<tr>
<th>Core value</th>
<th>Involvement</th>
<th>Responsibility</th>
</tr>
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<tbody>
<tr>
<td>High</td>
<td>Competence</td>
<td>Competence</td>
</tr>
<tr>
<td>Low</td>
<td>Competence</td>
<td>Competence</td>
</tr>
<tr>
<td>Medium</td>
<td>Competence</td>
<td>Competence</td>
</tr>
</tbody>
</table>

Notes: * indicates that the respondents perceived that the core value that permeated the unit partly depended on the work connected with the in-company quality award. ** indicates that the respondents perceived that the core value that permeated the unit depended on the work connected with the in-company quality award. The interviewed employees’ degree of involvement in the self-assessment and responsibility at the unit is shown in the first and second row, respectively.

Advantages and disadvantages of the in-company quality award

Table V presents the perceived advantages and disadvantages of the in-company quality award. The respondents who have a high degree of involvement in the in-company quality award perceive that one of the main advantages is an increased comprehensive view of the business, while the respondents who have a medium involvement in the in-company quality award perceive that the work connected with the in-company quality award is a good learning experience for the employees involved. The work connected with the in-company quality award is also perceived to initiate improvement projects, which can result in an increased customer orientation, as well as an increased process orientation. These positive effects verify the findings of Eriksson et al. (2002).

The main criticism of the work connected with the in-company quality award is that it is resource-demanding, and hence requires a great deal of work from the employees who are involved in the self-assessment. The lack of resources when performing self-assessment is also recognised in Svensson (2002). However, it is not possible to see positive effects of the work connected with the in-company quality award without spending resources on the work.

Suggestions for improvements in the in-company quality award

Both the respondents who were involved in the work connected with the in-company quality award and the respondent who did not take an active part in the work stated that the information about the work connected with the in-company quality award did not reach the whole unit. Hence, one should pay attention to the lack of communication between different parties within the unit if one wants to improve the in-company quality award. Moreover, as shown previously in some areas of questions, the respondents experienced the work connected with the in-company quality award differently. This could be due to the fact that no common set of beliefs concerning the work connected with the in-company quality award has been communicated. By putting more emphasis on and devoting more work to the phase of planning, it is possible that the communication problems can be prevented.
In addition, the SIQ model for performance excellence received some criticism from several respondents. The SIQ model for performance excellence is perceived to be too bureaucratic and extensive, and other methods for identifying improvement areas could be applied by using other methodologies and tools requiring a smaller amount of resources, according to two of the respondents. One tool that was mentioned in this context was the Springboard, see Hellsten (1997) and Hellsten (1999).

**Discussion**

All the answers from the respondents are presented in Eriksson (2002). To increase the validity of the study, the quality coordinator of the unit was contacted before the interviews to comment on the questions that were going to be asked. Further, the self-assessment procedure and the core values were explained to the respondents in order to decrease possible misinterpretations. Moreover, the respondents had the opportunity to comment on each area of questions in order not to neglect any important matter. An internal validation was executed as well, where colleagues of the author commented on the structure and the questions that were going to be asked in the case study. In addition, as an incentive to increase the validation, triangulation was performed to some extent for some areas of questions, as many different sources for data collection were used: the interviews, the document studies, and the questionnaire study described in Eriksson et al. (2002).

In future research, case studies at both the companies that still have an in-company quality award and at companies that have ended their in-company quality award need to be performed, in order to obtain a more complete picture of in-company quality awards and to validate the results of this study. In future case studies, some questions will be changed slightly. However, no major changes of the research design were identified as necessary.

The respondents of this case study, and at other units that work with an in-company quality award have in general a positive attitude towards the work connected with the in-company quality award, see Eriksson et al. (2002). Other organisations have also expressed a positive attitude towards self-assessment (see, for example, Brown and van der Wiele, 1996). However, the results of this case study indicate that a large amount of resources is spent on the description of activities, and some respondents believe that, due to this fact, the unit does not have the time to actually perform and execute the identified improvements. As a result of this, the company and the unit will probably perform self-assessment every other year in the future in order to manage the actual improvement work that follows the self-assessment.

One advantage of an in-company quality award in comparison with other types of awards can be that “best practice” can more easily be transferred to other units within the ---

<table>
<thead>
<tr>
<th>Involvement</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
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<tbody>
<tr>
<td>Low</td>
<td>An increased comprehensive view of the unit. The initiation of improvement projects, which results in an increased customer orientation</td>
<td>Resource-demanding</td>
</tr>
<tr>
<td>Medium</td>
<td>An increased customer and process orientation. A good learning experience</td>
<td>Resource-demanding</td>
</tr>
<tr>
<td>High</td>
<td>A good learning experience. The start of systematic improvement work</td>
<td>Resource-demanding</td>
</tr>
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</table>

**Note:** The interviewed employees’ degree of involvement in the self-assessment and responsibility at the unit is shown in the first and second row, respectively.

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**Table V** The perceived advantages and disadvantages of the work connected with the in-company quality award

- Involvement: Low, Medium, High
- Advantages: An increased comprehensive view of the unit, An increased customer and process orientation, A good learning experience, The start of systematic improvement work
- Disadvantages: Resource-demanding, Troublesome and formalistic demands from the SIQ model

---

In addition, the SIQ model for performance excellence received some criticism from several respondents. The SIQ model for performance excellence is perceived to be too bureaucratic and extensive, and other methods for identifying improvement areas could be applied by using other methodologies and tools requiring a smaller amount of resources, according to two of the respondents. One tool that was mentioned in this context was the Springboard, see Hellsten (1997) and Hellsten (1999).

**Discussion**

All the answers from the respondents are presented in Eriksson (2002). To increase the validity of the study, the quality coordinator of the unit was contacted before the interviews to comment on the questions that were going to be asked. Further, the self-assessment procedure and the core values were explained to the respondents in order to decrease possible misinterpretations. Moreover, the respondents had the opportunity to comment on each area of questions in order not to neglect any important matter. An internal validation was executed as well, where colleagues of the author commented on the structure and the questions that were going to be asked in the case study. In addition, as an incentive to increase the validation, triangulation was performed to some extent for some areas of questions, as many different sources for data collection were used: the interviews, the document studies, and the questionnaire study described in Eriksson et al. (2002).

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One advantage of an in-company quality award in comparison with other types of awards can be that “best practice” can more easily be transferred to other units within the ---
company, due to the fact that access to other units is easier. One disadvantage of a competition, like an in-company quality award competition, can be that too much focus is on the scoring instead of finding and executing improvements. Conti (2001) identifies this problem, and states that if the goal of self-assessment is performance improvements, the best choice is to ignore scores and weights. Further, Conti (2001) argues that internal awards linked to self-assessment can indeed be a stimulus; they can drive interest and create the motivation to start. However, although awards certainly help to produce improvement at the beginning, the rate of improvement then tends to slow down, according to Conti (2001). The veracity of this statement will hopefully be investigated by future research.

Conclusion

The main conclusion of this paper is that, even if the work connected with the in-company quality award requires a large amount of work, especially in the phase of description of activities, the customer orientation is perceived to increase as a result of the work connected with the in-company quality award. Some other positive effects were also recognised, such as an improved comprehensive view of the employees, a higher degree of participation by everyone and the initiation of systematic improvement work. These perceived positive effects are also reflected in an improvement in the average score from the examiners. These results verify and strengthen the findings of Eriksson et al. (2002). Even if the work involved in self-assessment, in this case in connection with an in-company quality award, is perceived to give positive results in alignment with other studies of self-assessment, the work connected with the in-company quality award can be improved. The main areas of criticism, and thereby possible improvement areas, concerning the work connected with the in-company quality award are a lack of communication and the bureaucratic and extensive SIQ model for performance excellence.

References


Paper IV

Organisational value of participating in a quality award process. A Swedish study


Accepted for publication in The TQM Magazine
Vol 16 No 2
Abstract
One way for organisations to support Total Quality Management (TQM) and its values, methodologies and tools, and hence try to increase customer satisfaction is to participate in a quality award process. Many previous studies investigating the organisational value of participating in a quality award have focused on quality award recipients. However, most of the organisations applying for a quality award do not receive any award. Instead, one of the main incentives of participating in a quality award process can be the identification of improvement areas, which can later be transformed into actual improvements. The executed improvements can result in, for example, a greater customer orientation, more effective and efficient processes, better employee relations, and an increased profitability. The purpose of this study is to explore the organisational value of participating in a quality award process. The study is based on interviews at 29 organisations that have participated in the process of the Swedish Quality Award. The main conclusion from this study is that most of the organisations consider the process orientation, customer orientation and improvement work to have been improved as a result of the participation in the quality award process. However, there are also obstacles to surmount in order to benefit fully from the process. Two main obstacles are difficulties in finding resources within the organisation to perform mandatory work and implement identified improvements, and difficulties in applying the circumstantial model used in the quality award process.

Introduction
Japan began honouring quality practices in the 1950s through quality awards. After the successful development in Japan, several countries established programmes in the late 1980s and early 1990s to recognise the inventive, yet effective quality practices taking place, see Vokurka et al. (2000). There are many similarities between different national quality awards, regarding, for example, the criteria and the quality award processes. Some examples of the criteria of quality awards that have been used by many organisations and are widespread are the criteria of the Malcolm Baldrige National Quality Award (MBNQA), see NIST (2003), and the European Quality Award (EQA), see EFQM (2003). In many countries, however, the development of national quality awards is still new or non-existent, see Chuan & Soon (2000). Vokurka et al. (2000) and Johnson (2002) present a thorough list of quality awards and a comparison between the different awards.

The organisational values for award recipients of participating in a quality award process have been investigated earlier. Hendricks & Singhal (1997) and Eriksson & Hansson (2003) compare recipients of quality awards with different control companies. The main conclusion
from both studies is that companies that have received a quality award outperform the control companies concerning a number of financial measures. Wrolstad & Kreuger (2001) showed also that companies that had received a quality award presented better results than a control group concerning measures of the operating profit margin, return on sales and return on equity, while the difference was not so large between the two groups concerning the operating margin, but still in favour of the quality award recipients. Quality award recipients like Texas Instruments Defence Group also claim that quality work can yield tremendous rewards, see Junkins (1994).

Many studies published so far which recognise the organisational value of participating in a quality award process have investigated quality award recipients. However, most of the organisations that apply for a quality award never receive any award. An interesting issue for quality award applicants is whether they also, like quality award recipients, benefit from the award process. One of the incentives of applying for a quality award is that improvement areas are identified, which can support actual improvements. The executed improvements can result in, for example, a greater customer orientation, more effective and efficient processes, better employee relations, and an increased profitability of the award applicants. The quality award applicants can therefore benefit in the long run from their application for the quality award as a result of the performed improvements. However, it is not clear how quality award applicants utilize the participation in the quality award process, and how they actually benefit from the performed improvement work. Moreover, it has not been completely investigated what the organisational values are for the quality award applicants that execute improvements successfully, and how much the organisations gain or profit from the improvement work. Hence, the purpose of this study is to explore the organisational value, including both the advantages and the disadvantages, of participating in a quality award process.

**Theory**

**Total Quality Management**

Total Quality Management (TQM) has become a recognised and frequently discussed term in management literature. Hellsten & Klefsjö (2000) define TQM, in agreement with the author of this paper, as a management system in continuous change, which consists of values, methodologies and tools, and the aim of which is to increase external and internal customer satisfaction with a reduced amount of resources, see Figure 1. Participating in a quality award process is for many organisations a way to support the management system of TQM. The criteria of quality awards conform with the major constituents of TQM, see Hendricks & Singhal (1996). Receiving a quality award is also a common proxy for a successful implementation of TQM, see Hendricks & Singhal (1997), Ghobadian & Gallear (2001) and Eriksson & Hansson (2003).

The type of organisations using TQM varies from private to public, large to small and manufacturing to service organisations. However, there is a discussion going on as to whether the general concept of TQM and its values, methodologies and tools should be the same for different types of organisations, for example large and small organisations, see Ehresman (1995). Ghobadian & Gallear (1997) argue, however, that small organisations can adopt the principles of TQM, but that an implementation of TQM requires specific requirements. Huq & Stolen (1996) analyse the difference between service and manufacturing organisations, and conclude that the underlying concept of TQM applies equally to both types of organisations, but with the difference that service organisations have been slow to adopt TQM. Similarly, public organisations have been slow to adopt TQM in comparison with private organisations,
but the concept of TQM is equally important in the two types of organisations, see Dean & Helm (1996).

**Figure 1** Total Quality Management (TQM) seen as a continuously evolving management system consisting of values, methodologies and tools, the aim of which is to increase external and internal customer satisfaction with a reduced amount of resources. The methodologies and tools in the figure are just examples and not a complete list. Source: Hellsten & Klefsjö (2000).

**Self-assessment**

Self-assessment, which can be regarded as a methodology, see Hellsten & Klefsjö (2000), has many similarities to the phases that an organisation goes through when participating in a quality award process. The main difference between a quality award process and self-assessment is that the latter does not necessarily involve external examiners. According to EFQM (1996), self-assessment is “a comprehensive, systematic and regular review of an organisation’s activities and results referenced against a model of business excellence”. Svensson & Klefsjö (2000) have suggested different phases of self-assessment, which are used in this paper as a description of the quality award process. They argue that the self-assessment procedure has four phases, similar to the four phases of the improvement cycle. The first phase, “plan”, includes asking questions like: “Why should we perform a self-assessment?” “When should the work be carried out?” “Who should be involved?” “Which excellence model should be used as a basis for the description?” This phase is developed further by Conti (2002), who claims that the organisation has to ask three questions (“Why?”,” “How?” and “What?”) before initiating self-assessment. The second phase, “do”, consists of obtaining a description of the organisation’s way of working today. The third phase, “study”, consists of the analysis of the description, often resulting in some form of feedback report based on the description. The fourth phase, “act”, consists of planning for improvements. The planned improvements are in turn the input to a number of improvement projects that should follow the improvement cycle, see Svensson (2002) and Figure 2.
The value of self-assessment has been illuminated in earlier research. However, these studies have not necessarily focused on organisations that have participated in a quality award process. For instance, van der Wiele et al. (1996) performed a survey of 117 organisations that had used self-assessment. A number of steps in the self-assessment process were identified to be important as key influences on the success of self-assessment. These were as follows:

- The business unit management develops an improvement plan.
- The outcomes of the self-assessment process are linked to the business planning process.
- Senior management monitors the target for the improvement plan which has been developed.
- The management team of a business unit has to present the improvement plan to the senior management team.

Additionally, van der Wiele et al. (1996) argue that the main learning points of the self-assessment are the following:

- Senior management must be seen to be committed to self-assessment and get involved in the process.
- Senior management has to review the improvement plan which has been set and its implementation.
- The people who will undertake the self-assessment have to be trained.

Furthermore, Finn & Porter (1994) state, after analysing 29 organisations, that the major benefits from self-assessment are the increase in the focus on improvements and the ability to measure the organisations’ progress. Sixteen of these organisations also agreed on the fact that the benefits from self-assessment outweighed the costs associated with the process. The
benefits of self-assessment recognised by the study performed by Gadd (1995) were within four categories: business results, culture, process management and benchmarking. Ghobadian & Woo (1994) argue also that self-assessment and taking part in an award process are beneficial. In contrast, Ghobadian & Woo (1994) also state that the amount of effort required to prepare an application and the large amount of time and high level of financial investment involved are among the major disadvantages of the awards.

Samuelsson & Nilsson (2002) state, in alignment with Conti (2002), after studying nine large organisations, that there is no universal methodology for self-assessment. On the contrary, their findings indicate that several approaches to self-assessment may be successful, as long as they fit the organisation, are used continuously, and foster participation. Samuelsson & Nilsson (2002) claim further that self-assessment must be considered from a holistic perspective in order to realise its full potential. Moreover, Conti (1997) argues that self-assessment and the subsequent improvement planning should be integrated into the corporate strategic planning cycle as a first fundamental step in the process of integration of quality concepts into business practice.

