

ISO 9000: marketing motivations and benefits

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Reports a survey of the largest-ever national survey of the international quality management system, ISO 9000 (BS EN ISO 9000), which has been installed in 95,000 companies internationally. Specifically, reports the marketing considerations which motivate companies to seek certification and the marketing benefits which accrue from certification. Mail surveys were carried out on 4,250 certificated organizations; 1,220 (28.7 per cent) responded. Marketing considerations were secondary in seeking registration, and outcomes related to profitability and process improvement were more highly valued than marketing benefits.

Content Indicators: Readability**, Practice Implications**, Originality*, Research Implications*

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The largest-ever national survey of the international quality management system, ISO 9000 (BS EN ISO 9000), which has been installed in 95,000 companies internationally, is the subject of a survey reported here. Specifically, the paper reports the marketing considerations which motivate companies to seek certification and the marketing benefits which accrue from certification. Mail surveys were carried out on 4,250 certificated organizations; 1,220, (28.7 per cent) responded. Marketing considerations were secondary in seeking registration, and outcomes related to profitability and process improvement were more highly valued than marketing benefits.

Introduction

This paper reports findings from the largest-ever national, omni-sectoral survey into the impacts of ISO 9000 on UK business.

The paper commences with a brief introduction to ISO 9000, before moving to a review of research method and findings.

ISO 9000: a primer

ISO 9000 is a series of international standards which sets out requirements and recommendations for the design and assessment of management systems. ISO 9000 is grounded on the “conformance to specification” definition of quality. The standards specify how management operations shall be conducted. ISO 9000’s purpose is to ensure that suppliers design, create and deliver products and services which meet predetermined standards; in other words, its goal is to prevent non-conformity. The ISO 9001, ISO 9002 and ISO 9003 quality assurance standards are described in [Table I](#) ISO 9000 quality assurance standards .

The rationale for these three separate standards, which in many ways are very similar, is to enable organizations with certain profiles to claim QA registration. A firm registered to ISO 9002 is either indicating that it does not have a design and development capability or that any it does has not been registered. ISO 9001 is the most comprehensive and inclusive of the three standards.

Companies which seek registration to the standard must review and document their management procedures, prepare a quality manual and have their processes periodically assessed by an approved external body.

Objectives

The broad research question guiding this study was: “Does ISO 9000 work, and if so with what benefits and costs?” A large number of specific objectives were pursued as follows, to identify:

1. ·whether ISO 9000 certification is pursued as part of a TQM agenda or as a stand-alone initiative;
2. ·the motivations for pursuing certification;
3. ·the benefits experienced from certification;
4. ·difficulties experienced during initial certification;
5. ·problems experienced following certification;
6. ·whether certification has met expectations;
7. ·the level of satisfaction with ISO 9000’s organizational impact;
8. ·willingness to recommend certification to similar firms;
9. ·time taken to recover the costs of certification.

A full report on these issues, which are not addressed in this paper, is available from the author.

This paper reports findings on the specific question: what are the marketing considerations which motivate companies to seek certification, and what are the marketing benefits which accrue after certification?

Methodology

A thorough literature review was conducted. Coverage included business reports, academic investigations, and broader press commentary on BS 5750/ISO 9000 issues. This generated a large number of statements concerning motivations, benefits and costs anticipated, and benefits and costs experienced. These were used to construct a questionnaire, which was piloted and amended.

Revised questionnaires were mailed to 4,250 organizations certificated to ISO 9000, under a Manchester Business School covering letter, together with a pre-paid return envelope.

The sample was selected at random from the 1995 quality assurance register of the Department of Trade and Industry. A total of 1,220 questionnaires (28.7 per cent) was returned. This is the largest-ever national, omni-sectoral ISO 9000 survey.

Literature review

Since 1984, when British Standards Institution (BSI) drafted its revision to BS 5750 (1979), there has been a huge amount of work published on ISO 9000. For the period January 1986 to May 1996, the ABI/Inform database records the publication of over 1,000 articles on the subject of ISO 9000 and/or BS 5750. Most of these articles are viewpoints and commentaries, but some are reports of academic research undertaken into the impacts of ISO 9000 at individual (company case histories), and aggregate (sector, industry or country) levels. In addition to the academic discourse there have been a number of other published investigations.

