

Road to Excellence of Iranian Companies

(A practical framework for guiding Iranian organizations toward excellence)

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Abstract

On 26th May 2006, the World Trade Organization (WTO) has finally accepted Iran as an observer member of WTO. This means Iran should accelerate reforms of infrastructures in different aspects particularly in economics; in order to experience a more satisfactory and less harmless adjoin to this international organization.

To succeed in the international competitive context of business, many Iranian organizations and their senior managers are provoked to pay more attention to applying a wide variety of management and improvement tools such as ISO 9001, Total Quality Management (TQM), Business Process Reengineering (BPR), Organizational Excellence Models, Knowledge Management (KM), Strategic Planning and so forth. Researches show that not only most of these systems and tools could not make the expected synergy, but also they impose excessive cost on the organizations and decrease the tendency of employees to change as they do not feel any positive impact of these interventions on the efficiency and effectiveness of their performance. Regardless of the context of organizations in applying the interventions and poor implementation of identifying alternatives, it seems a major cause of failure refers to the inappropriate routs of selecting the systems or tools which should be implemented without considering their rational precedence relationships.

A practical framework is represented in this paper, based on experiences in Iran management consulting field, in both public and private sectors. This framework is based on TQM framework of John. S. Oakland which incorporates the main components of TQM into other management tools and systems in strategic and operational fields and forms a Total Organizational Excellence model.

This new framework was developed as an extension to the Oakland's framework for local companies and could be considered as a customized Total Organizational Excellence model, called *Road to Excellence of Iranian Companies (REIC)*. It focuses on describing the logical identification of broader tools, approaches and techniques, clarifies their appropriate sub-elements and proposes required tools to run each of these elements effectively.

Introduction

Many Iranian companies in recent years have adapted a range of improvement approaches and tools in response to the great changes in the internal and external turbulences. These turbulences might occur in the legal, economical, technological or political parameters.

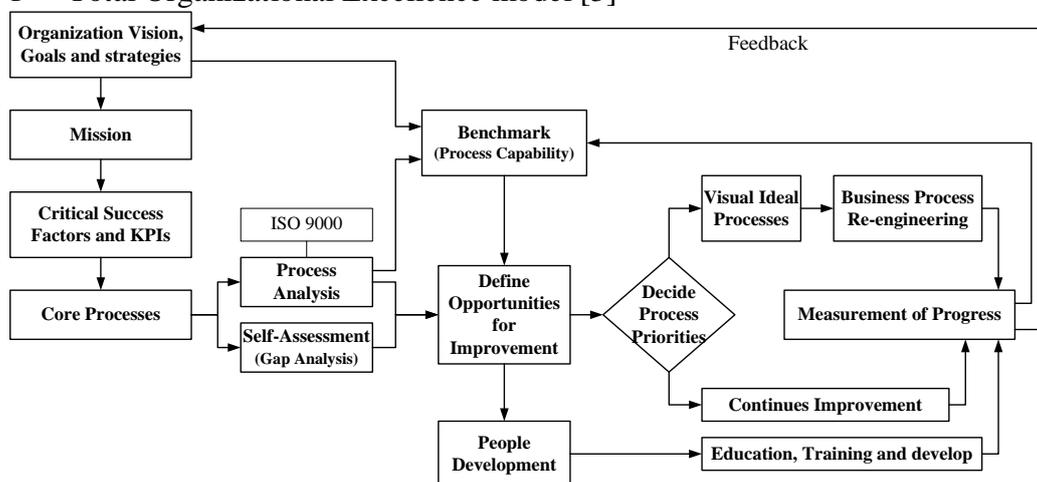
The ever increasing awareness of top level managers about a rapid adaptation to change, have encouraged them to exploit many Quality Management systems (QMSs) and other management tools and techniques simultaneously [2, 3]. No comprehensive survey has been performed locally about the most common management tools and how effectively these tools have been performed.

On the other hand, it is not easy to accept that applying Business Excellence models guarantees companies' success; Business Excellence models have been given as a global solution for organizations from all industries, with all organizational structures, with all strategies, all mission and of all sizes. This might be a bit hard to believe [4]. But reviewing Business Excellence provide some benefits to organization's success [5-7], but there are some conflicting subjects where success of organizations has not been only attributed to Business Excellence [8, 9]. Also, there are many theories on how an organization reach to its success and develop competitive advantages over other organizations, with the "Market-based view" and the "Resource-based view" being the most common, but both of these concepts have some drawbacks [10]. So the "Total Organizational Excellence" should be focused in this research to tackle these problems.

The proposed framework in this article was developed from case studies and tracking the most common management approaches, tools and techniques that have been used recently in Iranian companies. Following the roadmap illustrated in this framework, Iranian companies would be able to set off their journey to the Excellence by selecting the appropriate tools to improve their performance. It also helps them to decide how they could adapt an approach effectively and achieve success using a package of different tools.

As mentioned before, the practical framework represented in this article is mainly based on the implementation framework of TQM, called "Total Organizational Excellence model" [3], as illustrated in figure 1.

Figure 1- Total Organizational Excellence model [3]



Research Method

According to the literature review of TQM and Strategic Management models and many years of experience in applying them in Iranian companies, some facts which resulted in proposing solutions to raising congruency of change interventions with organizational and operational maturity levels were observed. Table 1 represents the experiences of implementing Strategic Management Project and Road to Excellence Model in 17 Iranian Companies, which were selected from different Industries including manufacturing, public sector, non-profit and governmental organizations. Moreover, the results which have an effect

on improving the primary model of Oakland [3], form the basis of the contributions in our Model. This emphasizes on the necessity of congruency between change interventions and organizational context that those interventions is performed.

