The International Dimension of Quality

Andrei Octavian PARASCHIVESCU
George Bacovia University, Bacau, ROMANIA
adiparaschivescu@yahoo.com

Abstract: The objective of this study was to follow the evolution of the movement for quality at international, regional and national level. The study showcases, through analytical approach, the main evidence and advantages of the internationalization of quality: models of excellence, quality awards, principles and criteria for self-assessment/evaluation of performance. The major business excellence awards, e.g. ISO 9000, Deming Application Prize, the EQA and Malcom Baldrige Quality Award are based on a perceived model of business excellence – TQM. The criteria of three of the main excellence models are presented comparatively. Keywords: quality, quality awards, TQM, Deming Award, Malcom Baldrige Award, European Quality Award

Introduction

Quality is a strategic objective. Why was there and why is there a need for an international strategic approach of quality? The answer can only be this: any organization faces many challenges that change constantly – customer requirements, legislation, technology and competition.

In other words, the quality should be “judged” strategically because the role it has is undeniable, its mastery in obtaining performance on all levels: economic, commercial image, global productivity, participation and motivation of all staff, customer satisfaction. By its strategic dimension, the approach of quality is characterized by defining the general guidelines, translated into objectives, action plans, pilot dashboards, self assessment, and continuous improvement.

The strategy of quality aims to:
- Quality impact;
- The need for quality in economy, technique, production, business, education, health, administration, culture, management, services, politics etc. ;
- The need for quality to improve the quality of life;
- The need for continuous improvement of quality;
- Advantages due to quality.

After 1990, some states have begun to define a national policy for quality that takes into consideration:
- The perception of product quality on domestic and foreign markets;
- Breakthrough of modern technologies in industrial and services sectors;
- Losses due to lack of quality.

Thus it was that Japan was considered a model for the way in which it built its policy for quality, considering that quality is a strategy of recovery. Great Britain defined quality as a national strategy, Belgium as a national policy, and USA, national priority.

Since 1995 there has been a policy for quality at European Union level that aims for customer satisfaction. This policy is possible if the firms impose as a future priority objective a world-class production. This tendency must be accompanied by a vision to ensure quality to world-class quality [1, 113].

The quality of “world-class” implies a new quality management. These changes are being driven by development in production operations, competitive pressure, the need for improved results from the financial market and shrinkage of buying points. This has lead to pressure on prices, performance, and innovation and the need for increased flexibility, agility and economics of scale, with a concentration on core competencies within the business. This situation demands a “new” form of quality management [2, 579].
1. International Dimension of Quality

The concern for quality has always existed in one form or another. Quality approach did not appear in a precise moment in history. This was a fundamental element due to human behaviour that was more or less developed according to circumstances and necessities. However, the debut of the internationalization movement for quality can be marked after the second World War in Japan (1950), then in USA (1987) and Europe (1990).

Japan was a pioneer. Japan mobilized energies, intelligence, fully integrated quality research in the daily life of the enterprise through quality circles, Kaizen and recognition / awarding performance [3, 33].

In 1969, the three large associations for quality control that exist – American Society for Quality (ASQ), European Organization for Quality (EOQ) and Union of Japanese Scientists and Engineers (JUSE), organized the first common conference in Tokyo, then in 1970 established the International Academy for Quality, that still has a series of projects published each year under the title The Best on Quality.

In 2008 the most powerful six world organizations formed Alliance for quality - WORLD ALLIANCE FOR QUALITY (WAQ). It is: EOQ, ASQ, JUSE, ANQ (Asian Network on Quality), IAQ (International Academy for Quality), and APQO (Asia Pacific Quality Organization).

The main objectives of WAQ are the following [4]:

- To meet the needs for continuous development and innovation that may influence future growth and support global initiative of quality improvement at individual and organizational level;
- To encourage the use of quality philosophy, techniques and tools appropriate for the overall benefit of society;
- To be a leader in communicating issues related to quality and work with the everyone, national, regional societies recognized for quality and to promote quality in the broadest applications;
- Develop and support quality leaders in the international community of quality;
- A first proof of the international preoccupation in the field of quality is the international standardization and the certifications of products and services according to these standards of quality;
- The second proof is a permanent international preoccupation for organizing debates focused on the issue of quality for a better knowledge of the good practices and for improving quality.

