The Future of ISO 9000 Quality Management System in a Global Economy

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Abstract

This position paper discusses ISO 9000 family of standards in terms of its capability assessment value and as a framework for management of organizations. Uses data collected from empirical sources to buttress a position for the continued usefulness of the management system standard for the foreseeable future and challenges the critics to put forward an alternative that can be effective for the complex global economy. The paper uses rationalization to put forward a thesis in which the misperceptions are blamed on the marketing flavor favored by the certification industry.

Introduction

A discussion of this topic must essentially look at ISO9001 from the wider perspective of management developments. Its history and the principles underpinning its development are some of the issues to be considered. Ideas and frameworks of managing have come and gone, many cases being dismissed as hypes, fads, and other unsavory terms (Nahmias, 2001). Having a topic title that includes "Future of ISO9001.." can in many cases create impression of possibility of negative change for ISO9001 and probably the entire ISO9000 family of standards. When issues at play are considered and the context understood, signs that there exist perceptions about the standard that are at variance, in some cases, with the objectives of the standard's development are detectable. These misperceptions would probably mask objective evaluation of the role and benefits of the management system standard.

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Since its inception, standardization has played critical role not just in international trade but in promotion of trade as a whole. Product standards allow easy and cost effective integration of products from different suppliers. It has helped in safeguarding users of products and the society from potential negative effects of products, product changes and their usage. The costs involved in conformance inspections for inbound logistics and their limitations, especially where subjects of contracts involve design and development and post delivery relationships led to change in focus to the pre-contract activities. Instead of focusing on product conformance evaluation, an organization could, instead, assess the capability of a supplier against criteria based on "organization as a system" thinking.

The debate on the future of ISO9001 can therefore be driven at two levels. At the first level, the debate ought to focus on whether evaluation of capability is an effective approach to engaging in trade or commerce should fall back to the product conformance inspections of the earlier era. At the second level, the debate ought to be around management technology as a factor of production that has significant influence on productivity. A discussion in this direction would necessarily be an evaluation of ISO9000 Quality Management System as a management framework, its application, failures and successes and contextual issues.

ISO 9001 as a Capability Evaluation Tool

Standards and certifications have some times been discussed as if they are one and the same. ISO standard and ISO certification is seen as meaning the same thing. Therefore a discussion of ISO9000 standard is seen as a discussion of ISO9000 certification. In the same vane, the agencies involved are often considered to be linked. The term, registrar or registrars, as used in reference to Conformity Assessment Bodies, is often taken to mean there is a relationship between the conformity assessment and the developer of the standard.

While International Standards Organization (ISO), the developer of ISO 9000 family of Standards, publishes annual survey on the number of certificates, the organization does not issue, control, or perform certification to its standards. The survey is carried out by the non-profit organization purely in response to frequent request for the information with the published survey result made available to the public free of any charge (ISO Central Secretariat, 2007). It is also important to note that certification is

not a requirement of the standard. This essentially points to a position that the future of the standard and the future of certification are distinct.

Two reports relating to the same concern amplifies the need for clarity on this topic. A special report in Fast Forward, a publication by ISO Central Secretariat (International Organization for Standardization, 2009) has the title "The future of certification". An online report on the trend of certification chooses to direct concern to the standard with the title, "The future of ISO9001 – bright or bleak" (The British Assessment Bureau, 2013). While these titles for these reports would appear to focus on different variables in the context, the discussions and the evidence put forward are all about certification.

A point that is of significant importance is the low certification take-ups in the North American region, with a paltry 10% of all certifications against the ISO 9001 standard. Also significant are the statistics indicating a near saturation point for the certificate take-ups globally. But what the statistics in the report by The British Assessment Bureau (2013) also revealed is that certifications may be seen by many purely as a marketing tool. As indicated in chart 1 below, more than 50% of businesses recognize meeting tender requirements and winning more business as the main benefits for certification. Only one third of businesses consider certification as a means to achieve higher level professionalism. For each of these groups, the key question would be: is it the certification or the standard?

Chart 1: Extracts from the British Assessment Bureau Survey

Benefits of achieving ISO 9001

Won more business	44%
More professional	34%
Client confidence	19%
Qualified for tenders	11%

44% of clients surveyed said they had won business as a direct result of ISO 9001 certification.

Source: British Assessment Bureau (2013)

The position in this paper is that the common practice of using the terms certification and ISO9001 standard usage interchangeably is responsible for the mixed perceptions.

The standard's purpose remains and this, right from its origin as a United States military standard, Mil-Q-9858A, is to assure capability of the organization beyond a single consignment of products. Organizations could make big savings from the expenses they incur in developing supplier evaluation systems, by utilizing the management system standard as the evaluation criteria. The standard's effectiveness has been proven, if not through the longevity of the structure but through its take up by the leading contract spenders in the world.