Van der Wiele et al. (1997) state in their summary that their research indicates that using the EFQM Model to measure progress is not helpful if an organisation is not experienced in TQM. For example, organisations could be discouraged by the very low scores that may be achieved when using the model.

**The Swedish Quality Award**

The Swedish Quality Award is organised by the Swedish Institute for Quality (SIQ). SIQ has developed a model, called the SIQ Model for Performance Excellence, which is based on thirteen core values and seven criteria, which are divided into 27 sub-criteria. The SIQ Model for Performance Excellence is presented in Figure 3.

![Figure 3: The SIQ Model for Performance Excellence](Source: SIQ (2002))

The core values of the SIQ Model for Performance Excellence, see SIQ (2002), are:
- Customer Orientation
- Committed Leadership
- Participation by Everyone
- Competence Development
- Long-range Perspective
- Public Responsibility
- Process Orientation
- Prevention
- Continuous Improvement
- Learning from Others
- Faster Response
- Management by Facts
- Interaction.

The core values and the number of such values that are included in different quality award models and by different authors of TQM literature differ slightly. For example, the SIQ Model for Performance Excellence includes thirteen core values, while EFQM (2003) only includes eight core values: Results Orientation, Customer Focus, Leadership & Constancy of Purpose, Management by Processes and Facts, People Development & Involvement, Continuous Learning, Improvement and Innovation, Partnership Development and Corporate Social Responsibility.

The Swedish Quality Award, which was inspired by the Malcolm Baldrige National Quality Award, see NIST (2003), has also many similarities to the latter. For example, the criteria of both quality awards emphasize the results achieved by the organisations, see Chuan & Soon (2000). However, one main difference between the Swedish Quality Award and other major quality awards is that the former is mainly based on the SIQ Model for Performance Excellence. Nevertheless, since 2000 it has also been possible to use, in addition to the SIQ Model, the EFQM Model or the MBNQA Model in one’s application for the Swedish Quality Award. This is a way to indicate that the methodology is the most important, not the choice of tool. There are also other differences between the Swedish Quality Award and other quality awards. For example, the Swedish Quality Award places greater emphasis on evaluation and improvement with regard to all the criteria addressed and on the practice of TQM principles in all organisational activities. There is also relatively more emphasis on the organisation’s impact on society, and on the organisation’s commitment to the customers compared with most other national quality awards studied, see Chuan & Soon (2000). For a thorough discussion concerning the difference between the criteria of the Swedish Quality Award, the Malcolm Baldrige National Quality Award and the European Quality Award, see Puay et al. (1998).

Methodology

Selection of a Quality Award Process and Time Period

The purpose of this study was to explore the organisational value of participating in a quality award process. Hence, the first methodology issue to be solved concerned which one of the many quality award processes should be studied. Since the Swedish Quality Award, which is the national quality award and the most frequently applied quality award in Sweden, had not aroused great interest before among researchers, its process was chosen as a relevant quality award process to study. It was originally the author’s intention to study all the organisations that had participated in the Swedish Quality Award process. However, it has been possible for organisations to apply for the Swedish Quality Award since 1992. Due to the fact that a long time had passed since the first organisations had applied for the award, the employees within
these organisations had difficulties in remembering facts and details about the work involved with the quality award. Furthermore, many of the employees within the organisations that had applied during the first years of the quality award had changed jobs and were no longer at the organisations. Hence, the study was limited to organisations that had applied between 1998 and 2002. This limit was set to include as many of the organisations as possible, and yet not decrease the reliability of the study due to the arguments above.

**Selection of a Data Collection Method and Organisations**

A total of 46 organisations applied for the Swedish Quality Award between 1998 and 2002. The organisations are located all over Sweden, which would have made face-to-face interviews very resource-consuming. A mail survey was also rejected due to the fact that the non-response rate probably would have been too high. Therefore, phone interviews were chosen as the most appropriate method of data collection.

Not all of the 46 identified organisations were included in the study for different reasons. Three of the organisations that had applied were not allowed to participate in the quality award process, because these organisations did not fulfil the general requirements of SIQ, which administrates the award. An additional nine organisations were excluded from the study because they did not currently exist in the form that they had done when they applied. They had performed a major re-organisation or had been purchased by or merged with another organisation. Hence, it was considered too difficult for these respondents to estimate the organisational value of the quality award process. Furthermore, two organisations did not want to participate in the study, due to a lack of time. In another two organisations, key persons for the study no longer worked at the organisations. It would have been possible to locate these persons, but it would have been very difficult for them to estimate the effects on the organisations of participating in the quality award, since they were no longer at the organisations in question. Finally, one organisation was excluded because it did not fulfil the quality award process and therefore did not receive a feedback report. Hence, the total number of organisations studied, including also some quality award recipients, was 29.

Table I presents how many times the organisations that were included in the study had applied for the Swedish Quality Award. Table I also states whether the organisation was privately or publicly owned, large or small (a large organisation is considered to have more than 200 employees by SIQ) and the type of business (i.e. whether it is a manufacturing or a service organisation).

**Table I:** The number of times the organisations included in the study applied for the Swedish Quality Award between 1998 and 2002.

<table>
<thead>
<tr>
<th></th>
<th>One time</th>
<th>Two times</th>
<th>Three times</th>
<th>Total</th>
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<tr>
<td>Private</td>
<td>11</td>
<td>4</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>Public</td>
<td>8</td>
<td>4</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>Large</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Small</td>
<td>9</td>
<td>7</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Service</td>
<td>15</td>
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<td>2</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>8</td>
<td>2</td>
<td>29</td>
</tr>
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</table>
As shown in Table I, 19 of the organisations had applied once, while eight had applied twice. Only two organisations had applied on three different occasions between 1998 and 2002. If the organisation had applied more than once, the overall experience from participating in the award process was requested during the interviews. Two of these 29 organisations that had applied once had used the EFQM Model in their application. The results concerning the core values and the criteria for these two organisations are therefore not presented in this study, as the criteria and the core values differ slightly between the models.

**Selection of Respondents**

The intention of the study was to obtain an overarching view of the organisational value of participating in the quality award process. Hence, the person with overall responsibility for each organisation’s application for the Swedish Quality Award was chosen as the most appropriate person to interview. Such a person would be able to present an overview of the work and estimate the overall perceived organisational values of participating in the quality award process. In many cases, the person responsible for the work involved with the quality award was also the CEO of the organisation. One may argue that such a person is biased and unable to present a complete picture of the benefit for the organisation, and that this could influence the results of the study. On the other hand, no other person within the organisation would have been able to present such a complete picture. One way to overcome this problem would have been to interview a number of persons within each organisation. However, this would have been very resource-demanding.

**Selection of Inquiries**

The questions used in the phone interviews were developed from questions previously used in studies of internal quality awards, see Eriksson et al. (2003) and Eriksson (2003). One of the findings from Eriksson et al. (2003) shows that the main effects of participating in a quality award are connected to the different core values of the model used. For example, the organisations studied in Eriksson et al. (2003) believed that one effect of internal quality awards was that customer satisfaction was improved. This effect could be linked to the core value of “customer orientation” of the SIQ Model for Performance Excellence. The core values were also illuminated in Eriksson (2003), and were perceived by the author as a good instrument to discover the organisational value of participating in a quality award process. Core values have also been used to illuminate TQM implementation aspects, see Hansson (2003). Hence, the organisational value of participating in a quality award process was measured in the present study through asking about the effects on the core values of the SIQ Model for Performance Excellence. And, in particular, the study illuminated which core values were affected and which were not due to the organisations’ participation in the quality award process. In this paper, it is important to distinguish the organisational value, which includes both advantages and disadvantages, from core values, which are the basis of the model used in the quality award process.

In addition, some general opinions on participating in a quality award process were requested from the respondents. Furthermore, the organisations’ way of working with the quality award process was investigated using the self-assessment procedure presented in Svensson & Klefsjö (2000). The major outcome of the award process, the work on improvements that should follow an application, was investigated using the improvement cycle. Questions were asked about each phase of the improvement cycle, see also Figure 2, in order to measure how the organisations had worked with the improvements.
The interviews were focused, see Yin (1994), and followed a certain set of questions and procedure. The actual phone interviews were performed during March 2003, and all the interviews were recorded. The questions and all the answers have been documented by Eriksson & Palmberg (2003).

Results

Quality Award Process at the Organisations

The organisations’ pre-understanding of quality award processes and the SIQ Model varied greatly before entering the quality award process. Some organisations claimed that they had not worked at all with issues that were illuminated in the quality award process, while others had worked with the model for a number of years and participated in other quality award processes; and some had also received a quality award: the Swedish Quality Award, an internal quality award, a regional quality award or a branch-specific quality award. In between these two extreme cases, some organisations had used the SIQ Model to improve the activities and results within the organisation without participating in a quality award process, while other organisations had educated employees within the organisation as examiners in the SIQ model.

Despite the difference in the pre-understanding of the SIQ Model and the experience of participating in a quality award process, the organisations’ ways of working with the process of the Swedish Quality Award were similar. In most organisations, different criteria were assigned to different teams with the task of writing the respective criteria. The different criteria were afterwards linked and put together by one or two persons before submitting the application. Some organisations claimed that during the phase of description of activities, improvement potentials were identified and transformed into improvement projects. This work was performed without using the feedback report from the examiners, which is normally considered to be the major input to the improvement work.

The planning for improvement that followed, after the examiners had evaluated the application, was also performed similarly among the organisations. However, some organisations claimed that the description of activities demanded a great deal of resources, and the plan for improvements that was intended to follow did not receive such great attention due to all the resources previously used. When drawing up the plan for improvements, some organisations received help from SIQ and the head examiner to start planning for improvements. Often the improvement areas which had the greatest impact and where it was relatively easy to perform improvements were prioritised among the employees (often including the business management group) who participated during the planning for improvements. Different improvement groups, or quality circles, were often delegated the assignment of executing the improvement. At one quality award recipient, an analysis was performed using the feedback report to identify “Strengths, Weaknesses, Opportunities and Threats” (SWOT). At this organisation the improvements were divided into “quick fixes” and more comprehensive improvement projects.

In several cases the plan for improvements was integrated into the strategic business plan, while in other cases the plan for improvements was kept as a separate activity. The respondents that had integrated the plan for improvement as a part of the business plan believed that the integration was valuable. Some of the organisations that had not integrated the improvement projects into the business plan perceived it too hard to do so.
Even if many organisations in the study planned systematically for the improvements, not all the organisations actually performed the different prioritised improvement projects. Some organisations had recently applied for the quality award and therefore had not yet performed all the identified improvement projects. However, there was also a group of organisations that did not succeed with the improvement projects or at least had not yet performed them after a number of years. Restriction of resources was the main explanation for not performing the improvement work.

Furthermore, the organisations that actually performed improvements based on the plan for improvements were not always as systematic as they had been in the initial step when planning for the improvements. Especially during the follow-up phases, including studying the outcome of the improvement and acting on the basis of it, see Figure 2, many organisations were not very systematic. Several organisations planned and executed the improvement, but failed to follow up the improvement in question. These organisations did not measure whether the improvements had the desired effect. This is especially true when it comes to translating the improvements into monetary value. No organisations claimed that they had measured how much they had earned in monetary units from the executed improvements. Many organisations claimed that it was too difficult, and some that it was even impossible, to estimate on the basis of the performed improvements how much they had earned in monetary units. In particular, the respondents found it hard to separate the activities related to the participation in a quality award process from other improvement activities performed within the organisation. However, a few organisations stated that they performed better than other organisations in the industry and other comparable organisations with regard to a number of indicators, including customers, employees and financial measures.

Organisational Advantages of the Quality Award Process

The overall attitude to the organisations’ participation in the quality award process was positive. The organisation’s attitude was measured using a five-grade scale: very negative, negative, neither negative nor positive, positive, and very positive. Twenty-six organisations were either positive or very positive to the organisations’ participation in the quality award process, with a small favour for the positive alternative. A few organisations also claimed that they would participate in a quality award process in the future.

One major benefit of participating in a quality award process is, according to the respondents, that one obtains an external evaluation of the business, and a confirmation and assessment of the current position of the business in comparison with, for example, the organisation’s goals, competitors and best-in-class organisations. Furthermore, the participation in the award process in itself resulted in a stronger participation by everyone and a common goal to work towards. Moreover, an increased focus on improvements was mentioned as a result of participating in the quality award process. The process was also an important learning experience for the employees who were involved in the quality award process.

Another advantage of participating in a quality award process, according to the respondents, was a better structure in the business’ activities, which in return resulted in a more comprehensive and systematic approach. The SIQ Model was believed to be complete, to cover the whole business, and to ensure that no area or issue was neglected. Furthermore, many award applicants that were beginners, i.e. organisations that had no extensive previous knowledge about TQM, believed that the SIQ Model resulted in a new thinking in the organisations. This was due to the fact that the employees were trained in and were required to work with the SIQ Model. Furthermore, experience of the SIQ Model was considered to be
an advantage when working with other standards, for example ISO 9000:2000 and Investor in People (IIP), as the threshold was not that high once one had worked with TQM. The new ISO standard, ISO 9000:2000, has a stronger focus on processes in comparison with the previous version. Through the work performed with the SIQ Model, which has a strong focus on processes, the transition to ISO 9000:2000 was easier according to one of the respondents.

**Analysis of the Core Values**

As mentioned above, the core values were illuminated as they were regarded as an important aspect when considering the benefits of participating in a quality award process. The issue that was illuminated was whether the respondents considered the 13 core values of the SIQ Model to be improved due to the participation in the quality award process.

Overall, most of the respondents believed that the greatest impact of participating in the quality award process was on the core value of “customer orientation”. Secondly, “continuous improvement” and “process orientation” were considered to be the most improved core values. Some quality award applicants also believed that the core values of “participation by everyone” and “committed leadership” had improved most.

When asking and analysing whether the different core values had improved at all as a result of the participation in the award, some core values were considered to have been improved, while others were not. The results for all the core values included in the SIQ Model are presented in Figure 4, 5 and 6. Two organisations were not included in this analysis due to the fact that they had used the EFQM Model in their application. In addition, one organisation was excluded from this analysis because the respondent was not able to estimate whether the core values were improved or not.

As shown in Figure 4, 5 and 6, all the organisations in the analysis believed that the organisation’s “process orientation” had improved due to the participation in the quality award process. Furthermore, “customer orientation” and “continuous improvement” were also considered to have been improved by most of the organisations. “Committed leadership”, “participation by everyone” and “management by facts” were by a relatively high number of respondents also considered to have been improved. The core value “long-range perspective”, on the other hand, was only considered to have been improved by a few organisations. “Public responsibility” and “faster response” were also only considered by a few organisations to have been improved as a result of the participation in the award process.

The impact of the criteria due to the participation in a quality award process was also illuminated. The criteria of “customer satisfaction”, “process management” and “strategic planning” were the criteria considered to be most improved as a result of the participation in the quality award process. These results reinforce the picture that it is in the areas of processes and customers that the greatest impact is achieved when applying for a quality award. Surprisingly, “strategic planning” was also considered as a criterion that was affected to a large extent. This might have been due to the fact the respondents were in many cases the CEO. The CEO often works with strategic planning, and therefore may see the impact largely in this area. Strategic planning is also strongly related to systematic and structured work, which was considered as one of the main advantages of participating in a quality award process.

Figure 4, 5 and 6 also present which type of organisation had the greatest benefit from participating in a quality award process when considering the core values. In Figure 4, public...
organisations are compared to private organisations. Public organisations believed to a larger extent that the core values had improved. This is especially true of the core values of “competence development” and “learning from others”. All the public organisations also believed that the core value “participation by everyone” was affected by the quality award process. On the other hand, the public organisations did not believe to a large extent that “public responsibility” had improved, which should be one of their main objectives.

![Figure 4](image)

**Figure 4** The percentage of the 26 organisations, the private organisations and the public organisations perceiving the core values to have been improved as a result of participating in the quality award process.