Rayner and Porter's[1] 1991 investigation of the standard's impacts on 20 SMEs found that 70 per cent of companies cited marketing advantages as the principal benefits: customer retention, customer acquisition, entry into new markets and fewer dissatisfied customers were the specific outcomes of certification. The vast majority of firms (85 per cent) felt their expectations had been met or exceeded. In 1992, Street and Fernie[2] obtained data from 52 certificated Scottish manufacturers. One-third claimed to have experienced a growth in the customer base, while one-quarter experienced increased sales. Mann and Kehoe[3] found that ISO 9000 had significantly greater impact on business performance, broadly defined, than other quality improvement methods such as statistical process control, Taguchi and Internal Audits, but less impact than TQM. Prasad and Naidu's[4] survey of 870 small and medium-sized American exporters (or intending exporters) found a very high incidence of indifference towards or ignorance of (64 per cent) the standard. Those respondents who were not so inclined believed that the standard enhanced competitiveness and provided a major competitive advantage. Taylor[5, 6] obtained data from senior executives in 115 ISO 9000 registered businesses in Northern Ireland. Thirty claimed to have pursued registration because of pressure from customers, and 45 per cent claimed to have experienced economies subsequently. Terziovski *et al.*[7] reported that there was no significant link between ISO 9000 certification and customer satisfaction. Unhappily, they failed to ask customers directly whether they were satisfied, preferring only to seek the views of contacts in their manufacturing firm sample. Vloeberghs and Bellens[8] conducted a census of all known Belgian certificate-holders ($n = 689$, response rate = 42 per cent). Most of the benefits experienced by these firms were internal; however, the greatest benefit is that the formal quality assurance (QA) system leads to "greater client trust".

In addition to these academic investigations, there have been a number of other reports on the impact of ISO 9000. Some of these reports are specific to certain sectors - local authorities, software companies, manufacturers, suppliers to the water utilities, and small businesses. Few are general in scope.

One of the earliest investigations was that of Straw[9]. His 1988 analysis of the impact of the standard on the metal finishing industry found that customer rejects fell to 40 per cent of their pre-certification level, resulting in more repeat business and a steady increase in new business. In 1991, the manufacturing group of the Institute of Quality Assurance conducted a survey of IQA members and others[10]. Of 12,000 questionnaires distributed, 502 (4.2 per cent) were returned. Seventy-five per cent of these claimed to have experienced improvements in product/service following the introduction of BS 5750. In 1991 PERA International/Salford University Business Services Ltd telephone interviewed 2,317 firms who had taken advantage of the DTI quality consultancy initiative[11]. Of these, only 28 per cent were certificated to BS 5750, but 89 per cent of the entire sample claimed to have experienced operating efficiencies as a result of the introduction of quality management systems. The 1992 survey by SGS Yarsley[12] of 500 certificated firms found that 90 per cent had recovered or expected to recover the costs of certification within three years. When Deloitte and Touche in collaboration with Quality Systems Update[13] undertook a survey of 1,700 certificated firms in the USA and Canada they identified that firms reported average savings of \$179,000/year from certification, but that demand from customers was the driving motivation. A 1993 study[14] of the US and Canadian chemical industry reported that 25 per cent ranked customer demands and expectations as the most important reason for seeking registration: half that number report that they did experience a marketplace advantage; 24.5 per cent claimed also to have experienced enhanced customer satisfaction. The 1994 LCCI survey[15] of 237 companies reported that 74 per cent of service firms and 57 per cent of manufacturers believed that BS 5750 certification had increased their competitive advantage. Mendham *et al.*'s[16] survey of 4,091 small businesses reported that their principal motivation for seeking certification, other than to improve quality, was to win new customers. Brown and van der Wiele's[17] census of accredited firms in Western Australia found that pressure from customers was the primary motivation for seeking certification, and that the four most important benefits experienced were improved quality awareness, improved awareness of problems, improved management control and improved customer service. A 1996 survey by Quality Systems Update and Dun and Bradstreet Information Services[18] found that 29 per cent of 1,880 ISO 9000 US registrees had experienced improved customer demand, whilst 18 per cent experienced improved market share. Guerin and Rice[19] investigated the perceptions of UK, German and Dutch companies importing wood from the USA. Only one of the 27 firms sampled said that they would be more inclined to purchase from an American supplier with ISO 9000 accreditation. Veritas Labs'[20] 1996 survey of 48 certificated companies in the New York (USA) area found that the primary reason for seeking certification was pressure from existing customers, and that benefits were obtained in the form of increased employee motivation and personal accountability for job performance. A number of similar studies[21, 22, 23, 24, 25, 26, 27, 28, 29], reaching broadly the same conclusions, together with preliminary interviews, played a central role in defining the character of the questionnaire administered in this study.

Respondent profile

All respondents to the survey were certificated to ISO 9000: 23 per cent to ISO 9001, 77 per cent to ISO 9002 and 0.3 per cent to ISO 9003. All geographic areas of the UK were represented as shown in [Table II](#) Principal location of respondents .

