
A STUDY OF THREE MAJOR BUSINESS EXCELLENCE MODELS IN PROCESS CRITERION

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Abstract:

Business environment is getting more competitive every day, business excellent models have an important job in organizational success, and many organizations are using business excellent models to obtain business excellent. In other hand, process, as an integral part of any organization to provide high quality services, is so important for survival. This paper tries to introduce three major quality awards; European foundation for quality management (EFQM), Malcolm Baldrige National Quality Award (MBNQA) from United States and Deming Prize (DP) from Japan, then compared process criteria in these models with each other and identified the main process criteria base on these models. Identification and comparison of Process criteria in business excellence models will help to provide necessary materials to create comprehensive process management models base on the excellence quality models.

Key Words: Process management, Business Excellence models, EFQM, MBNQA, DP

Introduction:

Many of definitions are presented for process and particularly for business process; perhaps the most common and the most accepted definition of process is a method to convert inputs to outputs (Zairi, M.1997). The process is the ways to provide products and/or services that meet client expectations. Thus, the organization is modeled as a series of processes that allow the organization to identify client needs and transform these needs into a deliverable product or service. From these elements, a process is defined as follows:

“An activity or a series of activities that use resources to convert input elements into output elements with an added value”(Jean-François Pillou, 2006) (Figure 1)

The important feature of Business process is they go beyond the functional and hierarchical boundaries within and outside the organization, so the coordination between process and strategic goals are important. (Zairi, M.1997)

Figure 1: Process



General feature of the process include:

1. Customers (internal or external)
2. Processes relate functional level to organizational level (internal or external)
3. Process are highly dependent on information and information technology (Gibbs, F. et al. 2006)

Business process management framework, connect together all the elements in the organization to create a process driven organization. In fact, business process management is a structured approach to analyze and continually improve fundamental activities of organization's operation such as manufacturing, marketing, communications and other key components (Gulledge, T.R. et al. 2002, Rensburg, A. 1998). So we can say that business process management deals with the main aspects of the organization's operations, where the most value added is create (Zairi, M.1997).

Hammer and Champy (1993) referring to the fact that the only important thing to the customer is the value provided by organization, define organization as a set of interrelated activities which are linked to create value for the customers. Thus, holistic approach to the organization and environment by using system thinking is essential in process approach. In other words, the outputs depend on several factors during the process which is not in manager's hands. Understand the impact of individual decisions on outputs requires an understanding of the relationship between various components of processes (Gadd, K.W. 1995).

In recent years, quality awards such as Deming Prize (DP) from Japan, Malcolm Baldrige National Quality Award (MBNQA) from United States and European Foundation for Quality Management (EFQM) have provided comparing and evaluating methods for organizations. Quality award structures using by companies are more than just a tool for recognition, the frameworks are the best practice models for executing excellence strategies, directing self-assessment, benchmarking and expressing improved performance. (Dodangeh, J. et al. 2012)

Deming quality award as the oldest award in quality was a starting point for introduce total quality management (TQM) in organizations (Bohoris, G.A. 1995). Total quality management (TQM) is a method for manage and administrate an organization by putting quality and member's participation as key factors, but unfortunately there isn't any official international standard to create a comprehensive quality management system. All scholars are agree with the importance need of total quality management principle measurement; for this reason, in recent years several studies have been done to identify and measure the main criteria in total quality management (TQM); Deming Prize for excellence in 1951, Malcolm Baldrige National Quality Award of United States in 1987 and European Foundation For Quality Management in 1991 are actions that have been taken in this direction.

Research Gap:

Efficient and effective process management has been always the most important concern in organizations. Business excellence models and quality systems are the tools that assess organizations to measure the strength of current processes and improve situation towards the ideal spots in future. The major quality awards are European Foundation for Quality Management (EFQM), Malcolm Baldrige National Quality Award (MBNQA) and Deming Prize (DP); Each quality models have their own approach toward process; accurate recognition in these approaches show their shortcomings into process issues, but it is possible to suggest a comprehensive model by compare and combine this models in process criteria.

Literature Review: An Overview of the Three Major Quality Awards

- The Deming Prize (DP)

The JUSE instituted the Deming prize in 1951 in acknowledgment of Dr. W Edwards Deming's work in the area of industrial quality control and known as the oldest quality award. (Porter, L.J 2004)(Deming, P.C, 2009).