Today, all countries and organizations have developed strategies for quality, performance criteria has been applied to self created conditions for self-performance.

Recognizing the successes achieved by organizations using the approach of total quality management (TQM) has been made and by quality awards. These awards may be, on one hand, significant awards, recognition to organizations competing for quality, on the other hand, symbolic as models of excellence [5, 14-18]. Giving these awards took place at the end of the twentieth century, the purpose of establishing these awards is to encourage organizations to improve quality and create a sense of pride by official recognition of the results, while stimulating other organizations by offering models of good practice in mastering quality and organizational excellence.

Today, internationally, there are three model/ excellence award recognized: Japanese model – "Deming" awarded in Japan in 1951 resulted in the Company Wide Quality principles (CWQC); American model – materialized in the criteria for "Malcolm Bridge" Award granted in USA since 1987, European model – materialized in the criteria for the European Award for quality, EFQM Award (European Foundation for Quality Management) granted since 1991. These awards appeared as a necessity in order to:

- Recognize the importance of the quality of products and services;
- The need to stimulate competitiveness;
The need to create an instrument for enhancing quality;
Encourage organizations to put into practice TQM strategies and ISO 9000 requirements.

A natural evolution of the awards made to suffer over the years a number of changes, becoming from the "excellent quality awards" the "awards for excellent management" or of the "management of excellence". We believe that this trend is a direct consequence of the fact that currently, the overriding concern of managers is not to incorporate quality management in general management arsenal, but that to fully apply the successful management (total or overall) by quality [6].

According to the National Institute of Standards and Technologies - NIST, 2010 [7] that over 100 national awards for quality / excellence which use the EFQM Excellence Model criteria (40%) of Baldrige model (17%) or the Deming Prize (2%) or combine their criteria (12%) or have their own criteria.

In Romania there is Juran Quality Award since 2000. For understandable reasons, it was chosen as "patron" of the Foundation Award for Quality the eminent American scientist Dr. Joseph M. Juran of Romanian origin, one of the main creators of modern science of quality.

2. The Importance of the Quality Awards
The National Quality Award is the highest national honour conferred for quality. Its purpose is to encourage all domestic corporations and organizations to carry out quality control and engage in more in research, popularization, and practice of quality control [8].

To a very large extent the initial objectives pursued by the establishment of these awards were identical or very similar, namely:
- recognition and validation performances in the competition for selling products and services at the highest level and also obtain an effective tool to promote domestic products in international markets;
- "marked" by a special distinction to those producers / providers who achieve the highest odds on the creation of "confidence in quality";
- disseminated widely on national and even international management methods and tools applied in place and sometimes created by the winners.

Juran & Godfrey [9, 142] noted that national and international awards for quality had a major impact on quality management by increasing the importance of leadership and competitive advantage. Stanciu [10, 41] considers that these awards have as result not only promote the concept of quality management, but also contribute to raising the standard living of the population.

Recognizing the importance of the awards / quality is confirmed by models constituting the Global Excellence Model – GEM (Global Excellence Model). The significance of the abbreviations translation, GEM = "gemstone" happily suggest the value of awards of excellence for global business. The purpose of this body, consisting of representatives of managing models and programs of excellence in countries around the world, is to promote excellence awards and models to work for the selection of relevant performance criteria. The council is basically a "global fraternity in pursuing management excellence sharing knowledge and information among countries al over the world, examines how the trend in the business and external factors can affect the usefulness and model of excellence and explores the possibility of developing new awards " [11].

Quality Awards are determined based on a referential multiple criteria and sub-categories set of organizations on which assesses whether the prerequisites for the implementation of TQM and to what extent the mobilization factors stimulating quality ensures obtaining favourable results business.

According to Dr. Ko Nishirima, president of Solectron (the first organization in the world, within a decade ago, has been awarded twice with the "Malcolm Baldrige" in 1991 and 1998), the company's success is due to a set of fundamental beliefs: “top priority should be given to the client and to quality, a deep respect to individual and quality and it is required the establishment of a harmonious
partnership with suppliers, there must be respected a solid ethical business, we must fulfil our social responsibility obligations”.