All standard industrial classifications, with the exception of fisheries, were represented. Three per cent were from primary industry, 53 per cent from manufacturing, 10 per cent from construction and 34 per cent from the service sector. The number of employees at certified sites ranged all the way from single figures to over 500, with sales revenues up to £800 million. The modal number of employees was in the range 25-49.

The following analysis focuses on the marketing-linked issues raised by the survey, in particular the marketing motivations for pursuing ISO 9000 and the marketing benefits accruing from certification.

The literature review, discussions with consultants and assessment bodies, and responses to piloting the questionnaire indicated that there were ten motivations for pursuing ISO 9000 certification. Respondents were asked to rate the importance of these reasons on a five-point Likert-type scale ranging from 5 = very important to 1 = not at all important. [Table III](#) Reasons for pursuing ISO 9000 certification presents rank ordered responses across the entire sample, the most important motivation listed first.

The data collapse into three classes, those having mean scores above 4, below 3, and between 3 and 4. Only one motivation scores above 4: "Anticipated demand from future customers for ISO 9000". Two score below 3: "Provides proof of commitment to TQM", and "Achieve cost reductions". The standard deviations (SD) give an indication of how much consensus there was about the importance of the motivation. The smaller the SD, the tighter the distribution of ratings around the mean, and the greater the consensus.

Marketing reasons, those to do with relationships with external customers, dominate the rankings. There is a very strong marketing flavour to the top of the rankings. Although pressure from existing customers ranked fifth, the most important motivation was the "anticipated demand from future customers for ISO 9000". The standard is already a requirement when bidding or tendering for business with many organizations. The evidence here is that companies expect ISO 9000 will become an even more significant issue in winning and keeping customers in the future.

Factor analysis of the responses (principal components method, Varimax rotation, three iterations) supports the claim that there are two principle motivations. Six of the items loaded on a factor best interpreted as "improving operations"; the other four loaded on a factor interpretable as "improving marketing performance" ([Table IV](#) Factor analysis of motivations). Together they account for 61.6 per cent of the variance contained within the data. Loading on to "improving marketing performance" were the following: anticipated demand from future customers for ISO 9000, maintain/improve market share, customer pressure, and desire to use ISO 9000 as a promotional tool.

Benefits of certification

A number of benefits have been claimed for ISO 9000. The literature review, discussions with consultants and assessment bodies, and responses to the questionnaire pilot identified 23 benefits which had been claimed as products of ISO 9000 certification ([Table V](#) Benefits of ISO 9000 certification). Respondents were asked whether their organization had experienced any of these benefits and if so, the value placed on that benefit. [Table V](#) Benefits of ISO 9000 certification reports rank ordered responses across the entire sample. Two classes of data are provided: the number and percentage of respondents experiencing the benefit, and the mean value they attached to the benefit. A five point Likert-type rating scale was used, ranging from 5 = of great value to 1 = of no value.

The data can be classified into three groups: benefits enjoyed by 90 per cent or more of the sample, benefits enjoyed by 75 per cent or less, and benefits enjoyed by the intermediate number. The most widely experienced benefits are: improvements in efficiency (experienced by 99 per cent), improving awareness of procedural problems (95 per cent), better management control (95 per cent), use of the standard as a promotional tool (94 per cent), increased customer satisfaction (91 per cent) improved customer service (91 per cent), and facilitation of the elimination of procedural problems (90 per cent).

In general, the data also confirm that the most valued benefits were enjoyed by the largest number of respondents i.e. the rank order for benefits experienced is not dissimilar from the rank order for value. There are, however, some exceptions. “Improved efficiency” was rank ordered first in terms of the numbers experiencing the benefit; in contrast it was only ranked tenth in terms of the value of the benefit. The same pattern is observed with the benefit, “improved staff motivation”, which is ranked eighth in experience and 17th in value. Interestingly the pattern is reversed for “consistency across sites”. Few experienced the benefit, but those who had, valued it highly. The same reversal is observed with the benefit, “reduced need for quality audits by customers”. These are probably indicative of the relatively small number in the sample who operate out of multiple sites or who undergo customer accreditation.

A factor analysis was conducted of the 23 items to ascertain if there were any underlying benefit dimensions. The principal components (Varimax rotation) method was used. Over 24 iterations, four factors were identified which accounted for 61.3 per cent of the variance contained within the data. [Table VI](#) Factor analysis of the benefits of ISO 9000 certification reports the factor loadings.