The standard's evolution starts from the first documentation of an organization as a system in the form of the USA military standard, Mil-Q-9858A (Portsmouth Business School, 2001). Allied Quality Assurance Publications (AQAP) used by North Atlantic Treaty Organization, a military alliance, was the first adaptation of the original Mil-Q-9858A codification of an organization as a system. With further adaptation in the form of MOD DEF-STAN 05-21, a United Kingdoms Ministry of Defense Standard, the management system standard, now incorporating assessment for general capabilities not specifically linked to specific contracts, became the standard evaluation scheme for commercial purchasing organizations. In the current global economy, this requirement does not diminish nor is there a more cost effective alternative.

It is argued in this paper that the view that standards are only important if associated with certification, which of course comes with a framed certificate on the wall and an "ISO9001 certified" mark in the stationary, fails to identify opportunities for risk limitation in use of the standard as a tool for capability assessment. This evaluation need not be for the purpose of certification but organizations can train its evaluators and use the standard as a second party evaluation tool for its contractors and suppliers. Independent assessors have effectively performed this role against technical standards, but have shied away from doing the same with the management system standards. But if they did, it would not be known, and this is the point: the usefulness and take-up of ISO9001 standard should not be tied with certifications, since it is fairly feasible, and the standard was developed for just this, to use the standard to evaluate the capability of organizations before contract. One would not, for instance, know if the defense contractors in the United States of America that the Defense Contract Management Agency audits before or during contract are ISO9001 certified.

1.1 ISO9001 as a Management Framework

The publication of ISO 9000:2000 family of standards, incorporating quality as an aspect of general management was a response to the criticism labeled against the ISO 9001, ISO 9002 and ISO 9003 quality assurance standards of presumed rigidity and inability to allow adaptation needed for survival in a global "turbulent field" type environment. The two standards in the family, ISO 9001:2008 Quality Management System – Requirements, and ISO 9004:2009 titled, Managing for sustained success of an organization – A quality management approach, are designed to complement each other, but can also be used independently.

ISO 9001:2008 specifies the requirements for a Quality Management System (QMS) that can be used internally by an organization or for third party certification purposes. The ISO 9004:2009 provides guidance for improvement of overall performance, efficiency and effectiveness in an organization. Awareness of this guideline standard appears not to be as wide-spread as awareness of ISO 9001. The position in this paper is that the low awareness of this specific standard is because, by its nature, third party certification is not available and hence appears of little iconic value.

Underpinning the value and type of documentation in the Quality Management System standards are the eight Quality Management principles of customer focus, leadership, people participation, systems approach, process approach, fact-based decision making, continuous improvement, and mutually beneficial supplier relationship. It is structured around the concept of Plan-Do-Check-Act cycle (the PDCA cycle). The emphasis is on the overall process management rather than conformance with procedures. Observations indicate a significant difference exists between organizations that have stuck to product quality assurance viewpoints in the ISO 9001, ISO 9002 and ISO 9003 and those that have adopted the new business process model in the millennium editions.

A case research in two Kenyan firms, one large enterprise and another a medium enterprise reveals how two organizations can differ in outlook and view of the management system standard. One of the two organizations (identified in table 1 as Org 1 for confidentiality reasons) is medium sized, in terms of the number of employees, and has less experienced managers. The second organization (identified in table 1 as Org 2) is a large enterprise with much more experienced managers equipped with higher level management training. Responses from the two organizations

exemplify how perception of the standard can differ from organization to organization, even where both are certified.

As the data in the table shows, in none of the two organizations is ISO 9001:2000, against which they had been certified, perceived as meant to achieve improvement in the operational performance. Less than 50% of respondents considered performance in internal and externally focused dimensions as evidence of success in the QMS initiative. One would then ask: why had they obtained the certification? The answer could be in the responses to the statement of Quality Management System as a framework for improvement, in which the two organizations appeared to share perception. The responses appear to suggest, the standard is viewed more as a group motivating tool and a marketing opportunity.

The differences between the two organizations in terms of indicators of ISO 9001 as a management framework, and the nature of these differences, are, however, of significance. Organization 2 (Org 2) with much less experienced managers, appear to see the standard as a management framework, while their more experienced and mature counterparts in Org 1 see it more as a motivating and marketing tool. Could it be that the standard provides the young, less mature and experienced managers with a needed management framework to help steer the organizational ship?