When studying the impact of participating in the quality award process on the core values, it seems that the size of the organisation does not matter, see Figure 5. Large organisations and small organisations believed, to a relatively large extent, that the same core values were improved as a result of the quality award process.

![Figure 5](image)

**Figure 5** The percentage of the 26 organisations, the large organisations and the small organisations perceiving the core values to have been improved as a result of participating in the quality award process.
Figure 6 also compares differences concerning the improvement of core values between the manufacturing and the service organisations. With small differences, both types of organisations believed that the same core values were affected by the quality award process.

As reflected in Figure 4, 5 and 6, different core values are impacted differently by the award process. Some core values are considered to have been improved by almost all the organisations, while only some organisations consider other core values to have been improved. These differences can depend on either the model or the organisations adopting the model. The SIQ Model may emphasise some core values more than others, even if no core value is expressed to be more important explicitly in the model. Similarly, the organisation can neglect some core values and favour others during the quality award process. The organisation’s pre-understanding of TQM and the core values may also influence which of the core values the organisation believes were improved as a result of the quality award process.

**Organisational Disadvantages of the Quality Award Process**

The main disadvantage of participating in the Swedish Quality Award was the resource-demanding and time-consuming work that organisations were required to perform when participating in the quality award process. In particular, the time-consuming phase of description of activities took the focus away from the operative activities. As a result of this time-consuming phase, the improvement work that should follow was also neglected, according to a few respondents.

The SIQ Model also received criticism for being too abstract and circumstantial, and difficult to use for beginners. Furthermore, the language and the definitions were hard to understand, according to the respondents. As a result, the work performed with the SIQ Model was difficult to communicate to the employees who were not involved with the work. Consequently, some employees within the organisations had difficulties in following the process, and instead chose to be very critical. Two organisations claimed further that the SIQ Model did not fit all organisations. For example, one public organisation stated that the SIQ Model did not fit the public sector. Instead that organisation preferred the EFQM Model, as a better tool for public organisations. Another organisation claimed that the SIQ Model did not
fit non-profit-driven organisations within the service sector. Two organisations also believed that the SIQ Model only fitted manufacturing organisations.

Two organisations that had applied with the one incentive of receiving an award also felt that they had been misunderstood by the examiners, as they did not receive the award. The disappointment among the employees spread, which led to quality issues not being prioritised any longer. The quality assurance of the examiners evaluating the organisations was another area that received criticism from the participating organisations. Two organisations that had applied more than once for the quality award perceived that the feedback report differed too much, and that the grading system was not reliable. They claimed further that it was hard to find improvement areas based on the feedback report from one group of examiners. Furthermore, they believed that the level of knowledge of the examiners had to be increased. Another quality award applicant made a comparison with the European Quality Award, and stated that the feedback report from the examiners for this award was a more powerful tool to use in order to improve one’s business.

The quality award recipients did not always consider the quality award announcement beneficial to the organisation. If an organisation receives the award, the organisation is obligated to perform certain activities, such as having an open house and holding seminars. Furthermore, many other organisations want to benchmark the organisation. Two small organisations that had received the quality award expressed that the work that followed the quality award announcement was too much for small organisations, as they did not have enough resources to handle this extra work. Everyday activities were therefore to some extent neglected within these organisations, and it was impossible to find time for improvement work. One quality award applicant claimed that the whole idea about learning from others was neglected, as one could not benchmark other organisations that had participated in the quality award process, except for the quality award recipients, because the organisations applying for the award were anonymous.

Discussions

Previous studies have shown that there is a positive relationship between TQM and performance, see Hendricks & Singhal (1997) and Eriksson & Hansson (2003). However, no organisations claimed that they had estimated how much they had earned in monetary units from the executed improvements, which is a common approach among other improvement programmes, for example, the Six Sigma, see Magnusson et al. (2003). Still, the value of TQM, through participating in a quality award process and performing self-assessment, seems to be beneficial according to the respondents of this study and in alignment with, for example, Finn & Porter (1994) and Eriksson et al. (2003). In agreement with earlier studies of self-assessment, the major benefits of participating in a quality award process are a greater focus on improvement work, see Finn & Porter (1994) and van der Wiele et al. (1996), processes, see Gadd (1995), and customers, see Brown & van der Wiele (1996) and Eriksson (2003). In addition, participation in a quality award process is also perceived to have an impact on “committed leadership”, “participation by everyone” and “management by facts”. These six areas or core values are also considered to be the essence of TQM today, see Bergman & Klefsjö (2003). Furthermore, this study, Ghobadian & Woo's (1994) study of self-assessment and Eriksson (2003) show that the major disadvantage of participation in quality awards is the resource-demanding and time-consuming work required.

Overall, it seems that the type of organisation does not influence the outcome of the quality award process to a large extent, even if some organisations claimed that the SIQ Model only
fitted certain types of organisations. Public organisations believed, however, to a larger extent than private organisations that the core values were improved. This could be due to the fact that public organisations have been slow to adopt TQM, see Dean & Helm (1996), and have therefore more to gain initially from the quality award process. Private organisations may have been working with TQM for a longer time and may therefore not benefit from the quality award process to the same extent as public organisations. However, van der Wiele et al. (1997) claim that beginners do not benefit from the use of the EFQM Model. In contrast, it seems that beginners in TQM experience the organisational value of the quality award process differently compared to more experienced users of TQM. Beginners benefit largely from the introduction of TQM because it results in a new way of thinking and a valuable experience for the involved employees, which are of great use in a longer perspective. On the other hand, it seems that organisations that already have great experience of TQM benefit to a larger extent from the actual outcome of the quality award process, the improvement work.

Even though some award applicants claimed that they would not participate in the quality award process in the future, they found the experience valuable. Some award applicants also believed that the quality issues that were raised when participating in the quality award process were important. These issues would not be neglected, even if the organisations did not intend to participate in a quality award process in the future, according to some respondents. In particular, these organisations claimed that there was a difference between the tool of the SIQ Model, whose value could be discussed, and the management system of TQM, which could never be neglected within organisations. Furthermore, some of the respondents claimed that applying for a quality award took the focus away from improvement, which should be the major outcome of an award, and that the focus was instead on the competition. This problem is also discussed in Conti (2002), who claims that if one’s aim is to improve, the best choice is not to apply for a quality award.

Some quality award applicants found it hard to make a breakthrough in their quality revolution and therefore did not yet see fully the value of working with TQM, while other organisations had already surmounted the obstacles and benefited greatly from the concept. Even if these organisations had overcome the major barrier of implementing TQM, it was difficult for them to maintain their new position. This was especially true within organisations which had lost some of the employees most dedicated to TQM. To eliminate the possibility of losing ground, one quality award recipient claimed that the quality award process was used annually, internally or through participation in the Swedish Quality Award process, to assure that the organisation maintained what it had accomplished earlier.

All the answers from the respondents are presented in Eriksson & Palmberg (2003) in order to make repeatability possible. To increase the validity of the present study, the quality award process was explained to the respondents in order to decrease possible misinterpretations. An internal validation was executed as well, in which colleagues of the author and a project group commented on the structure and the questions that were going to be asked during the phone interviews.

In future research, a more in-depth study will need to be performed in order to realise fully the value of participating in a quality award process. Furthermore, such in-depth studies will need to study how the improvement work should be performed. This could be accomplished by studying successful organisations, regarding the improvement work, in order to understand fully the possible benefits of participating in a quality award process. Furthermore, these
studies will need to illuminate why some core values are perceived to be improved while others are not.

**Conclusions**

The quality award applicants experienced a great benefit from participating in the award process. The main conclusion from this study is that most of the organisations considered the process orientation, customer orientation and improvement work to have been improved as a result of the participation in the quality award process. However, there are also obstacles to surmount in order to benefit fully from the process. Two main obstacles are difficulties in finding resources within the organisation to perform mandatory work and implement identified improvements, and difficulties in applying the circumstantial model used in the quality award process.

**Acknowledgements**

The author gratefully acknowledges the financial support from the Department of Economic Statistics at Stockholm School of Economics, “Söderbergstiftelsen” and “Carl Tryggers Stiftelse för vetenskaplig forskning”. The extensive support from the project group, consisting of Professor Bengt Klefsjö at Luleå University of Technology, and Professor Jan Eklöf and Dr. Johnny Lindström at Stockholm School of Economics, is also acknowledged. The author would also like to thank Dr. Rickard Garvare and Klara Palmberg at Luleå University of Technology for their support.

**References**


Paper V

Organisational performance improvement through quality award process participation


Submitted for publication
Organisational performance improvement through quality award process participation

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Keywords: Quality Award Process, Core Values, Organisational Performance, Self-assessment, TQM.

Abstract
The striving for business improvement and stronger customer orientation causes many organisations to participate in a quality award process. This study presents a case study of three organisations that have participated in the Swedish Quality Award process. The cases were selected in order to clarify how this award process could be used to improve organisational performance. The study focuses primarily on analyses of soft measures such as organisational core values. Several examples of approaches to how to benefit from a quality award process, and thereby to improve organisational performance, are provided. The studied organisations have been successful in their development and communication of visions, and also in their empowerment of employees. Specifically, the core values of customer orientation, process orientation, continuous improvement, committed leadership and participation by everyone have been strengthened. Findings from the case studies indicate that if the goal is to get lasting results, it is not sufficient to participate in a quality award process only once. Instead one should participate in the process several times, with enough time in between the applications in order to complete as many as possible of the improvement projects resulting from the evaluations.

Introduction
In the 1950s Japan began honouring quality practices through the establishment of the Deming Prize. After the successful development in Japan, several other countries also established programs to recognise quality practices taking place in organisations, see Vokurka et al. (2000). There are similarities between most national quality awards, regarding, for example, criteria and award processes. Some examples of widespread criteria are the ones used in the Malcolm Baldrige National Quality Award (MBNQA), see NIST (2003), and the European Quality Award (EQA), see EFQM (2003). In many countries, however, the development and use of national quality awards is still new or non-existent, see Chuan & Soon (2000). Vokurka et al. (2000), Johnson (2002) and Tan et al. (2003) present thorough lists of quality awards and comparisons between different awards.

Although much important work has been carried out on organisational experiences of quality award processes, a number of questions remain. Results of earlier studies indicate that if the aim is business improvement, participation in a quality award process is not always the most appropriate methodology, see for example Conti (2001). After a study of 29 organisations that have participated in the Swedish Quality Award process, Eriksson (2003a) concludes that many organisations do not have enough resources to actually carry out the improvement work that is supposed to be a result of the award process. However, Eriksson (2003a) also demonstrates that some successful organisations, when considering the improvement work, show major benefits from the process. For example, a large majority of the organisations...
studied consider the process orientation, customer orientation, and improvement work to have been improved as a result of the participation in the quality award process.

Sila & Ebrahimpour (2002) state that there has been an increase in the use of self-assessment models by organisations, but they also claim that there is a lack of published research on the experiences of organisations that have participated in quality award processes. Little is known about how organisations work with and benefit from such processes, and what their critical success factors are. As far as we know there has not yet been any systematic examination of how organisations actually should make use of their participation in a quality award process, and what there is to gain from such a process. In particular, it has not been fully illuminated what activities are performed in order to strengthen the organisational performance. The purpose of this study is to describe how organisations have utilized their quality award process participation in order to improve performance.

Theory

Total Quality Management (TQM)

The criteria of most national quality awards conform with the major constituents of Total Quality Management (TQM), see Hendricks & Singhal (1996). Receiving a quality award is also a common proxy for a successful implementation of TQM, see Hendricks & Singhal (1997), Ghobadian & Gallear (2001), and Eriksson & Hansson (2003). With reference to Hellsten & Klefsjö (2000) we define TQM as “a continuously evolved management system consisting of values, methodologies and tools, the aim of which is to increase external and internal customer satisfaction with a reduced amount of resources”, see Figure 1. Hellsten & Klefsjö (2000) argue that the methodologies and tools support the values and that the three units together form the whole. Hence, a TQM implementation should start with the identification of important values. Secondly, methodologies that support these core values should be identified and used continuously and consistently. Finally tools should be selected and used in an efficient way in order to support the methodologies chosen.

Figure 1 Total Quality Management (TQM) seen as a continuously evolving management system consisting of values, methodologies and tools. The values, methodologies and tools are just examples and not a complete list. Source: Hellsten & Klefsjö (2000).
Organisational Performance

The term performance can be used to describe “a measure of attainment achieved by an individual, a team, an organisation or a process”, see EFQM (1999). Samson & Terziovski (1999) show that there is a noteworthy cross-sectional relationship between TQM practice and organisational performance. TQM practice intensity explains a significant proportion of variance in organisational performance. Samson & Terziovski (1999) state that the categories of leadership, management of people and customer focus are the strongest significant predictors of operational performance. Moreover, the major findings of Allen & Kilmann (2001) show that higher levels of company performance are significantly correlated with greater use of TQM practices. McAdam & Bannister (2001) discuss the need for performance measurement within the TQM framework, and the fact that both hard and soft indicators, and both management and employee perceptive measures should be used to measure the outcome of TQM.

Self-assessment

Participating in a quality award process has many similarities with the methodology of self-assessment. According to EFQM (1996), self-assessment is “a comprehensive, systematic and regular review of an organisation’s activities and results referenced against a model of business excellence”. A main difference between a quality award process and self-assessment is that the ownership of the quality award process and self-assessment differs. The owner of a quality award process is not the evaluated organisation, while this is the case for self-assessment. Furthermore, self-assessment does not necessarily involve external examiners.

Svensson & Klefsjö (2000) have discussed different phases of self-assessment, which are used in this paper to describe a quality award process. They argue that the self-assessment procedure consist of four phases, similar to the four phases of the improvement cycle. The first phase, “plan”, includes answering questions like: “Why should we perform a self-assessment?” “When should the work be carried out?” “Who should be involved?” “Which criteria should be used as a basis for the description?” This phase has been further examined by Conti (2002), who claims that the organisation has to ask three questions (“Why?”, “How?” and “What?”) before initiating self-assessment. The second phase, “do”, consists of obtaining an organisational description of today’s way of working. The third phase, “study”, consists of description analyses, often resulting in some form of feedback report. The final phase, “act”, consists of planning for improvements. The improvements planned are in return input to a number of improvement projects that should follow the self-assessment cycle, see Svensson (2002) and Figure 2.
The Swedish Quality Award

Since 1992 the Swedish Quality Award has been organised by the Swedish Institute for Quality (SIQ). The SIQ has developed a model, called the SIQ Model for Performance Excellence, which is based on 13 core values and 7 criteria, which are divided into 27 sub-criteria. An overview of the SIQ Model is presented in Figure 3. The core values of the SIQ Model for Performance Excellence are, see SIQ (2002):

- Customer Orientation
- Committed Leadership
- Participation by Everyone
- Competence Development
- Long-range Perspective
- Public Responsibility
- Process Orientation
- Prevention
- Continuous Improvement
- Learning from Others
- Faster Response
- Management by Facts
- Interaction.

The criteria of the SIQ Model have been inspired by, and are similar to, the criteria of the Malcolm Baldrige National Quality Award Model, see NIST (2003). This is, for example, illustrated by the fact that both criteria strongly emphasize organisational results, see Chuan & Soon (2000). There are also differences between the criteria, for example the SIQ Model’s stronger emphasis on evaluation, improvement, and societal impact, see Chuan & Soon (2000). Since the year 2000 it has been possible to use either the SIQ Model, the EFQM Model or the MBNQA Model in an application for the Swedish Quality Award. For a thorough discussion concerning dissimilarities between the different criteria, see Puay et al. (1998).
Methodology

The intention of this study is to describe how organisations have utilized their quality award process participation in order to improve performance. A multiple case study, see Yin (1994), was chosen as the most appropriate research strategy. Input regarding case selections came from Eriksson (2003a), who identified 46 organisations that have applied for the Swedish Quality Award between 1998 and 2002. For various reasons, 29 of these organisations were studied, see Eriksson (2003a). The organisations in the present study were selected from these 29 applicants. The following criteria were used during the case selection:

1. The organisations should uphold systematic improvement work
2. The organisations should have used the SIQ Model for Performance Excellence in the application to the Swedish Quality Award
3. The organisations should not have gone through any major organisational changes subsequent to their latest award process participation.