There is worldwide a company that has won all three major awards for quality. Xerox was one of the first non-Japanese who won the Deming Prize (1980), Baldrige Award (1989) and the European Quality Award in 1992.

3. Strategic Determinants for Organisational Performance Excellence

A condensed list of strategic determinants for organizational performance excellence is introduced based on an assessment of different studies and international organisational performance excellence models [12]. These strategic determinants for organisational excellence are theoretically defined [13; 14, 74-79; 15, 32-41; 16; 2]: 1) Leadership; 2) Policy and strategy; 3) Customer satisfaction; 4) People management; 5) Resources and information management; 6) Processes; 7) Impact on society; 8) People satisfaction; 9) Organisation results.

A new vision for quality strategy strengthens the link between TQM and Excellence noting the importance of culture, education and knowledge management. A conceptual framework of the relationship between TQM practices, quality performance and education [2; 17, 280-318; ISO 9004:2010]:

- Top-management commitment;
- Customer focus;
- Training and education;
- Continuous improvement and innovation;
- Supplier management;
- Human resource management;
- Information and analysis;
- Process management;
- Teamwork;
- Quality culture;
- Strategic planning;
- Product and service design;
- Quality systems;
- Employee encouragement;
- Benchmarking;
- Communication;
- Social responsibility.

These are the key success factors (Critical Success Factors, CSF) that Shekhar [18, 84-90] presents in a relationship integrating TQM philosophy, models of excellence, and implementing ERP (Figure no. 1).

In the broadest sense, TQM means empowering people to take control of product quality and services.

According to Dale et all. [2, 582], the new measurement problems are concerned with four major areas: (1) The shift from focus on initial quality to durability; (2) The increased importance of non-technical softer influences on customer satisfaction; (3) The growing importance of software within products; and (4) The need for closer cooperation both internally between functions and externally between partners in supply chain.
4. Quality Award

4.1 The Deming Prize

The Deming Prize is the forerunner of the national quality award fashion and was established by the Japanese Union of Scientists and Engineers (JUSE) in 1951. Initially, the award was given for outstanding results achieved by organizations in implementing quality control, but with the evolution of the concept award criteria have changed, turning to company-wide quality control (Control-Wide Quality Control CWQC), then the total quality control, and today on Total Quality Management - TQM [9], integrated management system, and integrated business planning.

The award uses the following criteria to assess organizations: understanding and zeal of top management for quality; policy, goal and purpose; organization for quality (including systems and personnel); education in quality; implementation of quality improvement process and future policy, plan and measures of performance.

Hoffner (1994) reiterates the criteria for the Deming Prize, one of the highest quality awards conferred in Japan in honour of Dr. William Edwards Deming who has been enormously influential in starting and advancing the “total quality” revolution, as 1) Policies and Objectives; 2) Operation of the Organization; 3) Education; 4) Information Management; 5) Analysis; 6) Standardization; 7) Control; 8) Quality Assurance; 9) Results and 10) Future Plans.

Deming Prize is awarded for three categories of businesses and individuals who contributed to the development and implementation of TQM. 1986 may apply for this award and businesses in other countries. With the huge success of Japanese industry in the late twentieth century, interest in Japanese business practices has increased, including citations Japanese school quality. Since the 1980s he began to talk about the “Japanese miracle quality” or “quality revolution”. Since 1969, JUSE awarded the Grand Prize Deming (referred to 2011 Japan Quality Control Medal) set to mark the first International Conference on Quality Control, held in Tokyo in the year. This award is given to organizations that obtain at least five consecutive years to implement TQM three Deming Prize.

This year Japan is hosting for the sixth time the International Conference on Quality ICQ’14-Tokyo - ”Innovation through Quality-Creating New Value for the World”. Criteria for assessing the candidates,
numbering 64, have been grouped into ten categories. Deming model aims to recognize excellence in the implementation of quality control throughout the organization. Major contribution of Deming Prize is the practice of self-initiation and use of processes that were later found in the U.S. Baldrige Award and European Award. The main criticism of this award, especially by Americans and Western Europeans was limited availability.