In Deming Prize Guide for overseas (2009), Deming Prize categories are: the Deming prize for Individuals, The Deming Distinguished service Award for Dissemination and Promotion (Overseas) and The Deming Application Prize and The Quality Control Award for Operations Business Unit. (Table 1)

Table 1: Categories of The Deming Prize

The Deming Prize for Individuals	For individuals or groups
	Given to those who have made outstanding contributions to the study of TQM or statistical methods used for TQM, or those who have made outstanding contributions in the dissemination of TQM
The Deming Distinguished Service Award for Dissemination and Promotion (Overseas)	For individuals whose primary activities are outside Japan
	Given to individuals who have made outstanding contributions in the dissemination and promotion of TQM. Examination will be carried out every 3-5 years.
The Deming Application Prize	For organizations or divisions of organizations that manage their business autonomously
	Given to organizations or divisions of organizations that have achieved distinctive performance improvement through the application of TQM in a designated year
The Quality Control Award for Operations Business Units	For operations business units of an organizations
	Given to operations business units of an organization that have achieved distinctive performance improvement through the application of quality control/management in the pursuit of TQM in a designated year

Source: Deming Prize Guide for overseas (2009), <http://www.juse.or.jp/e/deming/pdf/demingguide2009>

Unlike EFQM and MBNQA, Deming Prize is not contestable, and all companies which get a minimum score will award.

Deming Prize checklist contain 10 main criterion which divided into other sub-criteria; but unlike EFQM and MBNQA, Deming Prize does not provide any framework to organize and prioritize the factors (Vokurka,RJ. 2000).

Base on the Application Guide for the Deming Prize (2013), the main 10 criteria include:

- 1- Outline of the organization
- 2- Organization and management
- 3- TQM promotion
- 4- Information management
- 5- Standardization
- 6- Human resource development
- 7- Implementation status of quality control
- 8- Policy management
- 9- Overall effects
- 10- Future plan

- **Malcolm Baldrige National Quality Award (MBNQA):**

MBNQA is an annual award, which is awarded to organizations that have taken steps towards achieving excellence; Malcolm Baldrige Quality program is responsible for implementing the annual event, which is administrated by National Institute of Standard and Technology (NIST) of United States department of commerce. In accordance with the law was adopted in 1987 in the Senate of United States, the prize were considered to American organizations to make them aware about improving performance, and it's title taken from former United State's minister of commerce Malcolm Baldrige. Since 1988, the prize regularly awarded to selected organizations (Criteria for performance Excellence, 2013-2014). Malcolm Baldrige criteria for performance Excellence framework in the latest version (2013-2014) is shown in Figure 2:

Figure2: The Malcolm Baldrige Quality Award

Source: NIST Criteria for performance Excellence, 2013-2014

Base on the above model (NIST, 2013), Criteria for performance Excellence, 2013-2014, criteria presented in seven categories:

- **Leadership:** Examines how senior executives guide and sustain the organization and how the organization addresses Governance, ethical, legal and community responsibilities.(120 point)
- **Strategic planning:** Examines how the organization sets strategic directions and how it determines and deploys key action plans.(85 point)
- **Customer focus:** Examines how the organization determines requirements and expectations of customers and markets; builds relationships with customers; and acquires, satisfies, and retains customers.(85 point)
- **Measurement, analysis, and knowledge management:** Examines the management, use, analysis, and improvement of data and information to support key organization processes as well as how the organization reviews its performance.(90 point)
- **Workforce focus:** Examines how the organization engages, manages, and develops all those activities involved in accomplishing the work of the organization to develop full potential and how the workforce is aligned with the organization's objectives.(85 point)
- **Process management:** Examines aspects of how key production/delivery and support processes are designed, managed, and improved.(85 point)
- **Results:** Examines the organization's performance and improvement in its key business areas: customer satisfaction, financial and marketplace performance, workforce, product/service, and operational effectiveness, and leadership. The category also examines how the organization performs relate to competitors.(450 point)
- **European Foundation for Quality Management (EFQM):**