One of the aims of this study is to transfer “best practice” regarding the improvement work that should follow participation in a quality award process. Therefore, the examined organisations must be successful and systematic in their work with improvements. The second criterion was chosen due to the fact that the study aims at analysing core values. Since the core values differ in the SIQ Model, the EFQM Model and the MBNQA Model, it would have been hard to make a comparison between organisations using different models. Most organisations participating in the Swedish Quality Award process have used the SIQ model, see Eriksson (2003a). Therefore, the criterion that the included organisations should have used the SIQ Model was established. The third criterion was chosen because effects on organisational performance due to participation in a quality award process would be difficult to isolate, if major organisational changes had also been performed.

We found that three organisations conformed to the criteria above, namely: Sydkraft Vattenkraft, Agria Djurförsäkring, and Kronans Droghandel. Data was collected through the use of interviews, document studies and direct observations during site visits. The main reason for using many sources of data is to increase the validity of the study.

Interviews

To obtain a broad picture of the quality award process, and thus increase the sensitivity of the study, two employees, with different levels of responsibility, were interviewed in each
organisation. One of the informants that were selected in each organisation had an overall responsible for the organisation’s participation in the quality award process. The other informant that was selected in each organisation had not had any overall responsibility for the application, but had instead been operationally involved in the quality award process. The interviews focused on how the organisations had utilized the quality award process, the improvement work and the core values of the SIQ Model for Performance Excellence. The interviews were focused, see Yin (1994), and followed a certain set of questions and procedures. The actual interviews were performed during March 2003, and all the interviews were recorded. All questions and answers have been documented by Eriksson & Palmberg (2003).

To further strengthen the validity of the present study an internal test was executed, in which colleagues of the authors and a project group commented on the structure and the questions that were going to be asked during the phone interviews. The quality award process was explained to the informants before the interviews were started in order to reduce possible misunderstandings. Furthermore, after making a fair copy of the interviews the informants were allowed to comment on their answers in order to eliminate misinterpretation before documenting the answers.

**Direct Observations and Document Studies**

Direct observations were made during one day in each of the three examined organisations. The observations could be classified as fairly informal, see Yin (1994), and provided additional information about the selected cases.

Document studies were also made in the three examined organisations. Documents that were requested from each organisation included:

- The latest application to the Swedish Quality Award
- The latest examiner feedback report
- Annual reports of the organisation
- Documents that describe improvement work performed in the organisation.

Documents that described the improvement work that had followed the quality award process participation were difficult to collect. However, other documents that described activities in order to improve organisational performance were examined.

**Cross-case Analysis**

In order to describe performance improvements resulting from the quality award process participation, all identified improvements, values, methodologies and tools were categorized according to the core values of the SIQ Model. The informants were asked to describe what activities had been performed in order to strengthen their core values. In addition, direct observations, the organisations’ applications to the Swedish Quality Award, and the examiners’ feedback report were all used in the analysis to describe changes in each category. This data also served as input to the cross-case analysis. Methodologies and tools were considered in the cross-case analysis in order to illuminate how performance improvement had been achieved by the organisations.
Case descriptions

Sydkraft Vattenkraft
The Sydkraft Group consists of 60 operating subsidiaries with approximately 5,300 employees in total. Main business areas include production, distribution and sale of electricity, but also natural gas, water and sewage systems, materials recycling, energy trading and communications solutions. The products and services of the Sydkraft Group are designed to increase the competitiveness, comfort and security of the Group’s customers in northern Europe. (Sydkraft, no date).

Sydkraft Vattenkraft, a subsidiary of the Sydkraft Group, is responsible for all hydro power processing in the Group with an average annual production of close to 11 TWh, and a total effect of about 2,300 MW. The electricity is produced by 120 outsourced power plants. The vision of Sydkraft Vattenkraft is “to be the leading hydro power supplier”. In the year 2002 Sydkraft Vattenkraft had 107 employees and the average sales were about 200 Million EURO. The results after financial incomes and costs were about 30 Million EURO. (Sydkraft Vattenkraft, 2003).

In order to stimulate quality efforts in the Sydkraft Group an internal quality award was introduced towards the end of the 1990s. Only subsidiaries and units in the group had the opportunity to apply for the award. The internal quality award was based on the SIQ Model and the process had many similarities with the process of the Swedish Quality Award. In 2001 the internal quality award at the Sydkraft Group was ceased. Sydkraft Vattenkraft applied for the internal quality award twice, but did not receive any award. However, according to the informants the organisation recognised many benefits with the participation in the internal quality award process and therefore participated in the national quality award process in 2001. The organisation did not receive the award, but the examiners made a site visit at the organisation (site visits are made only to organisations that can be considered potential award recipients).

The organisation started by describing a desired future state of activities and results instead of describing what they were doing at the present time. A long-term plan for how to reach the desired state was documented, communicated and anchored within the organisation. The organisation emphasised the importance of planning before participating in a quality award process. Cross-functional teams were assigned to work with the planning and the following award application. About 90 per cent of the employees were, on different occasions and to different extents, involved. Through opponent procedures the employees that were not directly involved in describing the activities and results could nonetheless comment on the work, and hence get involved in the award process. The organisation prioritized among the many improvement projects, both small and large, that were identified during the award process. The improvement projects were intended to support some criteria and core values in the SIQ Model that were prioritized by the organisation.

At the time of the case study, Sydkraft did not work directly with any quality award process, even though the informants considered it possible that the organisation would apply for a quality award in the future. Instead, the organisation worked with a large development project called Destination 05. According to the informants at Sydkraft the main advantage of participating in a quality award process had been to “receive an external evaluation of the organisation”. The main disadvantage had been that it required a lot of resources to participate. Furthermore, the organisation had to perform activities that, according to one of
the informants, were of little value. For example, the organisation was forced to prepare presentations and speeches if the judges decided to announce the organisation as a recipient. The informants claimed, however, that they have reached the described desired state for most of the criteria and core values that were prioritized.

**Agria Djurförsäkring**

Länsförsäkringar, with 24 independent regional insurance companies and the jointly owned Länsförsäkringar AB, is Sweden’s only customer-owned locally established banking and insurance group. Länsförsäkringar “offers a broad range of policies and financial services for companies and private individuals”. Länsförsäkringar is a leader in the Swedish market for non-life insurance. Its share of the market amounts to slightly more than 30 per cent. Its share of the market for life and pension assurance amounts to 11 per cent, with 2.6 per cent of the bank market. (Länsförsäkringar, 2003).

Agria Djurförsäkring, which is a subsidiary of Länsförsäkringar, offers insurances of animals and crops. Agria Djurförsäkring “offers animal owners and farmers flexible insurance solutions”. The company supports “animal breeding and animal health in close cooperation with animal owner organisations and veterinarians”. Agria Djurförsäkring has about 130 employees, who together serve about 335,000 customers. The premium incomes for 2002 were 70 Million Euro and the market share was about 64 per cent. (Agria, 2003).

Agria started to work with quality issues in 1994 with the main objective of improving the work procedures. Under the slogan “do everything online” Agria wanted to decrease administrative costs and increase sales. The organisation discovered the SIQ Model and decided it would be an appropriate tool for organisational improvement. The work started with mapping the processes, and involved almost all the employees on a voluntary basis.

After participating in the Swedish Quality Award for the first time in 1998, Agria received the award in 1999. Quality award recipients are not allowed to apply for the award again until three years after the announcement. Agria continued, however, to use the SIQ Model internally and applied a third time in 2002.

The organisation classified all improvement suggestions from the feedback report into two categories: a real improvement potential and an error in writing in the application. Since the first application to the Swedish Quality Award, the organisation has identified and executed numerous improvements. Besides improvements that are identified during participation in the quality award process, the organisation annually receives hundreds of improvement suggestions from its personnel. At the time of the study many of the employees were engaged in different kinds of improvement work. As an example, the total lead time for the settlement of claims had decreased from 20 days to 10 minutes as a result of the improvement suggestions.

A main advantage of participating in a quality award process had been, according to both the informants, the development of a more comprehensive view of the business and its processes among many of the employees. A broader view has been gained where, for example, the societal concerns are acknowledged. Valuable comments from external examiners were also highly appreciated. Furthermore, the participation in a quality award process has also led to a wider network and an ability to benchmark and compare with other organisations. The main disadvantages are that the work requires a lot of time and resources. The formalities of
participating in a quality award, like writing and editing an application and preparing presentations, are also perceived as a disadvantage.

**Kronans Droghandel**

The Kronans Droghandel Group comprises the parent company Kronans Droghandel AB (KD) and the wholly owned subsidiaries Kronans Droghandel ADB and Kronans Droghandel Tukku. KD is “a modern, comprehensive logistics company that supplies the Scandinavian health-care and medical markets with distributive and logistic services”. (Kronans Droghandel, no date).

Logistics involves flow of goods, information and capital. Over a number of years KD has made “a conscious and determined commitment to development of a customised and efficient IT-supported logistics system, which provides full insight into, and control over the entire distribution process”. The objective is “to integrate the entire chain from producer to consumer within one common system”. KD “will develop and supply cost-effective customised logistical solutions of the highest quality” on the Nordic market. This development will be conducted in co-operation with industry and public health care”. Total sales for the group were 1,600 Million Euro in 2001. (Kronans Droghandel, no date).

KD applied to the Swedish Quality Award in 1993 and 1994 with strong support from the current CEO. After a number of years KD applied a third and a fourth time in 2000 and 2002. In the latest application a group of KD applied, the business area Apotek, with about 90 per cent of the personnel in Sweden (238 employees). The business area of Apotek has a share of 49 per cent of the Swedish market for medical distributive and logistics services.

In 2002 a group of 10 employees was appointed as responsible for managing the application to the Swedish Quality Award. Persons were assigned to different criteria and were also given the overall responsibility for writing the application related to the respective criteria. Other employees were also involved in the process through continuously commenting on the work. The informants gave descriptions of great commitment within the group. The feedback report from 2000 was used continually in their work to improve processes and their results. They also produced an action list based on the phase of the description of activities.

During the completion of the latest application, the group believed that they had made progress in a number of areas, both economically and with positive trends for customer satisfaction, based on the quality award process participation in 2000. The examiners performed a site-visit to the organisation in 2000. The group was therefore very hopeful about the outcome of this application. However, the examiners had a different view. The score they gave the organisation was not high enough to lead to a site visit. The employees at KD were very disappointed with the fact that they did not even receive a site visit. They began questioning the examiners and the quality assurance of the award process. Because of the big disappointment the feedback report of the 2002 application had not been fully utilized at the time of the study.

Both informants believed that the main advantages of participating in the quality award process is that it illuminates and examines the whole organisation, thereby pointing out important improvement potentials. Furthermore, the informants believed that it had been a great learning experience that fostered everyone’s participation. The main drawback had been the lack of quality assurance of the award process. Furthermore, the informants believe that the SIQ model was narrow-minded. For example, the organisation had decided earlier that
they should not perform any employee satisfaction surveys. However, the award model and its framework did not benefit such a choice in their opinion. Furthermore, the informants believed that the quality award process was time-consuming.

Cross-Case Analysis

Customer Orientation
The informants of Sydkraft and Agria believed that the customer orientation was one of the core values that were strengthened the most by the use of the SIQ Model. Also in KD this core value was thought to have been strengthened over time, but the informants were not sure if this core value, or any of the others, had been strengthened due to the participation in a quality award process or if this was a result of other factors. All six informants claimed that the understanding of the concept of customer orientation had changed significantly over time in their organisations. For example, one informant at Sydkraft claimed, “We were forced to identify our customers in order to be able to initiate the work with the SIQ Model. At that time the thoughts of this approach were born”. At the time of the case study all three organisations were using a number of methodologies in order to strengthen their customer orientation. They had for example developed methodologies supporting comprehensive dialogues with their customers in order to fully understand their needs and expectations. The external examiners all thought that the organisation they had studied had been strongly customer oriented. Comments from the examiners included, for instance, that the organisations had developed and introduced systematic tools for measuring customer satisfaction.

Committed Leadership
According to the informants, leadership commitment was crucial in order to get the benefits of participating in the quality award process. According to one informant at Agria committed leadership is “a requirement for this to work”. A number of methodologies and tools were initiated in order to strengthen this area. The organisations have, according to their award applications, initiated regular employee surveys, leader development programs, and more systematic strategic and business planning. According to their external examiners the commitment among leaders was strong in all organisations. In particular, leaders in the organisations were systematic in defining and following up goals both for individuals and for the whole organisation.

Participation by Everyone
According to the informants at Sydkraft and Agria the top managers of those companies tried actively to involve all personnel in the quality award processes. The informants also claimed that more employees had become involved in the strategic and business planning as a result of their award process participation. One informant at Agria claimed that after having participated in the award process it had become almost impossible not to involve employees in any larger changes. The employees had reached a state where they did not accept being uninvolved. One of Agria’s characteristics, concerning the participation by everyone, was that all employees had participated in the development and improvement work in the organisation. Also, employees at Sydkraft seemed to have the opportunity of influencing the direction of the organisation, mainly through the use of cross-functional teams. Furthermore, in the process of strategic planning at Sydkraft, “nearly 100 percent of the employees are involved”. According to the examiners, the employees at KD had the opportunity of affecting the setting up of goals and the selection of indicators to be measured.
Competence Development

At the time of the study Agria was using a number of tools for competence development in the organisation, for example Investors In People and Competence Analyze Tool. KD had developed a methodology, or training system that was called the Kronans Droghandel University (KDU), in order to support competence development. In this forum “we are trying to identify areas where the employees, the group and the whole company can be developed”, one of the informants stated. At the time of the study competence development was not a prioritized area at Sydkraft. The external examiners concluded that their organisations had approached the issue of competence development in a systematic way. However, for both Agria and KD the examiners indicated that the results of the competence development were an improvement area.

Long-range Perspective

All informants claimed that the process of strategic planning had been improved, and had thereby provided a more long-range perspective. According to the external examiners, all three organisations operated with long-range perspectives. Specifically, Agria was praised for using methodologies such as interviews with customers, focus groups and a comprehensive world analysis in order to be prepared for the future. Furthermore, Agria had started a separate company that was to work with development issues that had not directly to do with insurance activities. The already long-term perspective of Sydkraft had not been further developed by their participation in the quality award process.

Public Responsibility

All three organisations demonstrated clear signs of strong public responsibility and also had strong links with society. They were all sponsors of different forums and were all working with and communicating quality development in the country. According to the examiners it was beyond doubt that these organisations showed strong public responsibility. According to the applications to the Swedish Quality Award the methodologies and tools of the ISO 14000 were used continuously in all organisations to make sure that the environmental concerns were considered. However, tangible results concerning the environmental and social improvements had been difficult to determine.

Process Orientation

All three studied organisations were largely process oriented. At Sydkraft, one of the informants argues, “the fact that we choose to design our organisations in a way that supports process orientation indicates the importance of process orientation”. All the organisations had started using the tool of process maps in the middle of the 1990s and were now recognising benefits of having been focusing on their processes. Most processes in the organisations were running effectively and efficiently at the time of the study, with clearly assigned teams and roles. Specifically, KD had identified “process owners”, “process improvement teams” and “work groups” responsible for different parts of their process management. All organisations had identified connections between process orientation and the core value of continuous improvement. Most of the improvements were made within the process framework. According to the external examiners, the organisations were characterized by their high degrees of process orientation. The most significant improvement potentials found with regard to process orientation were associated with the systems for measurement and control.
Prevention

In order to prevent failures all the studied organisations had developed well-documented routines. The informants at Agria claimed that they were working more proactively now. By using the tool of a customer model, threats and risks for customers were identified in order to prevent failures, KD had begun working with the methodology of Risk Management, and Sydkraft claimed that “the largest difference today is that we involve customers and suppliers in the work of planning and actions” in order to prevent failures. According to the examiners of Agria it was not clear how they used their experiences to prevent future defects and deviations.