This analysis indicates that the benefits most valued are those related to profitability (factor 1), the second most valued benefits are those connected with process improvement (factor 2), the third most valued are the marketing benefits (factor 3). Finally, there is a sundries factor on which the remaining four items load.

Expectations, satisfaction and word-of-mouth

The degree to which certificated companies' expectations were met, satisfaction achieved, and their willingness to recommend ISO 9000 to others were measured on seven-point Likert type scales. End-points and mid-points were labelled as follows. Expectations: 7 = greatly exceeded expectations, 4 = met expectations, 1 = greatly fallen short of expectations. Satisfaction: 7 = very satisfied, 4 = neither satisfied nor dissatisfied, 1 = very dissatisfied. Willingness to recommend ISO 9000 registration to others: 7 = strongly recommend, 4 = neither discourage nor recommend, 1 = strongly discourage. These three variables are very strongly inter-correlated, as indicated by the Pearson product moment correlations in [Table VII](#) Correlations between Exp, Sat and Rec4 .

Because of this high level of inter-variable correlation, this paper now focuses only on organizational satisfaction with ISO 9000. [Table VIII](#) Satisfaction with the organizational impacts of ISO 9000 reports the level of satisfaction with the impact of ISO 9000 on respondents' organizations. The mean of 4.451 indicates that the level of satisfaction with the standard is generally high. More than half the respondents scored to the positive side of the mid-point on the seven-point satisfaction scale.

Multiple regression was used to establish whether there was any association between satisfaction and benefits experienced after certification[30]. There certainly are strong associations between satisfaction and the benefits enjoyed by respondent organizations. In multiple regression, the higher the multiple R , the higher the correlation between the criterion variable (satisfaction) and the weighted sum of the predictor variables (benefit factors). R square indicates how much variance in the criterion variable is accounted for by all predictor variables combined. [Table IX](#) Regression analysis: satisfaction against benefits of ISO 9000 presents the results of the multiple regression analysis.

The entire regression equation accounts for 45 per cent of the variance in satisfaction (multiple $R = 0.66766$, R square = 0.44577). This is a remarkably strong finding given that only 61.3 per cent of the data (i.e. residing in the four factors) was incorporated into the regression equation. The beta weights signify the relative contributions of each factor to the overall equation.

Marketing benefits (beta = 0.251) are approximately half as important in the overall equation as the most significant factor, process improvement (beta = 0.484). The overall test for goodness of fit of the regression equation is the F -statistic. In this case, F -statistics are highly significant ($F = 214.149$, signif $F = 0.0000$) indicating that the equation is most unlikely to have occurred by chance.

Conclusion

Companies pursue ISO 9000 certification in order to enjoy both operational and marketing benefits which impact on costs, revenues, and, by inference, profit. The most important benefit sought from certification is profit improvement. Ranked second and third most important are process improvements and marketing benefits. Marketing benefits include gaining new customers, keeping existing customers, using the standard as a promotional tool, increasing market share, increasing growth in sales and improving customer satisfaction. By and large companies are satisfied with the impact of the standard on their organizations. These findings are broadly in keeping with the majority of previous research detailed earlier in this paper. However, the large sample size and broad scope of this survey add considerable weight to the conclusions.

In order of relative importance corporate satisfaction is related to process improvement benefits, profitability benefits and marketing benefits. The achievement of marketing benefits does not account for much variance in overall satisfaction.

[Table I](#) ISO 9000 quality assurance standards

[Table II](#) Principal location of respondents

[Table III](#) Reasons for pursuing ISO 9000 certification

[Table IV](#) Factor analysis of motivations

[Table V](#) Benefits of ISO 9000 certification

[Table VI](#) Factor analysis of the benefits of ISO 9000 certification

[Table VII](#) Correlations between Exp, Sat and Rec4

[Table VIII](#) Satisfaction with the organizational impacts of ISO 9000

[Table IX](#) Regression analysis: satisfaction against benefits of ISO 9000

Notes and references

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30. Problems encountered during initial registration were also identified during preliminary research. The following were listed in the questionnaire: difficulty interpreting the ISO 9000 standard; lack of free advice; high cost; time required to write the manuals; time to complete the whole process; need to change practices to fit ISO 9000; the vagueness of the standard; the narrow focus of the standard. These variables collapsed into two dimensions during factor analysis. Factor 1 (uncertainty) accounted for 47.7 per cent of the variance (pre-rotation); factor 2 (time) accounted for an additional 12.9 per cent, making 60.6 per cent in total. Problems experienced during registration are only weakly associated with satisfaction with ISO 9000 (multiple $R = 0.33127$, square = 0.10974).