The European Foundation for Quality Management (EFQM) based in Brussels was founded in 1988 by 14 leading corporations. The model includes five "enabler" criteria: leadership, strategy, people, partnership and resources; and processes, products and services. It also comprises four "results" criteria: customer results, people results, society results, and key results (EFQM, 2010). In 2010 version, several changes occurred in the criteria's titles; Policy and Strategy changed to strategy, Process changed to Process, Product and Services, Key Performance Result changed to Key Result and then in 2012 it changed to Business Results. EFQM Excellence model criteria have shown in figure 3:

Figure 3: European Foundation for Quality Management Excellence model criteria

Source: European Foundation for Quality Management, 2012

- **Leadership:** Excellent organizations have leaders who shape the future and make it happen, acting as role models for its values and ethics and inspiring trust at all times. They are flexible, enabling the organization to anticipate and react in a timely manner to ensure the on-going success of the organization.
- **Strategy:** Excellent organizations implement their mission and vision by developing and deploying a stakeholder focused strategy. Policies, plans, objectives and processes are developed and deployed to deliver the strategy.
- **People:** Excellent organizations value their people and create a culture that allows the mutually beneficial achievement of organizational and personal goals. They develop the capabilities of their people and promote fairness and equality. They care for, communicate, reward and recognize, in a way that motivates people, builds commitment and enables them to use their skills and knowledge for the benefit of the organization.
- **Partnership and Resources:** Excellent organizations plan and manage external partnerships, suppliers and internal resources in order to support strategy and policies and the effective operation of processes.
- **Process, Product and Services:** Excellent organizations design, manage and improve processes to generate increasing value for customers and other stakeholders.
- **Customer Results:** Excellent organizations achieve and sustain outstanding results that meet or exceed the needs and expectations of their customers.
- **People Results:** Excellent organizations achieve and sustain outstanding results that meet or exceed the needs and expectations of their people.
- **Society Results:** Excellent organizations achieve and sustain outstanding results that meet or exceed the needs and expectations of relevant stakeholders within society.
- **Business Results:** Excellent organizations achieve and sustain outstanding results that meet or exceed the needs and expectations of their business stakeholders (EFQM, 2012).

Literature Review of general comparison of EFQM, MBNQA and DP:

In an early paper Bohoris (1995) has compared the Japanese, European and American quality awards and discusses their significance to business. It has been found that the DP focuses on the dissemination of companywide quality control, continuous improvement and relations with suppliers. Its most important aspect is the thorough application of statistical quality control techniques. The Malcolm Baldrige accepts that quality is customer-driven and therefore focuses on customer satisfaction, benchmarking, and competitive comparisons with the industry average, the industry leader, and the principal competitors in the company's key markets. The European quality award focuses on the relations with the community, and customers' and employees' satisfaction. Finally, another major difference between the DP and the other two is that certain examination criteria such as human resource management, customer satisfaction, impact on society, and operational results are not included in the former.

Gurhan Uysal (2012) investigates total quality management (TQM) Award models to determine the quality criteria for firms to achieve total quality management. He found Major focuses in TQM Awards are: the Baldrige aims to achieve organizational performance via business results, because American firms demand that TQM must have an impact on business results such as profit, market share, sales, and revenue; EFQM aims to achieve business excellence, and Deming Prize aims to achieve organizational quality.

Vokurka, et al. (2000) has compared five quality awards: the Malcolm Baldrige National Quality Award, the European Quality Award, the Deming Prize, the Canadian Quality Award and the Australian Quality Award. It has been found that the quality award programs, their models and their criteria have several objectives in common. Each program emphasizes continuous analysis and improvement. But Business results have the greatest weight for the MBNQA, customer satisfaction for the European Quality Award, and the Deming Prize places more emphasis on process control and improvement.