Continuous Improvement

The improvement work in the organisations was found to be both systematic and continuous. According to an informant of Agria, “we work all the time with improvements, which are a word that permeates us”. Agria had also, to a larger extent than the other companies, given the employees authority, not only to identify improvements, but also to execute some of them through a tool called the “Initiative Ladder”. A similar approach was used at Sydkraft. All the organisations had developed different methodologies for improvement. For example, Sydkraft used IT-support for handling the improvement work. They set goals for the improvement work and followed up the work continuously. The improvements made were at many different levels, ranging from small specific improvements to large improvement projects. Sydkraft claimed, “Today we receive and perform about 200 improvements annually”. Continuous improvement was, according to the examiners, systematic in the organisations, and of great help primarily in the process work. However, results and trends in this area had not been presented to a sufficient extent, according to the examiners.

Learning from Others

Through the methodology of benchmarking different activities were performed in all organisations. Sydkraft claimed, however, that this core value had not been prioritised during the planning phase. Agria benchmarked earlier quality award recipients and organisations that were not necessarily in the insurance business. One informant of Agria stated, “It is important to understand that you cannot copy everything straight off, rather you have to create the tools and involvement in your own organisation”. KD claimed that learning from others took place all the time and at different levels at the organisation. The organisations were, to different extents, systematic in their way of learning from others. However, neither Agria nor KD could show direct comparisons with competitors and leading organisations, according to the examiners.

Faster Response

Faster response was not prioritized at Sydkraft at the time of the case study, and the informants stated that there was an improvement potential concerning this core value. KD has daily contact with its customers and its customers’ customers to be able to react quickly if there is any problem. The informants emphasised, “we need to have fast responses to everything”. As previously mentioned Agria had developed a tool called the initiative ladder, which gave the employees an opportunity to react fast to problems that were not necessarily an issue for the management. According to the external examiners the intentions of the organisations were to react quickly to customer feedback, but it was not fully clear what actions had been performed in order to support this core value.
Management by Facts
Sydkraft had developed a number of indicators that were continuously monitored. In particular, they claimed, “We measure more, and are thereby able to improve”. However, they also stated that this core value was not prioritized. The informants at Agria stated that they had more of an “emotional organisation” and that they combined emotions with facts when they were making decisions. Agria and KD claimed that information was distributed effectively to the employees in order to support them in their decision-making. The organisations had, to different extents, extensive, systematic and structured management of facts, according to their award applications and the external examiners.

Interaction
Sydkraft interacted to a large extent with different divisions, customers and suppliers. In particular, they stated, “Today we interact significantly more between different plants and learn more from each other”. Agria had partner cooperation with all kinds of businesses, not only with insurance and animal organisations, and also had good cooperation with its owners. KD worked with the methodology of cross-functional teams and with a close relationship with its customers. Furthermore, the interaction with customers and suppliers had been recognized by the external examiners of all companies.

Summary of core value changes observed in the cases
On the whole, the organisations show many good examples, both systematic and integrated, of how organisational core values can be strengthened. In general, the main improvement potentials were found in the results area. According to the external examiners the organisations needed to improve measurement, analyse trends and also to perform comparisons with other leading organisations and competitors. None of the studied organisations claimed that they had, in monetary terms, been able to estimate how much they had earned or saved due to the improvements made.

Table I shows which core values were considered by the informants to have been most improved due to the participation in the quality award process. Furthermore, the results of the cross-case analysis, with regard to which core values have been most improved due to the participation in the quality award process, are presented in Table I. The core values of customer orientation, committed leadership, participation by everyone, process orientation and continuous improvement were considered to be most strengthened. The organisations have developed different methodologies and tools in order to strengthen these five core values. Some of the other studied core values have also been strengthened, but not to the same extent as the ones mentioned. The results of our study indicate that use of the SIQ Model strengthens certain core values more than others. This is in accordance with the findings of Eriksson (2003a), who also found that the five previously mentioned core values had been improved due to organisations having participated in quality award processes. In contrast to the findings of the present study, management by facts was also considered to have been strengthened by a large number of the informants studied in Eriksson (2003a). This difference between the studies might be due to the fact that the methods used in this study were not able to show a great impact on management by facts or that the organisations in this study are already relatively good at management by facts. The six mentioned core values are considered by many authors to be the essence of TQM today, see Bergman & Klefsjö (2003).

The two informants at Sydkraft seemed to have similar views on which core values that had primarily been strengthened due to the participation in the quality award process, see Table I. The informants at the other two organisations, however, had different views internally on
which core values had been improved. The informants that had overall responsibility in the organisation for the quality award process all indicated that leadership commitment was one of the core values that had been most strengthened. This was not the case for the informants with no overall responsibility.

Table I: The table shows which core values were considered to have been most strengthened due to the participation in the quality award process. “A” indicates an informant with overall responsibility for the award process in the organisation, “B” indicates an informant with no overall responsibility and “C” indicates results of the cross-case analysis.

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<th>Sydkraft</th>
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<th>Kronans Droghandel</th>
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<td>Kronans Droghandel</td>
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<td>Customer Orientation</td>
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<td>Committed Leadership</td>
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<td>Participation by Everyone</td>
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<tr>
<td>Competence Development</td>
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<tr>
<td>Long-range Perspective</td>
<td>+</td>
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<td>+</td>
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<tr>
<td>Public Responsibility</td>
<td>+</td>
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<tr>
<td>Process Orientation</td>
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<tr>
<td>Prevention</td>
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<tr>
<td>Continuous Improvement</td>
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<td>Learning from Others</td>
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<td>Management by Facts</td>
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<td>Interaction</td>
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Discussion

As reflected in Table I, there were some differences between the studied cases, regarding which values had been affected by the quality award process participation. All organisations had experienced improvements in the areas of customer orientation, committed leadership, process orientation and continuous improvement. At Sydkraft and Agria the participation by everyone had also been significantly strengthened. These two organisations have involved almost all their employees in the quality award process, and also, to a large extent, in their business planning. This was not the case at KD. However, KD had a much larger organisation in terms of the number of employees, and hence had a more difficult task involving all their employees. Furthermore, KD had many blue-collar workers in their organisation in comparison with Agria and Sydkraft, which had more white-collar workers and no workshop. This could be an explanation of the observed differences.

The answers of the informants seem to differ systematically depending on the role of the interviewee. This should not come as a surprise. For example, managers may believe that the main results of a change programme affect the leadership, because it is in that area they mainly see the effects. Employees with no overall responsibility may, on the other hand, see the main effects on the empowerment and competence development.

In general, the informants were positive to their organisation’s participation in the Swedish Quality Award process, and they also recommended other organisations to participate in an award process. As one informant stated, “It is much better to perform a systematic
improvement program with a structured model that covers all aspects of the business, than to have ad-hoc and unsystematic improvement work”. The informants also claimed that it is important to have a long-range perspective in order to fully take advantage of the award process. They argued that the use of the SIQ Model had been important for their success, but some of the informants questioned the frequency of quality award participation. Every second year was thought to be more appropriate than every year. All organisations also complained that the participation in a quality award process had been very resource demanding. Our conclusion is that to participate in a quality award process every year could be too intense for organisations. For that reason, an application every second year could be more beneficial. By extending the time between applications the organisations get more time to complete improvement projects initiated as results of the evaluations. It is also clear that one needs to participate once in the process in order to be familiar with the model and the method of working. This would suggest that a second application could give a more beneficial outcome than the first. Simpson et al. (1998) also argue that it is widely accepted that subsequent self-assessment is more successful than the first attempt. If the studied organisations were to participate in a quality award process once again they would do it somewhat differently. The informants of Sydkraft argue, for example, that they would train more employees in the SIQ Model. KD would also involve more employees in the award process. In the planning phase, Sydkraft argues that one could learn more from others, instead of participating in a quality award process directly.

The value of TQM, through participating in a quality award process, seems to be beneficial according to the informants of this study. This is in line with, for example, the findings of Finn & Porter (1994) and Eriksson et al. (2003). As in earlier studies of self-assessment, the major benefits of participating in a quality award process were found to be a greater focus on improvement work, see Finn & Porter (1994) and van der Wiele et al. (1996), processes, see Gadd (1995), and customers, see Brown & van der Wiele (1996) and Eriksson (2003b). In addition, participation in a quality award process is also perceived to have an impact on committed leadership and participation by everyone.

In summary, critical success factors identified in this study of participating in a quality award process include the involvement and empowering of employees in the process. Furthermore, the leaders of the organisations must show strong long-term commitment to supporting the values of customer orientation, process orientation and continuous improvement.

Conclusions

The purpose of this study is to describe how organisations have utilized their quality award process participation in order to improve performance. The three studied organisations were selected partly due to their systematic improvement work. Examples of the application of methodologies and tools in order to improve organisational performance are provided in a number of areas. Specifically, the areas of customer orientation, process orientation, improvement work, committed leadership and participation by everyone have been strengthened through the participation in the quality award process.

The studied organisations may serve as good examples of how to perform an organisational change. In particular, the studied organisations have been successful in developing and communicating their vision, thereby empowering their employees. Like the studied organisations, other organisations considering participating in a quality award process need to have strong long-term commitment. Participating in a quality award process only once seems to be ineffective use of resources. The first time one participates in an award process one
mainly learns the craft. Often benefits cannot be measured until the second participation. It is also of importance to get enough time in between the applications in order to be able to complete as many as possible of the improvement projects.

Acknowledgements
The financial support from the Department of Economic Statistics at Stockholm School of Economics and “Söderbergstiftelsen” is gratefully acknowledged. The authors also wish to thank Professor Jan Eklöf, Professor Bengt Klefsjö, Dr. Johnny Lindström and Ms. Klara Palmberg for their extensive support during this project.

References


Appendix 1

Introductory Letters for Study 2
Till chef

**Enkät om Utmärkelsen Kvalitet i Posten**

Avdelningen för kvalitetsteknik och statistik vid Luleå tekniska universitet driver ett större forskningsprojekt, med stöd från bland annat Institutet för kvalitetsutveckling (SIQ) och Posten, som går ut på att kartlägga erfarenheter av företagsinterna kvalitetsutmärkelser. Ett första steg i forskningsprojektet är denna enkätundersökning, som framförallt går ut på att ta reda på effekterna och kostnaderna av företagsinterna kvalitetsutmärkelser, samt få en bild av företagsinterna kvalitetsutmärkelser ur ett lönsamhetsperspektiv. Enkätundersökningen är riktad till de personer som är chefer för enheterna inom de svenska företag som driver eller har drivit en företagsintern kvalitetsutmärkelse.

Enkäten är uppdelad i fyra frågeområden. Det första området består av inledande frågor, därefter kommer frågor rörande effekter i del två, samt kostnader i del tre. Enkäten avslutas med övriga frågor.

Din medverkan är viktig för att Posten skall kunna dra nytta av forskningsresultaten på bästa möjliga sätt. Framförallt kommer Posten, genom detta projekt, att få reda på vilka effekter en företagsintern kvalitetsutmärkelse medför ur ett perspektiv som innefattar kunder, medarbetare, ägare och processer. Därför är det vår förhoppning att Du tar Dig tid till att fylla i enkäten. Alla svar kommer att behandlas konfidentiellt.

Vi är tacksamma om Du besvarar enkäten omgående, dock senast den 23 november. Resultatet av enkätundersökningen kommer vi att distribuera till Er. Om Du vill veta mer om detta projekt, kontakta gärna Professor Bengt Klefsjö (0920-491123, bengt.klefsjo@ies.luth.se), Britt-Marie Olsson (08-7815707, britt.marie.olsson@posten.se) eller Doktorand Henrik Eriksson (0920-491720, henrik.eriksson@ies.luth.se). Tack på förhand för Din medverkan!

Med vänliga hälsningar

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Bengt Klefsjö Britt-Marie Olsson Henrik Eriksson
Professor ProcessKvalitet Doktorand

Bilagor
- Enkät
- Svara duvvert

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**Besöksadress** Universitetsområdet **Telefax** 0920-72160
**E-post** Henrik.Eriksson@ies.luth.se

Porsön
Till chef

Enkät om Utmärkelsen Kvalitet Sydkraft

Avdelningen för kvalitetsteknik och statistik vid Luleå tekniska universitet driver ett större forskningsprojekt, med stöd från bland annat Institutet för kvalitetsutveckling (SIQ) och Sydkraft, som går ut på att kartlägga erfarenheter av företagsinterna kvalitetsutmärkelser. Ett första steg i forskningsprojektet är denna enkätundersökning, som framförallt går ut på att ta reda på effekterna och kostnaderna av företagsinterna kvalitetsutmärkelser, samt få en bild av företagsinterna kvalitetsutmärkelser ur ett lönsamhetsperspektiv. Enkätundersökningen är riktad till de personer som är chefer för enheterna inom de svenska företag som driver eller har drivit en företagsintern kvalitetsutmärkelse.

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Med vänliga hälsningar

Bengt Klefsjö Henrik Eriksson
Professor Doktorand

Bilagor
• Enkät
• Svarskuvert
Till chef

Enkät om Utmärkelsen Kvalitet i Vägverket

Avdelningen för kvalitetsteknik och statistik vid Luleå tekniska universitet driver ett större forskningsprojekt, med stöd från bland annat Institutet för kvalitetsutveckling (SIQ) och Vägverket, som går ut på att kartlägga erfarenheter av företagsinterna kvalitetstumärkelser. Ett första steg i forskningsprojektet är denna enkätundersökning, som framförallt går ut på att ta reda på effekterna och kostnaderna av företagsinterna kvalitetsutmärkelser, samt få en bild av företagsinterna kvalitetstumärkelser ur ett lönsamhetsperspektiv. Enkätundersökningen är riktad till de personer som är chefer för enheterna inom de svenska företag som driver eller har drivit en företagsintern kvalitetstumärkelse.

Enkäten är uppdelad i fyra frågeområden. Det första området består av inledande frågor, därefter kommer frågor rörande effekter i del två, samt kostnader i del tre. Enkäten avslutas med övriga frågor.

Din medverkan är viktig för att Vägverket skall kunna dra nytta av forskningsresultaten på bästa möjliga sätt. Framförallt kommer Vägverket, genom detta projekt, att få reda på vilka effekter en företagsintern kvalitetstumärkelse medför ur ett perspektiv som innefattar kunder, medarbetare, ägare och processer. Därför är det vår förhoppning att Du tar Dig tid till att fylla i enkäten. Alla svar kommer att behandlas konfidentiellt.

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Med vänliga hälsningar

Bengt Klefsjö
Professor

Sten Livehed
Vägverket

Henrik Eriksson
Doktorand

Bilagor
- Enkät
- Svarskuvert
Appendix 2

Questionnaires for Study 2
Enkät om Utmärkelsen Kvalitet i Posten

Följande definition används i denna enkätundersökning om Postens företagsinterna kvalitetsutmärkelse:
Utmärkelsen Kvalitet i Posten är en företagsintern kvalitetsutmärkelse som är endast riktad till enheter inom Posten och som inkluderar verksamhetsbeskrivningar av aktiviteter, samt utvärderingar och examination av aktiviteter baserat på grundläggande värderingar inom offensiv kvalitetsutveckling.