Since 2006 Baldrige Award addresses also to other categories of organizations: Manufacturing business, Service business, Small business, Educational organizations, Healthcare organizations, nonprofit organizations. Always improving criteria, the 2010 guidelines for the participation of Deming Prize and Japan are more explicit Quality Medal giving those interested more information, including based examples [JUSE, 2012]. Today Japan awards annually: the Deming Prize for individuals, Deming Prize, The Deming Distinguished Service Award for Dissemination an Promotion and the Grand Deming Prize.

4.2 MBNQA

The Malcolm Baldrige Model is associated to National Quality Award (MBNQ) which was set up in 1987, after 37 years since the introduction in Japan of the first Award for Quality. MBNQ was named in memory of one who, as Secretary of Commerce in the Reagan administration encouraged continuous quality improvement initiatives in North American businesses in order to gain competitive advantage.

The award is given in the Baldrige National Quality Program framework by the National Institute of Standards and Technologi - NIST [7], in collaboration with the American Society for Quality. Baldrige Award was first awarded in 1988. According to the literature [2; 3; 19], the Malcom Baldrige National Quality Award promotes three important characteristics, namely, awareness of quality to increase competitiveness, understanding the requirements for excellence in quality, and sharing the information and benefits derived from successful quality strategies that are employed by the companies.

The awards program was first created for:

- Identifying and recognizing patterns in different areas of business;
- Establishing criteria for evaluating improvement efforts;
- Analyzing and sharing best practices.

The MBNQ Awards were grouped first in three categories: the factories, services for small businesses (up to 500 employees). Malcolm Baldrige Award is handed out annually by the U.S. President and is given to those organizations that are distinguished by outstanding results in business, on account of the implementation and maintenance of the principles of TQM. In 1995, the authors Baldrige criteria have eliminated the term "quality" of all criteria and replaced it with "performance", thus changing the centre of gravity towards all aspects of organizational performance, including profitability, safety, market share growth, morale employees, innovation and other factors quite difficult to achieve without performance [19, XI]. After 1999 the scope was extended to health and education, and since 2005 also addressed non-profit/governmental organizations. Last revised criteria occurred in 2013. Every Baldrige Award application is evaluated in seven major categories with maximum total score of 1000 (US Department of Commerce). These are [2, 540], Figure no. 2: 1) Leadership (120 pts); 2) Strategic Quality Planning (85 pts.); 3) Customer and market Focus (85 pts.); 4) Information and Analysis (90 pts.); 5) Human Resource Focus (85 pts.); 6) Process Management (85 pts.); 7) Business Results (450 pts).

The first six criteria relate to the determinants of the organization is assessed, taking into account the following aspects [20, 274]: a systemic approach, deployment, learning and integration. One of the strengths of this prize is the three-dimensional model used scoring by assessing the achievements of approach, deployment and results.
The model includes leadership triad (categories 1 to 3) and results triad (categories 4 to 6). The framework has three the basic elements: strategy and action plan, system, and information and analysis. The seven categories embody 11 core values and concepts: customer-driven excellence, visionary leadership, organizational and personal learning, valuing employees and partners, agility, focus on the future, managing for innovation, management by fact, public responsibility and citizenship, focus on results creating value, and system perspective [2, 540]: visionary leadership, customer-driven excellence organizational and personal learning, valuing employees and partners, agility, focus on the future, managing for innovation, management by fact, public responsibility and citizenship, focus on results creating value, system perspective. Bonk [21, 11-13] considers the concepts and core values of Excellence Baldrige Program as mobilizing and Brown [19, 16] noted that the U.S. model is a new category of criteria – Measurement.

Analysis, and Knowledge Management. Under the Framework Manual - 2013 prize awarding the new requirements appear for candidates [19]:

- helping to improve organizational performance (practice capabilities);
- facilitating communication and the exchange of best practices information for all American organizations;
- using as a tool for understanding and managing performance, planning, and learning opportunities.

The Malcolm Baldrige criteria have been the basis of many quality awards in various countries.

4.3 EFQM

The European Quality Award - EQA was launched in October 1991 by the Governing Committee of the European Foundation for Quality Management (EFQM) in conjunction with the European Commission and European Organization for Quality, launched during the 1991 European Quality Management Forum in Paris.