The criteria in EFQM, MBNQA and DP almost include all areas in different issues at an organization; set of these criteria ensure necessary requirements for establish an effective and successful quality system. Economic structure, social characteristics and maturity level of quality movement will be considered in national quality award designation in different countries (Tan et al. 2003). Today, EFQM, MBNQA and DP are known as world's foremost quality models, ISO 9000 and ISO 14000 comes in the next place. Table 2 show the general comparison of EFQM, MBNQA and DP excellence models (Vokurka, et al. 2000)

Table 2: Awards Descriptions

	European Quality Award	Malcolm Baldrige Award (U.S.)	Deming Prize (Japan)
Objectives	<ul style="list-style-type: none"> -To stimulate and assist European organizations in improving customer and employee satisfaction, impact on society and business results -To support European manager's efforts to initiate total quality management and achieve global competitive advantage 	<ul style="list-style-type: none"> -To help improve performance practices and capabilities. -To facilitate communication and sharing of best practices among U.S. organizations -To serve as a working tool for understanding and managing performance, planning, training and assessment 	<ul style="list-style-type: none"> -To evaluate and recognize methods of company quality control for Japanese businesses
Quality Principles	<ul style="list-style-type: none"> -Customer focus -Supplier partnership -People development and involvement -Processes and facts -Continuous improvement and innovation -Leadership and consistency of purpose -Public responsibility -Results orientation 	<ul style="list-style-type: none"> -Companies must have direction and customer focus -Quality and performance are judged by customers -Organizational and personal learning are required -Employees and partners are vital to company success -Success requires capacity for change and flexibility -Market leadership requires a future orientation -Making meaningful change requires innovation -Management requires factual analysis -Public responsibilities is important -Performance measurement should focus on results -A system perspective is required 	<ul style="list-style-type: none"> -Create vision and demonstrate commitment -Learn the new philosophy -Understand inspection -Stop making decisions purely on the basis of costs -Improve constantly and forever -Institute training -Institute leadership -Drive out fear -Optimize the efforts of teams -Eliminate exhortations -Eliminate numerical quotas and management by objectives -Remove barriers to pride in workmanship -Encourage education and self-improvement -Take action
Criteria	<ol style="list-style-type: none"> 1-Leadership 2-Policy and Strategy 3-People management 4-Resources 5-Processes 6-Customer satisfaction 7-People satisfaction 8-Impact on society 9-Business results 	<ol style="list-style-type: none"> 1-Leadership 2-Strategic planning 3-Customer and market focus 4-Information and analysis 5-Human resource focus 6-Process management 7-Business results 	<ol style="list-style-type: none"> 1-Policies (hoshin) 2-Organization 3-Information 4-Standardization 5-Human resources 6-Quality assurance 7-Maintenance 8-Improvement 9-Effects 10-Future plans

Resource: Vokurka, R.J, Gray L Standing & Jason Brazeal. 2000

The difference between objectives, quality principles and criteria in these three excellence models is significant. In this article, we have studied process criterion in three major quality excellence models (EFQM, MBNQA, DP), and we have tried to provide a comprehensive framework for organizational

process management. This kind of comparative studies can provide a good situation to compare different criteria in different models toward create comprehensive models for different organizations.

Research Methodology:

Current research has been conducted by library studies. In this study, all the available resources have been studied, including: Books, articles, manuals and reporting on quality awards. Then, we classified our findings and analyze them by using reasoning and reasonable inference.

Process Management in EFQM, MBNQA and DP:

Process management is about the design, implement, manage and improve of key processes in organizations to achieve better performances, we divided all the process in organization in two categories (Adapted from MBNQA), it gives us a better chance to compare and categorize all processes properly:

1. Main processes and support process : which include products and services processes and support processes
2. Suppliers and Partnering process: describe how organization manage its partners and suppliers for production and delivery

Then, we studied quality award's process management criterion base on two process categories, and identify the related sub-criteria, then we tried to match them.

Among the three quality awards are some similarity and some differences in process management criteria. Comparative results are summarized in Table 3.

It should be considered, despite of EFQM and MBNQA, Deming Prize doesn't have a framework or model to organize the criteria.

Table 3: Process comparison between EFQM, MBNQA and DP

Quality Awards	EFQM	MBNQA	DP
Processes			
Main Processes and Support processes	<p>4a. External partnerships are managed</p> <p>4b. Finances are managed</p> <p>4c. Buildings, equipment and materials are managed</p> <p>4d. Technology is managed</p> <p>4e. Information and knowledge are managed</p> <p>5a. Processes are systematically designed and managed</p> <p>5b. Processes are improved, as needed, using innovation in order to fully satisfy and generate increasing value for customers and other</p>	<p>6-2-a work process design</p> <p>6-2-b work process management</p> <p>6-2-c Work Process Improvement</p>	<p>4-1. standards system fitness</p> <p>4-2. procedures for creating, modifying and remove standards</p> <p>4-3. actual performance in creation, modification and remove standards</p> <p>4-4. standards content</p> <p>4-5. use and maintain standards</p> <p>4-6. development, collect, manage and systematic use of technologies</p> <p>6-1. manage quality assurance system</p> <p>6-2. quality control recognition</p> <p>6-3. new product and technology development (including quality implementation and design review activities)</p> <p>6-4. process control</p> <p>6-5. analyze and process improvement (including the study of quality capabilities)</p> <p>6-6. inspection, evaluation and audit quality</p>