Table 1: Differences in perception of ISO 9001 as a management framework

No	Indicator of ISO 9000 QMS as a management framework	% of informants Org 1	% of informant Org 2
1	The organization has implemented a management framework rather than a Quality system	55	23
2	ISO 9000 means quality philosophy becomes the key guiding principle for operating process decisions.	70	27
3	Quality Management system certification framework is a means to facilitate improvement	50	55
4	Assessment of performance in both internal and external focused dimensions provides the evidence of success in the QMS initiative	45	46
5	QMS is a strategy and a management philosophy	70	27

Source: Survey data

Performance Evaluation

The introduction to this paper identifies two streams of debate on the future of ISO 9001 Quality Management System. One stream considers the future of the standard as a tool for promotion of trade through capability assessment. Another stream considers the future in terms of a management framework to drive performance in a global economy. In both these situations, a Performance Evaluation system is needed for integration of the application of the prescribed practices in the organization's functions so as to be able to focus effort in achieving objectives. Performance evaluation provides a means to give feedback against a roadmap, check-point or a standard.

A range of performance evaluation tools and methods are available to an organization. Choices include auditing, self-assessment, benchmarking, balanced scorecard, servqual (for services), value management, Quality Function Deployment (QFD), cost of quality, Failure Mode Effect & Criticality Analysis (FMECA), Six Sigma, and Statistical Process Control (SPC). Criteria for selection of one, or a combination, are appropriateness for specific key organizational objective, relevance to the type of organization, availability of measures that can readily highlight strengths and areas for improvement, level of comprehensiveness against requirement, and the extent it meets the requirement for a planning tool.

Systems and process auditing, as an evaluation method, can highlight strengths and areas for improvement in the management system, help managers improve their process operations and to meet requirements for certification against specific standard. This can be external by an organization accredited by an Accreditation Body that is a member of the International Accreditation Forum, Inc., 2nd party by a customer seeking to ascertain conformity for its own inbound supplies, or 1st party by own internal audit personnel competent in the specific standard. The objective for external audit is usually to meet requirement for certification to a management system standard. It can be expensive, but where there is a business requirement for compliance, the cost can be justified.

1st party audit is usually carried out with the objective of contributing to the improvement of an organization's management system. It can also help verify capability to meet contractual requirements of a customer. 1st and 2nd party audits

often carry very low financial burden and can be very effective in achieving the audit objectives.

Self-assessment is, in many cases, the most relevant as it can be comprehensive enough to encompass all the key processes, resources and results. The method offers an effective planning tool to assist managers to ascertain where they are and to plan where they want to be, and how to get there. It makes use of consistent scoring scale with enough flexibility to allow for meaningful differentiation in graduations, and can help achieve sustainable business improvement. Self-assessment against ISO 9004:2009, Managing for sustainable success – the quality management approach, standard provides an effective means to help internal and external learning in terms of best practices and transfer of ideas. It helps in giving attention to the needs of all interested parties in the level achievable when using Excellence Models.

Another performance evaluation method used by organizations is the Balanced Scorecard. The method provides clear and unambiguous guidelines of evaluating quality in the form of perspectives. It measures performance drivers as well as performance results. These can be in terms fully comprehensible and meaningful to the organization and the person carrying out assessment.

Summary and Conclusion

In this paper, the misperceptions, the differences that are often not talked about as concerns the performance of the certified organizations in the focus areas, and the freedom that users of ISO 9000 family of standards have in selecting evaluation methods are set out. The key issues are: is the current global economy any less sensitive to contractor capability to produce and supply? What is the most effective method of evaluating that capability? What effect would certification saturation have on the standards' popularity and usefulness?

This paper makes a case for not only continued requirement for capability assessment as a means to reduce business risks but for enhancement in light of the more complex global economy. The paper also makes a case for consideration of certification and the standards as separate and the global certification saturation should not affect the standard itself. In fact, the wide use of the standard only makes it an indispensable capability enhancing tool. As a capability evaluation tool, the standard becomes a

contract order qualifier even if not an order winner. In this respect, the future of the standard, if not the certification, is bright.

What is not desirable as it blurs the benefits of the standard is the certification-driven use of the standard. This position has been supported by empirical evidence which suggests it could be responsible for the mixed customer satisfaction outcomes associated with the quality management system standards in some cases. A point that must be stressed is that audit as applied by conformance assessment bodies is not the only evaluation method for quality systems. Nor is it the only audit type.

A conclusion that can be drawn from the analysis in this paper is that the standard provides organizations with invaluable means for minimizing contract risks. Beyond this, the standard is an important embodiment of the key aspects of management technology and is effective in enhancing strategic capability for organizations. In this respect, ISO 9001 is invaluable but its use must be driven by the users capability needs not market needs of assessment industry.

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