Under the award assessment, a company is rated on its results and improved performance in customer satisfaction, employee satisfaction, business performance and impact on society. It is composed of eight specific categories of criteria and their relevant values are shown in the Figure no. 3 [22].
EQA 2000 version eliminated the entire text TQM concept and introduced RADAR logic (Achievement, Approach, Deployment, Assessment = Assessment, Review) to a logical and easy self-assessment for companies.

EFQM model redesigned in 2009, then in 2013 has core values and concepts of business excellence described as satellites in Earth orbit. The redesign was necessary because in many models users understand only nine categories of criteria for business excellence separately and not how eight of these values and concepts (such as innovation) core overlap.

The EFQM excellence model is intended to help management of European organizations to better understand best practices and to support them in their leadership role. The model provides a generic framework of criteria that can be applied to any organization or its component parts. The model is based on eight fundamental concepts - results orientation:

- Leadership – 100 ppt;
- Policy and strategy – 80 ppt;
- People management – 90 ppt;
- Partnership and resources – 90 ppt;
- Processes – 140 ppt;
- Customer results – 200 ppt;
- People results – 90 ppt;
- Society results – 60 ppt;
- Key performance results – 150 ppt.

The criteria are split into two groups: enablers and results. The European Quality Award (EQA) criteria are very similar to the MBNQA criteria except for the point system used for each category.

Today all European countries have established a national award for quality to help establish national business excellence, achieving better results through continuous improvement, benchmarking national practice continuous improvement methods and techniques, exchange of information and experiences. EQA model was the first model, which explicitly states that social responsibility is closely related to thinking / quality [23, 285–297].

4.4 The Global Performance Excellence Award

The Global Performance Excellence Award (GPEA) is administered by Asia Pacific Quality Organization (APQO). APQO is a non-profit organization that serves as umbrella group that brings together all of the leading quality professional societies from countries that border on the Pacific
Ocean or are considered Asia/Pacific Rim nation. The governing body of APQO include representatives from Australia, Azerbaijan, Canada; Chile, China, Indonesia, Kazakhstan, Korea, Malaysia, Mexico, Nepal, New Zeeland, Pakistan, Philippine, Singapore, Sri Lanka, Thailand, Turkey, USA, United Arab Emirates, Republic Uzbekistan and Vietnam. The following requirements must be met in order for organization to apply for the 2013 GPEA [7]:

- The Candidates for the award must already have won their National Quality Award within the last 3 years (2010-2012);
- The National Quality Award Organization/s must recommend Candidates for the Global Performance Excellence Award (GPEA);
- The National Quality Award Organization or the Candidate must include in its NQA and feedback / site visit report that the GPEA Application documents reflect the organization’s actual operations;
- Applications must be in Baldrige Award Criteria format to the item level with a maximum number of 60 pages plus the feedback / site visit report.

**Conclusions**

Each of the reviewed excellence model frameworks has its unique characteristics. However, they all attempt to propagate organizational performance excellence practices. They share a set of fundamental philosophies. These include: acceptance of responsibility for quality by top management, customer orientation, high level of employee participation, open and effective communication, fact-based management and strategic quality planning.

Analysts estimated that through a series of adjustments to the Baldrige and EFQM Models undertaken in recent years, each has reached a 95% compatibility. The main feature of union between these two models is that both consider quality as the main driving force that can direct the organization on the path to business excellence and not as an end in itself [20, 275].

The second common feature is the use of objective measurements based on assessments by specially trained experts using appropriate measuring scales. A third feature is the increasing complexity of the scoring and commitment to customers [19, 12]. Internationalization movement as evidence began to appear after 1950:

- **Quality circles** first appeared in Japan (first circles-1962), then in other countries;
- Launching national competitions for quality, following the model of Japan (first prize) and the U.S.;
- Acceptance of models of excellence;
- Organizing lectures, seminars, international conferences on themes of quality and excellence;
- The existence and intensification of international regional and national organizations for quality;
- International recognition of the contribution of "gurus" of quality such as Feigenbaum, Deming, Juran, Ishikawa, Crosby, Taguchi etc.;
- Increased national and international publications on topics related to quality;
- A rich literature on quality.

The expanding year after year of the quality national and international awards is a further proof of the internationalization of quality. Completion of the most important awards criteria and excellence models shows a significant increase of the attention given to customer satisfaction, social responsibility and sustainable development.


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