	<p>stakeholders</p> <p>5c. Products and Services are designed and developed based on customer needs and expectations</p> <p>5d. Products and Services are produced, delivered and serviced</p> <p>5e. Customer relationships are managed and enhanced</p>		<p>6-7. manage production equipment, measurement tools and vendors</p> <p>6-8. packaging, storage, transportation, sales and services</p> <p>6-10. quality assurance</p> <p>6-12. guarantee the reliability, safety, environmental protection and product support</p> <p>7-1. Management cycle, PDCA (plan, do, check, act)</p> <p>7-2. procedures to determine control</p> <p>7-3. control (control charts and other tools)</p> <p>7-4. temporary and permanent measurements</p> <p>7-5. operational management system for cost, quantity, delivery, etc.</p> <p>7-6. association quality assurance systems with other operational management systems</p> <p>8-5. confirm improved result and transmit them to maintenance/control activities</p> <p>8-6. help to QC (quality control) activities</p>
<p>Suppliers and Partnering Process</p>	<p>4c. Buildings, equipment and materials are managed</p> <p>5b. Processes are improved, as needed, using innovation in order to fully satisfy and generate increasing value for customers and other stakeholders</p> <p>5c. Products and Services are designed and developed based on customer needs and expectations</p>	<p>6-1-a work system design</p> <p>6-1-b work process management</p> <p>6-1-c emergency readiness</p>	<p>2-6. Relationship with associated companies</p> <p>5-6. support human resource development in associated companies</p> <p>6-1. manage quality assurance system</p> <p>6-2. quality control recognition</p> <p>6-7. manage production equipment, measurement tools and vendors</p> <p>6-10. quality assurance</p> <p>7-1. Management cycle, PDCA (plan, do, check, act)</p> <p>7-2. procedures to determine control</p> <p>7-3. control (control charts and other tools)</p> <p>7-4. temporary and permanent measurements</p> <p>7-5. operational management system for cost, quantity, delivery, etc.</p> <p>7-6. association quality assurance systems with other operational management systems</p> <p>8-6. help to QC (quality control) activities</p>

Findings:

Each model have particular approach to process in organization; as described in table 3, we categorized Process in two main parts, 1.Main and Support Processes, and 2.suppliers and partnering processes. Sub-criteria in Process category compared; accurate recognition show

shortcoming in each of these models, it shows all approaches have merits and demerits. All quality award model's process criterion emphasize on continuous analysis, improvements and all trying to have satisfy customers, But in other hand, each model have their own specifications:

- EFQM process criterion most focus is on outcome, therefore it have more attention to customers, employees and stakeholders satisfaction than other models, this model focuses is on transformation processes because it is trying to get "business excellence" in the process of transformation from enablers to results.
- MBNQA have the greatest focus on business results and managing the processes toward the best performances, in this model processes focus is on interrelated management practices for achieve to "best performance".
- Deming Prize's most attention is on continuous improvement, quality management and quality control by focusing on statistical process control, and in other hand it have less consideration on business results but more attention on organizational processes.