1 Inledande frågor

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<tr>
<th>Namn</th>
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<td>Vid vilken enhet är Du anställd</td>
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</table>

1.1 Har Din nuvarande enhet sökt Utmärkelsen Kvalitet i Posten? (Markera med ett kryss i rutorna.)

☐ Ja, vilka årtal? (Ringa in årtal.) 1997 1998 1999 2000 2001

☐ Nej

☐ Vet ej

1.2 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för min nuvarande enhet beskrivas med en (kryssa i en ruta på varje rad):

- Kraftig minskning med 11 % eller mer
- Sansad minskning med ca 6-10 %
- Obetydlig minskning med ca 1-5 %
- Ingen förändring
- Obetydlig ökning med ca 1-5 %
- Sansad ökning med ca 6-10 %
- Kraftig ökning med 11 % eller mer
- Ej tillämplig för enheten eller vet ej

NKI (Nöjd Kund Index) eller NIK (Nöjd Intern Kund)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Kundklagomål

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Reklamationer

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

1.3 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för måtten i 1.2, samt för eventuella övriga mått som min nuvarande enhet använder relaterade till kunder (interna och externa), beskrivas med en:

- Kraftig försämring
- Sansad försämring
- Obetydlig försämring
- Ingen förändring
- Obetydlig förbättring
- Sansad förbättring
- Kraftig förbättring
- Ej tillämplig för enheten eller vet ej

Mått relaterade till Kunder (interna och externa)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
1.4 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för min nuvarande enhet beskrivas med en (kryssa i en ruta på varje rad):

<table>
<thead>
<tr>
<th></th>
<th>Kraftig minskning med 11 % eller mer</th>
<th>Sansad minskning med ca 6-10 %</th>
<th>Obetydlig minskning med ca 1-5 %</th>
<th>Ingen förändring</th>
<th>Obetydlig ökning med ca 1-5 %</th>
<th>Sansad ökning med ca 6-10 %</th>
<th>Kraftig ökning med 11 % eller mer</th>
<th>Ej tillämpbar för enheten eller vet ej</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ledtid</td>
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<td>[ ]</td>
</tr>
<tr>
<td>Kvalitets-bristkostnader</td>
<td>[ ]</td>
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<td>[ ]</td>
<td>[ ]</td>
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</tr>
<tr>
<td>KIPP (Kvalitet I Postens Processer)</td>
<td>[ ]</td>
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<td>[ ]</td>
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</tr>
<tr>
<td>SWEX (Mätning av brevleverans)</td>
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<td>[ ]</td>
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</tr>
</tbody>
</table>

1.5 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för mätten i 1.4, samt för eventuella övriga mått som min nuvarande enhet använder relaterade till processor, beskrivas med en:

<table>
<thead>
<tr>
<th></th>
<th>Kraftig försämring</th>
<th>Sansad försämring</th>
<th>Obetydlig försämring</th>
<th>Ingen förändring</th>
<th>Obetydlig förbättring</th>
<th>Sansad förbättring</th>
<th>Kraftig förbättring</th>
<th>Ej tillämpbar för enheten eller vet ej</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mått relaterade till Processer (operationella mått)</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
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<td>[ ]</td>
</tr>
</tbody>
</table>

1.6 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för min nuvarande enhet beskrivas med en (kryssa i en ruta på varje rad):

<table>
<thead>
<tr>
<th></th>
<th>Kraftig minskning med 11 % eller mer</th>
<th>Sansad minskning med ca 6-10 %</th>
<th>Obetydlig minskning med ca 1-5 %</th>
<th>Ingen förändring</th>
<th>Obetydlig ökning med ca 1-5 %</th>
<th>Sansad ökning med ca 6-10 %</th>
<th>Kraftig ökning med 11 % eller mer</th>
<th>Ej tillämpbar för enheten eller vet ej</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIP (Vi I Posten)</td>
<td>[ ]</td>
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<td>[ ]</td>
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<td>[ ]</td>
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<td>[ ]</td>
</tr>
<tr>
<td>Frånvaro</td>
<td>[ ]</td>
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<td>[ ]</td>
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<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Personal-omsättning</td>
<td>[ ]</td>
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<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Idéverksamhet</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>
1.7 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för mätten i 1.6, samt för eventuella övriga mätt som min nuvarande enhet använder relaterade till medarbetare, beskrivas med en:

<table>
<thead>
<tr>
<th>Kraftig försämring</th>
<th>Sansad försämring</th>
<th>Obetydlig försämring</th>
<th>Ingen förändring</th>
<th>Obetydlig förbättring</th>
<th>Sansad förbättring</th>
<th>Kraftig förbättring</th>
<th>Ej tillämplig för enheten eller vet ej</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
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</tr>
</tbody>
</table>

Mått relaterade till Medarbetare

1.8 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för min nuvarande enhet beskrivas med en (kryssa i en ruta på varje rad):

<table>
<thead>
<tr>
<th>Kraftig minskning med 11 % eller mer</th>
<th>Sansad minskning med ca 6-10 %</th>
<th>Obetydlig minskning med ca 1-5 %</th>
<th>Ingen förändring</th>
<th>Obetydlig ökning med ca 1-5 %</th>
<th>Sansad ökning med ca 6-10 %</th>
<th>Kraftig ökning med 11 % eller mer</th>
<th>Ej tillämplig för enheten eller vet ej</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
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</tr>
</tbody>
</table>

Budgetavvikelse

<table>
<thead>
<tr>
<th>Kraftig försämring</th>
<th>Sansad försämring</th>
<th>Obetydlig försämring</th>
<th>Ingen förändring</th>
<th>Obetydlig förbättring</th>
<th>Sansad förbättring</th>
<th>Kraftig förbättring</th>
<th>Ej tillämplig för enheten eller vet ej</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
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</tr>
</tbody>
</table>

Lönsamhet

1.9 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för mätten i 1.8, samt för eventuella övriga mätt som min nuvarande enhet använder relaterade till ägare, beskrivas med en:

<table>
<thead>
<tr>
<th>Kraftig försämring</th>
<th>Sansad försämring</th>
<th>Obetydlig försämring</th>
<th>Ingen förändring</th>
<th>Obetydlig förbättring</th>
<th>Sansad förbättring</th>
<th>Kraftig förbättring</th>
<th>Ej tillämplig för enheten eller vet ej</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
</tr>
</tbody>
</table>

Mått relaterade till Ägare (finansiella mått)

1.10 Har Du arbetat för någon enhet inom Posten som, under Din tid vid enheten, har sökt Utmärkelsen Kvalitet i Posten? (Markera med ett kryss i rutorna.)

☐ Ja  Gå till fråga 2.1
☐ Nej  Gå till fråga 4.1
☐ Vet ej  Gå till fråga 4.1
2 Effekter

2.1 Vilka effekter för enheten har arbetet med Utmärkelsen Kvalitet i Posten resulterat i, samt hur viktig anser Du dessa effekter vara för enhetens medarbetare, kunder, ägare och processer?
(Skala 1-5, där 5 är mycket viktig och 1 är inte viktig.)

<table>
<thead>
<tr>
<th>Effekter för enheten med Er företagsinterna kvalitetsutmärkelse</th>
<th>Medarbetare (1-5)</th>
<th>Kunder (1-5)</th>
<th>Ägare (1-5)</th>
<th>Processer (1-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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<td>5.</td>
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<tr>
<td>6.</td>
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<tr>
<td>7.</td>
<td></td>
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</tr>
</tbody>
</table>
3 Kostnader
3.1 Uppskatta lönekostnader, genom att fylla i tabellen nedan från vänster till höger, samt övriga kostnader (kolumnen till höger) för enheten för respektive år enheten ansökte om Utmärkelsen Kvalitet i Posten. Fyll gärna i under punkt 6 och 7 på liknande sätt andra kostnader för enheten med Utmärkelsen Kvalitet i Posten (använd gärna baksidan av bladet om det behövs).

<table>
<thead>
<tr>
<th>Kostnader för enheten med Er företagsinterna kvalitetsutmärkelse</th>
<th>Antal deltagare från enheten</th>
<th>Genomsnittlig antal timmar för deltagarna</th>
<th>Genomsnittlig timlön (inklusive sociala avgifter) för deltagarna</th>
<th>Total lönekostnad</th>
<th>Totalt övriga kostnader (exklusive löner)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Planering för att genomföra en ansökan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Första året enheten sökte utmärkelsen</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Eventuellt andra året enheten sökte utmärkelsen</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Eventuellt tredje året enheten sökte utmärkelsen</td>
<td>*</td>
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<td></td>
</tr>
<tr>
<td>2. Utbildningar av personal</td>
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<tr>
<td>Första året enheten sökte utmärkelsen</td>
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</tr>
<tr>
<td>Eventuellt andra året enheten sökte utmärkelsen</td>
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<tr>
<td>Eventuellt tredje året enheten sökte utmärkelsen</td>
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<td></td>
</tr>
<tr>
<td>3. Identifiering och beskrivningar av aktiviteter för enhetens verksamhetsbeskrivning</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Första året enheten sökte utmärkelsen</td>
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<td>Eventuellt andra året enheten sökte utmärkelsen</td>
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<tr>
<td>Eventuellt tredje året enheten sökte utmärkelsen</td>
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</tr>
<tr>
<td>4. Utvärderingar (examination) av andra enheters verksamhetsbeskrivningar</td>
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<tr>
<td>Första året enheten sökte utmärkelsen</td>
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<tr>
<td>Eventuellt andra året enheten sökte utmärkelsen</td>
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<td>Eventuellt tredje året enheten sökte utmärkelsen</td>
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<tr>
<td>5. Förbättringsarbete efter utvärdering</td>
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<tr>
<td>Första året enheten sökte utmärkelsen</td>
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<tr>
<td>Eventuellt andra året enheten sökte utmärkelsen</td>
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<tr>
<td>Eventuellt tredje året enheten sökte utmärkelsen</td>
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<td>6.</td>
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<tr>
<td>Första året enheten sökte utmärkelsen</td>
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<td>Eventuellt andra året enheten sökte utmärkelsen</td>
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<tr>
<td>Eventuellt tredje året enheten sökte utmärkelsen</td>
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<td>7.</td>
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<tr>
<td>Första året enheten sökte utmärkelsen</td>
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<tr>
<td>Eventuellt andra året enheten sökte utmärkelsen</td>
<td>*</td>
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<td></td>
</tr>
<tr>
<td>Eventuellt tredje året enheten sökte utmärkelsen</td>
<td>*</td>
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</tr>
</tbody>
</table>
4 Övriga frågor
4.1 Vilken är Din huvudsakliga inställning till Utmärkelsen Kvalitet i Posten (markera med ett kryss i rutorna)?

☐ Mycket Positiv
☐ Ganska Positiv
☐ Varken Positiv eller Negativ
☐ Ganska Negativ
☐ Mycket negativ
☐ Vet ej

4.2 Anser Du att det är lönsamt med Utmärkelsen Kvalitet i Posten (markera med ett kryss i rutorna)?

☐ Ja
☐ Nej
☐ Vet ej

4.3 Ge gärna Dina kommentarer kring effekter, kostnader eller andra erfarenheter rörande Utmärkelsen Kvalitet i Posten (använd gärna baksidan av bladet om det behövs):

........................................................................................................................................
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................

Tack för Din medverkan!

Fyll i och sänd denna enkät i bifogat svarskuvert senast 2001-12-14 till Henrik Eriksson, Avd. Kval. & Stat./LTU, Svarspost: 950344733, 978 00 LULEÅ
### Enkät om Utmärkelsen Kvalitet Sydkraft

Följande definition används i denna enkätundersökning om Sydkrafts företagsinterna kvalitetsutmärkelse:

**Utmärkelsen Kvalitet Sydkraft** är en företagsintern kvalitetsutmärkelse som är endast riktad till enheter inom Sydkraft och som inkluderar verksamhetsbeskrivningar av aktiviteter, samt utvärderingar och examination av aktiviteter baserat på grundläggande värderingar inom offensiv kvalitetsutveckling.

## 1 Inledande frågor

<table>
<thead>
<tr>
<th>Namn</th>
<th>Telefon</th>
<th>E-post</th>
<th>Vid vilken enhet är Du anställd</th>
<th>Vilken är Din befattning</th>
</tr>
</thead>
</table>

### 1.1 Har Din nuvarande enhet sökt Utmärkelsen Kvalitet Sydkraft? (Markera med ett kryss i rutorna.)

- [ ] Ja, vilka årtal? (Ringa in årtal.) **1998 1999 2000 2001**
- [ ] Nej
- [ ] Vet ej

### 1.2 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för min nuvarande enhet beskrivas med en (kryssa i en ruta på varje rad):

<table>
<thead>
<tr>
<th></th>
<th>Kraftig minskning med 11 % eller mer</th>
<th>Sansad minskning med 6-10 %</th>
<th>Obetydlig minskning med 1-5 %</th>
<th>Ingen förändring</th>
<th>Obetydlig ökning med 1-5 %</th>
<th>Sansad ökning med 6-10 %</th>
<th>Kraftig ökning med 11 % eller mer</th>
<th>Ej tillämpbar för enheten eller vet ej</th>
</tr>
</thead>
<tbody>
<tr>
<td>NKI (Nöjd Kund Index)</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
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</tr>
<tr>
<td>Kundklagomål</td>
<td>[ ]</td>
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<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Reklamationer</td>
<td>[ ]</td>
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</tr>
</tbody>
</table>

### 1.3 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för mätten i 1.2, samt för eventuella övriga mätt som min nuvarande enhet använder relaterade till **kunder** (interna och externa), beskrivas med en:

<table>
<thead>
<tr>
<th></th>
<th>Kraftig försämring</th>
<th>Sansad försämring</th>
<th>Obetydlig försämring</th>
<th>Ingen förändring</th>
<th>Obetydlig förbättring</th>
<th>Sansad förbättring</th>
<th>Kraftig förbättring</th>
<th>Ej tillämpbar för enheten eller vet ej</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mått relaterade till Kunder (interna och externa)</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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</tbody>
</table>
1.4 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för min nuvarande enhet beskrivas med en (kryssa i en ruta på varje rad):

<table>
<thead>
<tr>
<th></th>
<th>Kraftig minskning med 11% eller mer</th>
<th>Sansad minskning med ca 6-10%</th>
<th>Obetydlig minskning med ca 1-5%</th>
<th>Ingen förändring</th>
<th>Obetydlig ökning med ca 1-5%</th>
<th>Sansad ökning med ca 6-10%</th>
<th>Kraftig ökning med 11% eller mer</th>
<th>Ej tillämplig för enheten eller vet ej</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ledtid</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Kvalitets-bristkostnader</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Kostnads-besparingar</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Leveranssäkerhet</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Processtid</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Fel och defekter</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

1.5 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för måtten i 1.4, samt för eventuella övriga mått som min nuvarande enhet använder relaterade till processer, beskrivas med en:

<table>
<thead>
<tr>
<th></th>
<th>Kraftig försämring</th>
<th>Sansad försämring</th>
<th>Obetydlig försämring</th>
<th>Ingen förändring</th>
<th>Obetydlig förbättring</th>
<th>Sansad förbättring</th>
<th>Kraftig förbättring</th>
<th>Ej tillämplig för enheten eller vet ej</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mått relaterade till Processer (operationella mått)</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>
1.6 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för min nuvarande enhet beskrivas med en (kryssa i en ruta på varje rad):

<table>
<thead>
<tr>
<th></th>
<th>Kraftig minskning med 11 % eller mer</th>
<th>Sansad minskning med 6-10 %</th>
<th>Obetydlig minskning med 1-5 %</th>
<th>Ingen förändring</th>
<th>Obetydlig ökning med ca 1-5 %</th>
<th>Sansad ökning med ca 6-10 %</th>
<th>Kraftig ökning med 11 % eller mer</th>
<th>Ej tillämplbar för enheten eller vet ej</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nöjd medarbetar index</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frånvaro</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Personal-omsättning</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Förslagsverksamhet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Säkerhet och Hälsa för medarbetarna</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.7 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för måtten i 1.6, samt för eventuella övriga mått som min nuvarande enhet använder relaterade till medarbetare, beskrivas med en:

<table>
<thead>
<tr>
<th></th>
<th>Kraftig försämring</th>
<th>Sansad försämring</th>
<th>Obetydlig försämring</th>
<th>Ingen förändring</th>
<th>Obetydlig förbättring</th>
<th>Sansad förbättring</th>
<th>Kraftig förbättring</th>
<th>Ej tillämplbar för enheten eller vet ej</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mått relaterade till Medarbetare</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.8 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för min nuvarande enhet beskrivas med en (kryssa i en ruta på varje rad):

<table>
<thead>
<tr>
<th></th>
<th>Kraftig minskning med 11 % eller mer</th>
<th>Sansad minskning med ca 6-10 %</th>
<th>Obetydlig minskning med ca 1-5 %</th>
<th>Ingen förändring</th>
<th>Obetydlig ökning med ca 1-5 %</th>
<th>Sansad ökning med ca 6-10 %</th>
<th>Kraftig ökning med 11 % eller mer</th>
<th>Ej tillämplbar för enheten eller vet ej</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marknadsandel</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Omsättning per anställd</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avkastning per kapital</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Vinstmarginal</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
1.9 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för måtten i 1.8, samt för eventuella övriga mått som min nuvarande enhet använder relaterade till ägare, beskrivas med en:

<table>
<thead>
<tr>
<th>Kraftig försämring</th>
<th>Sansad försämring</th>
<th>Obetydlig försämring</th>
<th>Ingen förändring</th>
<th>Obetydlig förbättring</th>
<th>Sansad förbättring</th>
<th>Kraftig förbättring</th>
<th>Ej tillämpbar för enheten eller vet ej</th>
</tr>
</thead>
</table>

Mått relaterade till ägare (finansiella mått)

1.10 Har Du arbetat för någon enhet inom Sydkraft som, under Din tid vid enheten, har sökt Utmärkelsen Kvalitet Sydkraft? (Markera med ett kryss i rutorna.)