Recommendation:

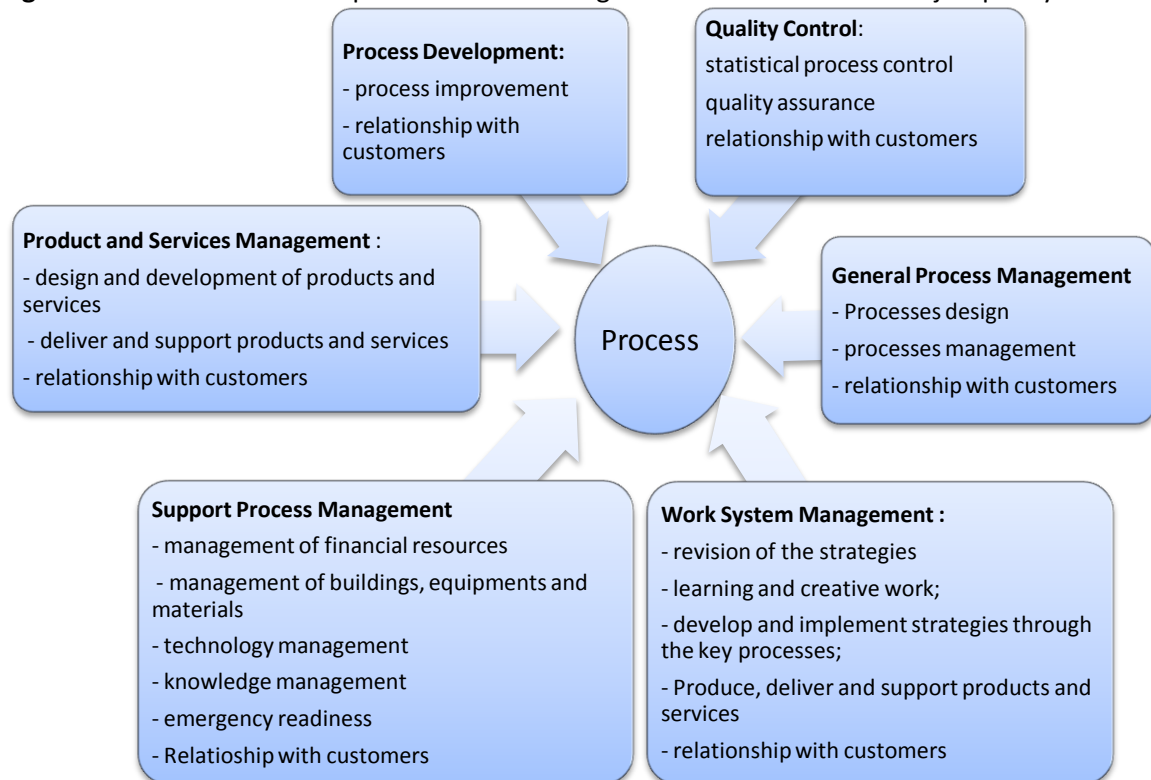
We can achieve to a comprehensive and perfect process model by combination of MBNQA, EFQM and DP main and important criteria, which can cover almost all require processes in organization. After accurate evaluation of models and matching the criteria and sub-criteria, we reached to six main process criteria:

- 1- General Process Management
 - 2- Product and Services Management
 - 3- Process Development
 - 4- Work System Management
 - 5- Support Process Management
 - 6- Quality control
- General Process Management : it means organizing a systematic processes to achieve customers and stakeholders satisfaction
 - Product and Services Management : It means design and development of products and services based on the customer needs and expectation; produce, deliver and support products and services; and management and strengthening the relationship with customers
 - Process Development : It means improving process by innovation, management and strengthen the relationship with customers
 - Work System Management : It means the revision of the strategies based on the information from performance assessment; Research, learning and creative work; develop and implement strategies through the key processes; Produce, deliver and support products and services; and management and strengthen the relationship with customers
 - Support Process Management : It means management of financial resources; management of buildings, equipments and materials; technology management; knowledge management; emergency readiness; and management and strengthen the relationship with customers

- Quality Control : it means quality assurance, continuous improvement and strengthen the relationship with customers by using statistical process control

In Figure 4, you can see the conceptual framework of main process criteria in organization base on the MBNQA, EFQM and DP models:

Figure 4: Framework of main process criteria in organization base on three major quality awards



As you can see, management and strengthen relationship with customers have the most frequently in process management at organizations, which means customer satisfaction is the main goal of major quality awards.

No individual framework is complete or provides outstanding opportunities for business excellence, but by comparative studies such as this study we can propose a comprehensive model. Current research can be part of further studies to provide a perfect process management model in organization.

This may include redesigning of some processes to achieve better outcomes. Designing the process should be a continual work and it can be improve by using information from organizational performance reviews, research and process analysis, benchmarking and customer reviews.

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