☐ Ja __________ Gå till fråga 2.1

☐ Nej __________ Gå till fråga 4.1

☐ Vet ej __________ Gå till fråga 4.1
2 Effekter
2.1 Vilka effekter för enheten har arbetet med Utmärkelsen Kvalitet Sydkraft resulterat i, samt hur viktig anser Du dessa effekter vara för enhetens medarbetare, kunder, ägare och processer? (Skala 1-5, där 5 är mycket viktig och 1 är inte viktig.)

<table>
<thead>
<tr>
<th>Effekter för enheten med Er företagsinterna kvalitetsutmärkelse</th>
<th>Medarbetare (1-5)</th>
<th>Kunder (1-5)</th>
<th>Ägare (1-5)</th>
<th>Processer (1-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
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<tr>
<td>3.</td>
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<td>4.</td>
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<td>5.</td>
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<tr>
<td>6.</td>
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<tr>
<td>7.</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
### 3 Kostnader

3.1 Uppskatta lönekostnader, genom att fylla i tabellen nedan från vänster till höger, samt övriga kostnader (kolumnen till höger) för enheten för respektive år enheten ansökte om Utmärkelsen Kvalitet Sydkraft. Fyll gärna i under punkt 6 och 7 på liknande sätt andra kostnader för enheten med Utmärkelsen Kvalitet Sydkraft (använd gärna baksidan av bladet om det behövs).

<table>
<thead>
<tr>
<th>Kostnader för enheten med Er företagsinterna kvalitetsutmärkelse</th>
<th>Antal deltagare från enheten</th>
<th>Genomsnittlig antal timmar för deltagarna</th>
<th>Genomsnittlig timlön (inklusiv sociala avgifter) för deltagarna</th>
<th>Total lönekostnad</th>
<th>Totalt övriga kostnader (exklusive löner)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Planering för att genomföra en ansökan</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Första året enheten sökte utmärkelsen</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>=</td>
</tr>
<tr>
<td>Eventuellt andra året enheten sökte utmärkelsen</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>=</td>
</tr>
<tr>
<td>Eventuellt tredje året enheten sökte utmärkelsen</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>=</td>
</tr>
</tbody>
</table>

| **2. Utbildningar av personal** | | | | | |
| Första året enheten sökte utmärkelsen | * | * | * | * | = |
| Eventuellt andra året enheten sökte utmärkelsen | * | * | * | * | = |
| Eventuellt tredje året enheten sökte utmärkelsen | * | * | * | * | = |

| **3. Identifiering och beskrivningar av aktiviteter för enhetens verksamhetsbeskrivning** | | | | | |
| Första året enheten sökte utmärkelsen | * | * | * | * | = |
| Eventuellt andra året enheten sökte utmärkelsen | * | * | * | * | = |
| Eventuellt tredje året enheten sökte utmärkelsen | * | * | * | * | = |

| **4. Utvärderingar (examination) av andra enheters verksamhetsbeskrivningar** | | | | | |
| Första året enheten sökte utmärkelsen | * | * | * | * | = |
| Eventuellt andra året enheten sökte utmärkelsen | * | * | * | * | = |
| Eventuellt tredje året enheten sökte utmärkelsen | * | * | * | * | = |

| **5. Förbättringsarbete efter utvärdering** | | | | | |
| Första året enheten sökte utmärkelsen | * | * | * | * | = |
| Eventuellt andra året enheten sökte utmärkelsen | * | * | * | * | = |
| Eventuellt tredje året enheten sökte utmärkelsen | * | * | * | * | = |

| **6.** | | | | | |
| Första året enheten sökte utmärkelsen | * | * | * | * | = |
| Eventuellt andra året enheten sökte utmärkelsen | * | * | * | * | = |
| Eventuellt tredje året enheten sökte utmärkelsen | * | * | * | * | = |

| **7.** | | | | | |
| Första året enheten sökte utmärkelsen | * | * | * | * | = |
| Eventuellt andra året enheten sökte utmärkelsen | * | * | * | * | = |
| Eventuellt tredje året enheten sökte utmärkelsen | * | * | * | * | = |
4 Övriga frågor

4.1 Vilken är Din huvudsakliga inställning till Utmärkelsen Kvalitet Sydkraft (markera med ett kryss i rutorna)?

☐ Mycket Positiv
☐ Ganska Positiv
☐ Varken Positiv eller Negativ
☐ Ganska Negativ
☐ Mycket negativ
☐ Vet ej

4.2 Anser Du att det är lönsamt med Utmärkelsen Kvalitet Sydkraft (markera med ett kryss i rutorna)?

☐ Ja
☐ Nej
☐ Vet ej

4.3 Ge gärna Dina kommentarer kring effekter, kostnader eller andra erfarenheter rörande Utmärkelsen Kvalitet Sydkraft (använd gärna baksidan av bladet om det behövs):

........................................................................................................................................
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........................................................................................................................................

Tack för Din medverkan!

Fyll i och sänd denna enkät i bifogat svarskuvert senast 2001-12-14 till Henrik Eriksson, Avd. Kval. & Stat./LTU, Svarspost: 950344733, 978 00 LULEÅ
Enkät om Utmärkelsen Kvalitet i Vägverket

Följande definition används i denna enkätundersökning om Vägverkets företagsinterna kvalitetsutmärkelse:

Utmärkelsen Kvalitet i Vägverket är en företagsintern kvalitetsutmärkelse som är endast riktad till enheter och regioner inom Vägverket och som inkluderar verksamhetsbeskrivningar av aktiviteter, samt utvärderingar och examination av aktiviteter baserat på grundläggande värderingar inom offensiv kvalitetsutveckling.

1 Inledande frågor

<table>
<thead>
<tr>
<th>Namn</th>
<th>Telefon</th>
<th>E-post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vid vilken enhet/region är Du anställd</td>
<td>Vilken är Din befattning</td>
<td></td>
</tr>
</tbody>
</table>

1.1 Har Din nuvarande enhet/region sökt Utmärkelsen Kvalitet i Vägverket? (Markera med ett kryss i rutorna.)

☐ Ja, vilka årtal? (Ringa in årtal.) 1998 1999 2001

☐ Nej

☐ Vet ej

1.2 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för min nuvarande enhet/region beskrivas med en (kryssa i en ruta på varje rad):

   Kraftig minskning med 11 % eller mer
   Sansad minskning med ca 6-10 %
   Obetydlig minskning med ca 1-5 %
   Ingen förändring
   Obetydlig ökning med ca 1-5 %
   Sansad ökning med ca 6-10 %
   Kraftig ökning med 11 % eller mer
   Ej tillämplbar för enheten eller vet ej

NKI (Nöjd Kund Index)
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Kundklagomål
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

1.3 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för måtten i 1.2, samt för eventuella övriga mått som min nuvarande enhet/region använder relaterade till kunder (interna och externa), beskrivas med en:

   Kraftig försämring
   Sansad försämring
   Obetydlig försämring
   Ingen förändring
   Obetydlig förbättring
   Sansad förbättring
   Kraftig förbättring
   Ej tillämplbar för enheten eller vet ej

Mått relaterade till Kunder (interna och externa)
1.4 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för min nuvarande enhet/region beskrivas med en (kryssa i en ruta på varje rad):

<table>
<thead>
<tr>
<th></th>
<th>Kraftig minskning med 11 % eller mer</th>
<th>Sansad minskning med ca 6-10 %</th>
<th>Obetydlig minskning med ca 1-5 %</th>
<th>Ingen förändring</th>
<th>Obetydlig ökning med ca 1-5 %</th>
<th>Sansad ökning med ca 6-10 %</th>
<th>Kraftig ökning med 11 % eller mer</th>
<th>Ej tillämpbar för enheten eller vet ej</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ledtid för projekt</td>
<td>□</td>
<td>□</td>
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<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Kvalitetsbristkostnader</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Kostnadsbesparingar</td>
<td>□</td>
<td>□</td>
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</tr>
<tr>
<td>Leveranssäkerhet</td>
<td>□</td>
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<td>□</td>
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<td>□</td>
</tr>
<tr>
<td>Processtid (ärende- hanteringstid)</td>
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<td>□</td>
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<tr>
<td>Fel och defekter (skadeanmälan)</td>
<td>□</td>
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<td>□</td>
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</tr>
</tbody>
</table>

1.5 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för mätten i 1.4, samt för eventuella övriga mätter som min nuvarande enhet/region använder relaterade till processer, beskrivas med en:

<table>
<thead>
<tr>
<th></th>
<th>Kraftig försämring</th>
<th>Sansad försämring</th>
<th>Obetydlig försämring</th>
<th>Ingen förändring</th>
<th>Obetydlig förbättring</th>
<th>Sansad förbättring</th>
<th>Kraftig förbättring</th>
<th>Ej tillämpbar för enheten eller vet ej</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mätt relaterade till Processer (operationella mätt)</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<td>□</td>
</tr>
</tbody>
</table>

1.6 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för min nuvarande enhet/region beskrivas med en (kryssa i en ruta på varje rad):

<table>
<thead>
<tr>
<th></th>
<th>Kraftig minskning med 11 % eller mer</th>
<th>Sansad minskning med ca 6-10 %</th>
<th>Obetydlig minskning med ca 1-5 %</th>
<th>Ingen förändring</th>
<th>Obetydlig ökning med ca 1-5 %</th>
<th>Sansad ökning med ca 6-10 %</th>
<th>Kraftig ökning med 11 % eller mer</th>
<th>Ej tillämpbar för enheten eller vet ej</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nöjd medarbetare- index</td>
<td>□</td>
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<td>Frånvaro</td>
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<tr>
<td>Personal-Omsättning</td>
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<td>□</td>
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<td>□</td>
</tr>
<tr>
<td>Förslagsverksamhet</td>
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<tr>
<td>Säkerhet och Hälsa för medarbetarna</td>
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</tbody>
</table>
1.7 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för mätten i 1.6, samt för eventuella övriga mått som min nuvarande enhet/region använder relaterade till medarbetare, beskrivas med en:

<table>
<thead>
<tr>
<th>Kraftig försämring</th>
<th>Sansad försämring</th>
<th>Obetydlig försämring</th>
<th>Ingen förändring</th>
<th>Obetydlig förbättring</th>
<th>Sansad förbättring</th>
<th>Kraftig förbättring</th>
<th>Ej tillämplbar för enheten eller vet ej</th>
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</table>

Mått relaterade till Medarbetare

1.8 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för min nuvarande enhet/region beskrivas med en (kryssa i en ruta på varje rad):

<table>
<thead>
<tr>
<th>Kraftig minskning med 11 % eller mer</th>
<th>Sansad minskning med 6-10 %</th>
<th>Obetydlig minskning med ca 1-5 %</th>
<th>Ingen förändring</th>
<th>Obetydlig ökning med ca 1-5 %</th>
<th>Sansad ökning med ca 6-10 %</th>
<th>Kraftig ökning med 11 % eller mer</th>
<th>Ej tillämplbar för enheten eller vet ej</th>
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Överskriderande av totalbudget

<table>
<thead>
<tr>
<th>Kraftig försämring</th>
<th>Sansad försämring</th>
<th>Obetydlig försämring</th>
<th>Ingen förändring</th>
<th>Obetydlig förbättring</th>
<th>Sansad förbättring</th>
<th>Kraftig förbättring</th>
<th>Ej tillämplbar för enheten eller vet ej</th>
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Prognosavvikelse

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<thead>
<tr>
<th>Kraftig försämring</th>
<th>Sansad försämring</th>
<th>Obetydlig försämring</th>
<th>Ingen förändring</th>
<th>Obetydlig förbättring</th>
<th>Sansad förbättring</th>
<th>Kraftig förbättring</th>
<th>Ej tillämplbar för enheten eller vet ej</th>
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</table>

Kostnader för adm. per årsarbetskraft

<table>
<thead>
<tr>
<th>Kraftig försämring</th>
<th>Sansad försämring</th>
<th>Obetydlig försämring</th>
<th>Ingen förändring</th>
<th>Obetydlig förbättring</th>
<th>Sansad förbättring</th>
<th>Kraftig förbättring</th>
<th>Ej tillämplbar för enheten eller vet ej</th>
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</tbody>
</table>

1.9 Ta ställning till följande påstående: Sedan början av 1998 kan utvecklingen fram till idag för mätten i 1.8, samt för övriga mått relaterade till ägare, för min nuvarande enhet/region beskrivas med en:

<table>
<thead>
<tr>
<th>Kraftig försämring</th>
<th>Sansad försämring</th>
<th>Obetydlig försämring</th>
<th>Ingen förändring</th>
<th>Obetydlig förbättring</th>
<th>Sansad förbättring</th>
<th>Kraftig förbättring</th>
<th>Ej tillämplbar för enheten eller vet ej</th>
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</table>

Mått relaterade till Ägare (finansiella mått)

1.10 Har Du arbetat för någon enhet inom Vägverket som, under Din tid vid enheten/regionen, har sökt Utmärkelsen Kvalitet i Vägverket? (Markera med ett kryss i rutorna.)

☐ Ja  Gå till fråga 2.1
☐ Nej  Gå till fråga 4.1
☐ Vet ej  Gå till fråga 4.1
2 Effekter

2.1 Vilka effekter för enheten/regionen har arbetet med Utmärkelsen Kvalitet i Vägverket resulterat i, samt hur viktig anser Du dessa effekter vara för enhetens/regionens medarbetare, kunder, ägare och processer? (Skala 1-5, där 5 är mycket viktig och 1 är inte viktig.)

<table>
<thead>
<tr>
<th>Effekter för enheten/regionen med Er företagsinterna kvalitetsutmärkelse</th>
<th>Medarbetare (1-5)</th>
<th>Kunder (1-5)</th>
<th>Ägare (1-5)</th>
<th>Processer (1-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>7.</td>
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</tr>
</tbody>
</table>
3 Kostnader

3.1 Uppskatta lönekostnader, genom att fylla i tabellen nedan från vänster till höger, samt övriga kostnader (kolumnen till höger) för enheten/regionen för respektive år enheten/regionen ansökte om Utmärkelsen Kvalitet i Vägverket. Fyll gärna i under rad 6 och 7 på liknande sätt andra kostnader för enheten/regionen med Utmärkelsen Kvalitet i Vägverket (använd gärna baksidan av bladet om det behövs).

<table>
<thead>
<tr>
<th>Kostnader för enheten med Er företagsinterna kvalitetsutmärkelse</th>
<th>Antal deltagare från enheten</th>
<th>Genomsnittlig antal timmar för deltagarna</th>
<th>Genomsnittlig timlön (inklusive sociala avgifter) för deltagarna</th>
<th>Total lönekostnad</th>
<th>Totalt övriga kostnader (exklusive löner)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Planering för att genomföra en ansökan</td>
<td>*</td>
<td>*</td>
<td>=</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Första året enheten sökte utmärkelsen</td>
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</tr>
<tr>
<td>Eventuellt andra året enheten sökte utmärkelsen</td>
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<tr>
<td>Eventuellt tredje året enheten sökte utmärkelsen</td>
<td>*</td>
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<tr>
<td>2. Utbildningar av personal</td>
<td>*</td>
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<tr>
<td>Första året enheten sökte utmärkelsen</td>
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<td>Eventuellt andra året enheten sökte utmärkelsen</td>
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<td>Eventuellt tredje året enheten sökte utmärkelsen</td>
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<tr>
<td>3. Identifiering och beskrivningar av aktiviteter för enhetens verksamhetsbeskrivning</td>
<td>*</td>
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<tr>
<td>Första året enheten sökte utmärkelsen</td>
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<td>Eventuellt tredje året enheten sökte utmärkelsen</td>
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<tr>
<td>4. Utvärderingar (examination) av andra enheters verksamhetsbeskrivningar</td>
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<td>Första året enheten sökte utmärkelsen</td>
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<tr>
<td>5. Förbättringsarbete efter utvärdering</td>
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<td>Första året enheten sökte utmärkelsen</td>
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<td>Eventuellt tredje året enheten sökte utmärkelsen</td>
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<td>Första året enheten sökte utmärkelsen</td>
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<td>Eventuellt andra året enheten sökte utmärkelsen</td>
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<td>Eventuellt tredje året enheten sökte utmärkelsen</td>
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<td>Första året enheten sökte utmärkelsen</td>
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<tr>
<td>Eventuellt andra året enheten sökte utmärkelsen</td>
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<tr>
<td>Eventuellt tredje året enheten sökte utmärkelsen</td>
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</tr>
</tbody>
</table>
4 Övriga frågor
4.1 Vilken är Din huvudsakliga inställning till Utmärkelsen Kvalitet i Vägverket (markera med ett kryss i rutorna)?

☐ Mycket Positiv
☐ Ganska Positiv
☐ Varken Positiv eller Negativ
☐ Ganska Negativ
☐ Mycket negativ
☐ Vet ej

4.2 Anser Du att det är lönsamt med Utmärkelsen Kvalitet i Vägverket (markera med ett kryss i rutorna)?

☐ Ja
☐ Nej
☐ Vet ej

4.3 Ge gärna Dina kommentarer kring effekter, kostnader eller andra erfarenheter rörande Utmärkelsen Kvalitet i Vägverket (använd gärna baksidan av bladet om det behövs):

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Tack för Din medverkan!

Fyll i och sänd denna enkät i bifogat svarskuvert senast 2001-12-14 till Henrik Eriksson, Avd. Kval. & Stat./LTU, Svarspost: 950344733, 978 00 LULEÅ
Appendix 3

Case Study Questions for Study 3
INTRODUKTION:
1. Vad heter Du?
2. Vilken är Din befattning?
3. När påbörjade Du din anställning på Vägverket samt på regionen?
4. Kan du beskriva Dina huvudsakliga arbetsuppgifter?
5. Beskriv Din roll i arbetet med USKEN (SIQs modell/ den företagsinterna kvalitetsutmärkelsen)?

SYFTET OCH MÅL:
Svar jämförs mellan medarbetarna
6. Varför har ni börjat arbeta med USKEN?
7. Vilket anser Du är syftet med USK-arbetet?
8. Vilka anser Du är målen för USK-arbetet?
9. Anser Du att Ni har uppfyllt målen för regionen med arbetet med USKEN?
10. Har Du ytterligare några kommentarer om målet eller syftet med arbetet med USKEN?

ARBETSSÄTT:
Svar jämförs mellan medarbetarna och med enkäten
11. Beskriv hur ni arbetar med USKEN?
12. På vilket sätt arbetar ni med återföringsrapporten?
14. Vilka faser skall läggas till respektive dras ifrån modellen?
15. Hur många medarbetare anser Du har involverats i respektive fas (gå från vänster till höger)?
16. Rangordna faserna efter hur mycket arbete som har lagts ned på USKEN (börja med fasen som regionen har lagt ned mest arbete på)?
17. Rangordna de olika åren regionen har sökt USKEN efter hur mycket arbete som har lagts ned (börja med det år som regionen lade ned mest arbete)?
18. Beskriv hur Du upplever arbetet med USKEN? Vad är positivt respektive negativt med arbetet med USKEN?
19. Om Du fick möjlighet att förbättra något med arbetet med USKEN. Vad skulle det i så fall vara?

20. Skulle Du vilja aktivt delta i arbetet med USKEN vid nästa tillfälle?

21. Har Du ytterligare några kommentarer om regionens arbetssätt med USKEN?

PÅVERKAN PÅ
Grundläggande värderingar:
Svar jämförs mellan medarbetarna, samt med återföringsrapporten och enkäten.

22. Jag visar de 13 grundläggande värderingarna som använts i arbetet med USKEN. Anser Du att alla 13 grundläggande värderingarna genomsyrar regionen (visa de 13 grundläggande värderingarna)? Om nödvändig: Med genomsyra menar jag att de grundläggande värderingarna är vägledande i Ditt arbete.

23. Nämn de tre grundläggande värderingarna som Du anser mest genomsyrar regionen?

24. Vilka av dessa tre grundläggande värderingar beror på, delvis på samt inte alls på arbetet med USKEN?

25. Har Du ytterligare några kommentarer om hur arbetet med USKEN har påverkat de grundläggande värderingar?

Intressenter och Processer:
Svar jämförs mellan medarbetarna, samt med verksamhetsbeskrivningen (framförallt resultaten) övrig dokumentation av resultat och enkäten.

26. Hur påverkar arbetet med USKEN era kunder, det vill säga medborgare i Sverige som använder Era vägar?

27. Hur påverkar arbetet med USKEN medarbetarna?

28. Hur påverkar arbetet med USKEN uppdragsgivarna, det vill säga ytterst regeringen?

29. Hur påverkar arbetet med USKEN ert arbetssätt?

30. Har Du ytterligare några kommentarer om hur arbetet med USKEN har påverkat enhetens intressenter och arbetssätt?

AVSLUTNING:
Svar jämförs mellan medarbetarna.

31. Vilka fördelar har arbetet med USKEN medfört?

32. Vilka nackdelar har arbetet med USKEN medfört?

33. Överväger nytan med arbetet med USKEN resursåtgången?
34. Vilken är Din huvudsakliga inställning, positiv eller negativ, till arbetet med USKEN?

35. Har Du ytterligare några kommentarer om hur arbetet med USKEN har påverkat regionen?
Appendix 4

Questionnaire for Study 4
Bakgrundsfakta?
1.1 Organisation? Namn? Befattning?

1.2 Hur många anställda har Er organisation idag?

1.3 Vilket eller vilka år har Ni ansökt om Utmärkelsen Svensk Kvalitet, USK?

1.4 Vilken var Er roll i organisationen under utmärkelseprocessen till Utmärkelsen Svensk Kvalitet, USK?

1.5 Vilken nivå, 1 till 7, har Er organisation placerats i vid ansökningsstillfället?

Allmänna Erfarenheter?
2.1 Vilka var Er organisations tidigare erfarenheter från att arbeta med SIQs modell samt att delta i en utmärkelseprocess?

2.2 Vilken har varit den främsta fördelen för Er organisation med att delta i utmärkelseprocessen?

2.3 Vilken har varit den främsta nackdelen med att delta i utmärkelseprocessen?

2.4 Vilka grundläggande värderingar har stärkts eller förbättrats i Er organisation genom Ert deltagande i utmärkelseprocessen?
   Kundorientering
   Engagerat ledarskap
   Allas delaktighet
   Kompetensutveckling
   Långsiktighet
   Samhällsansvar
   Processorientering
   Förebyggande åtgärder
   Ständiga förbättringar
   Lära av andra
   Snabbare reaktioner
   Faktabaserade beslut
   Samverkan

   Vilken av dessa grundläggande värderingar har framförallt stärkts eller förbättrats genom Ert deltagande i utmärkelseprocessen?

2.5 Vilka kriterier har stärkts eller förbättrats genom Ert deltagande i utmärkelseprocessen?
   Ledarskap
   Information och Analys
   Strategisk planering
   Medarbetarnas utveckling
   Verksamhetens processer
   Verksamhetens resultat
   Kundtillfredsställelse
Vilket kriterium har framförallt stärkts eller förbättrats genom Ert deltagande i utmärkelseprocessen?

Förbättringsarbete?
3.1 Har Ni arbetat med förbättringar utifrån återföringsrapporten (Om Nej -> Fråga 4.1)?

3.2 Planerade Ni att genomföra förbättringar utifrån återföringsrapporten? I så fall hur?
3.3 Genomförde Ni förbättringar utifrån återföringsrapporten (Om nej -> 4.1)? I så fall hur?

3.4 Studerade Ni effekterna av de genomförda förbättringarna utifrån återföringsrapporten? I så fall hur?

3.5 Lärde Ni Er något från de genomförda förbättringarna utifrån återföringsrapporten? I så fall hur?

3.6 Har Ni undersökt hur mycket Ni har tjänat i pengar på förbättringsarbeteet utifrån återföringsrapporten? I så fall hur?

Processer?
4.1 Har Ni kartlagt några av huvudprocesserna i Er organisation (Om Nej -> Fråga 5.1)? I så fall vilka, och vilken grad (övergripande/detaljerat)?

4.2 Har Ni utsett personer som är ansvariga för de processer som har kartlagts (processägare, processledare eller liknande)?

Övriga Kommentarer?
5.1 Anser Du att nyttan för Er organisation överväger resursåtgången med att delta i utmärkelseprocessen?

5.2 Vilken är Din huvudsakliga inställning till att Er organisation deltog i utmärkelseprocessen, mycket positiv, positiv, varken positiv eller negativ, negativ eller mycket negativ?

5.3 Finns det möjlighet att besöka Er under April för att mera utförligt ta del av Era erfarenheter från utmärkelseprocessen?

5.4 Övriga kommentarer kring deltagandet i utmärkelseprocessen?
Appendix 5

Case Study Questions for Study 5
1 Bakgrund
1.1 Hur länge har du jobbat i organisationen?
1.2 Vad är dina arbetsuppgifter?
1.3 Vad kallas din befattning?
1.4 Vilka var dina roller i organisationen under utmärkelseprocessen till Utmärkelsen Svensk Kvalitet, USK?
1.4.4 Har du varit examinator?

2 Allmänna erfarenheter
2.1 Beskriv översiktligt hur ni fram till idag arbetat med SIQs modell samt vilka är ni deltagit i utmärkelseprocessen?
2.1.1 Vad var orsaken och syftet till att delta i utmärkelseprocessen? Har syftet uppfyllts?
2.1.2 Beskriv delaktigheten och engagemanget bland medarbetare till arbetet med utmärkelseprocessen?
2.2 Vilka har varit fördelarna för er organisation med att delta i utmärkelseprocessen?
2.3 Vilka har varit nackdelarna med att delta i utmärkelseprocessen?

3 Förbättringar
3.1 Beskriv översiktligt hur ni har bedrivit förbättringsarbete utifrån ert deltagande i utmärkelseprocessen?
3.1.1 Hur var reaktionen bland medarbetarna till återföringsrapporten?
3.1.2 Under vilka faser i utmärkelseprocessen har förbättringar identifierats?
3.1.3 Hur många planerade förbättringsprojekt har identifierats utifrån ert deltagande i utmärkelseprocessen?
3.1.4 Hur många förbättringsprojekt har genomförts och lett till verkliga förbättringar utifrån ert deltagande i utmärkelseprocessen?

4 Grundläggande värderingar
Vilka grundläggande värderingar har stärkts eller förbättrats i Er organisation genom Ert deltagande i utmärkelseprocessen?

<p>| Kundorientering | Engagerat ledarskap | Allas delaktighet |</p>
<table>
<thead>
<tr>
<th>Kompetensutveckling</th>
<th>4.1.1 Varför anser du att denna grundläggande värdering har stärkts eller förbättrats (alternativt varför inte)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Långsiktighet</td>
<td>4.1.1 Varför anser du att denna grundläggande värdering har stärkts eller förbättrats (alternativt varför inte)?</td>
</tr>
<tr>
<td>Samhällsansvar</td>
<td>4.1.1 Varför anser du att denna grundläggande värdering har stärkts eller förbättrats (alternativt varför inte)?</td>
</tr>
<tr>
<td>Processorientering</td>
<td>4.1.1 Varför anser du att denna grundläggande värdering har stärkts eller förbättrats (alternativt varför inte)?</td>
</tr>
<tr>
<td>Förebyggande åtgärder</td>
<td>4.1.1 Varför anser du att denna grundläggande värdering har stärkts eller förbättrats (alternativt varför inte)?</td>
</tr>
<tr>
<td>Ständiga förbättringar</td>
<td>4.1.1 Varför anser du att denna grundläggande värdering har stärkts eller förbättrats (alternativt varför inte)?</td>
</tr>
<tr>
<td>Lära av andra</td>
<td>4.1.1 Varför anser du att denna grundläggande värdering har stärkts eller förbättrats (alternativt varför inte)?</td>
</tr>
<tr>
<td>Samverkan</td>
<td>4.1.1 Varför anser du att denna grundläggande värdering har stärkts eller förbättrats (alternativt varför inte)?</td>
</tr>
</tbody>
</table>

**Kundorientering**
4.1.1 Varför anser du att denna grundläggande värdering har stärkts eller förbättrats (alternativt varför inte)?

**Engagerat ledarskap**
4.1.1 Varför anser du att denna grundläggande värdering har stärkts eller förbättrats (alternativt varför inte)?

**Allas delaktighet**
4.1.1 Varför anser du att denna grundläggande värdering har stärkts eller förbättrats (alternativt varför inte)?

**Kompetensutveckling**
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**Samhällsansvar**
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**Förebyggande åtgärder**
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**Lära av andra**
4.1.1 Varför anser du att denna grundläggande värdering har stärkts eller förbättrats (alternativt varför inte)?

**Snabbare reaktioner**
4.1.1 Varför anser du att denna grundläggande värdering har stärkts eller förbättrats (alternativt varför inte)?

**Faktabaserade beslut**
4.1.1 Varför anser du att denna grundläggande värdering har stärkts eller förbättrats (alternativt varför inte)?

**Samverkan**
4.1.1 Varför anser du att denna grundläggande värdering har stärkts eller förbättrats (alternativt varför inte)?

<table>
<thead>
<tr>
<th>4.2 Vilken eller vilka av dessa 13 grundläggande värderingar har framför allt stärkt eller förbättrats genom ert deltagande i utmärkelseprocessen?</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.3 Övriga kommentarer kring grundläggande värderingar?</td>
</tr>
</tbody>
</table>

**5 Kriterier**
5.1 Vilka kriterier har stärkt eller förbättrats genom ert deltagande i utmärkelseprocessen?

| Ledarskap | Information och analys |
| Strategisk planering | Medarbetarnas utveckling |
| Verksamhetens processer | Verksamhetens resultat |
| Kundtillfredsställelse |

5.2 Vilka eller vilket kriterium har framförallt stärkts eller förbättrats genom ert deltagande i utmärkelseprocessen?

**6 Avslutning**
6.1 Vilket mervärde har ett deltagande i utmärkelseprocessen givit er organisation?

6.2 Om ni skulle delta i utmärkelseprocesser i framtiden, vad skulle ni då göra annorlunda?

6.3 Skulle du vilja att ni deltog i utmärkelseprocesser i framtiden?

6.4 Skulle du rekommendera andra organisationer att delta i utmärkelseprocesser? Varför/varför inte?

6.5 Anser du att nytton för er organisation överstiger resursåtgången med att delta i utmärkelseprocesser?
<table>
<thead>
<tr>
<th>6.6 Vilken är din huvudsakliga inställning till att er organisation deltog i utmärkeprocessen, mycket positiv, positiv, varken positiv eller negativ, negativ eller mycket negativ?</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.7 Övriga kommentarer?</td>
</tr>
</tbody>
</table>