Table 1- A summary of 17 projects applying Strategic Management and Road to Excellence Models in Iran

Company Name	Industry Type	Year	Improvement Results
Daroupakhsh Production Co.	Medical Product Industry	1998	New Managerial Paradigm- BPR
Zamyad Co.	Auto Manufacturing Company	2000	New Managerial Paradigm- Strategic Plan- Kaizen
Zam Zam Group	Soft Drink Manufacturing	2000	Strategic Plan- Identify Key Process
Daroupakhsh Distribution Co.	Medical Product Industry	2001	New Managerial Paradigm- BPR- Kaizen
Abguineh Glass Industry	Glass Industry	2001	Identify Key Process- Key Process Analysis & Diagnosis
Arj Co.	Home Appliances Industry	2002	Strategic Plan- Key Process Analysis and Diagnosis- Operational Plans
Sina Tile	Tile and Ceramic Industries	2003	Strategic Plan- Kaizen
Yazd University	University and Educational Services	2003	Strategic Plan- Identify Key Process
Irana Tile Co.	Holding of Tile & Ceramic Industries	2004	Strategic Plan- BPR
West Regional Water Co.	Holding of Water Management	2004	Strategic Plan- Best Demonstrated Practices- BSC Design
Toklan-Toos Industrial Manufacturing Company	Auto Manufacturing Company	2005	Key Process Analysis and Diagnosis- Functional plans
Tamin Oil & Gas Investment	Holding of Investment on Oil & Gas	2005	Change Management- Prioritized Process Improvement- Key Process Analysis & Diagnosis
Iran Milk Co. (Pegah)	Dairy Products Industry	2006	New managerial Paradigm- Change Management- BSC Design
National Petrochemical Company- R&T	R&D Services	2007	BPR- KM- BSC Design and Implementation
Agricultural Services- Special Holding Company	Holding of Agriculture Services	2007	KM- BSC Design and Implementation
Khuzestan Water & Power Authority	Holding of Water & Power Management	2008	Structuring- BSC Design and Implementation
Raja, Passenger Trains Co.	Passengers Train Services	2009	New managerial Paradigm- Key Process Analysis and Diagnosis- Functional plans

The most important facts have been achieved in 5 projects including Strategic Management project of Toklan-Toos industrial manufacturing company, System Analyzing using Total Organizational Excellence model and Strategic Management Project Iran Milk Co. (Pegah), Applying Excellence Model and Implementing Strategic Management Project in National Petrochemical Company- R&T (NPCRT), Strategic Management Project of Khuzestan Water & Power Authority and Applying Road to Excellence Model and Implementing Strategic Management Project in Raja Passenger Trains Co.

Toklan-Toos Company is the biggest manufacturer of auto spares in Iran. Analyzing this company revealed the gap between current situation and ideal one based on World Class Manufacturing (WCM) approach. So, appropriate functional plans have been selected to improve its compatibility with environmental circumstances. [11]

Pegah Co. is the biggest holding of dairy products in Iran. Applying Total Organizational Excellence model in this holding occurred during two periods. The first period, using Change Management plans were suggested in different managerial layers as the most important strategy as well as usual market strategies. Implementation of this project demonstrated that Change Management tools should be considered in all along the Road to Excellence. In second period, main bottlenecks to achieve the Mission of Pegah were identified and the best strategies to solve them were selected. Aligning Strategic approaches and Operational Plans with New Paradigm of Pegah management, designing Performance Measurement System based on Balanced Scorecard (BSC) and applying outsourcing strategies were the most viable results of second phase. [12]

NPCRT is a governmental company which is responsible for research and development Function of Iran National Petrochemical Company. Extensive and dispersive data and documents in this company confronted its top management to a serious problem. The review on KM shows that its Maturity model consists of different levels. First level of KM Maturity Model, which is documentation and integration of documents, was found as the best solution for it. Moreover, BSC was designed and Strategy Map of NPCRT was shaped to implement its functional strategies to prevent from stacking them. [13]

Khuzestan Water and Power Authority is one of the major organizations of the Iranian government. Despite designing BSC framework and breaking down its strategies to operational plans, Strategic Management of the organization could not be successful. The main cause of this failure was the lack of appropriate Organizational Chart to support the implementation of strategies. Based on the conclusion, four critical roles of management including production, administration, entrepreneurship and integration [14], in order to design its valuable Top Chart were defined. [15]

Raja Passenger Trains Co. is responsible for providing trains services to Iranian passengers. Varied numbers of systems analysis and improvement projects have been implemented on Raja and this confused its managers. Establishing a New Managerial Paradigm seemed critical to achieve motive Mission and Vision which are basis of a successful strategic plan. Regarding the fact that improvement plans are the outputs of Key Processes Analysis Diagnosis, functional plans have been defined based on key processes and stopped any projects which had some contradiction to these plans. [16]

In projects mentioned in table 1, many strategic plans were formulated according to their level of maturity by adopting the Organizational Life-Cycle Analysis [17]. Diagnosing key organizational processes based on Process Maturity Models [18], process improvement plans have been designed according to process maturity levels [19].

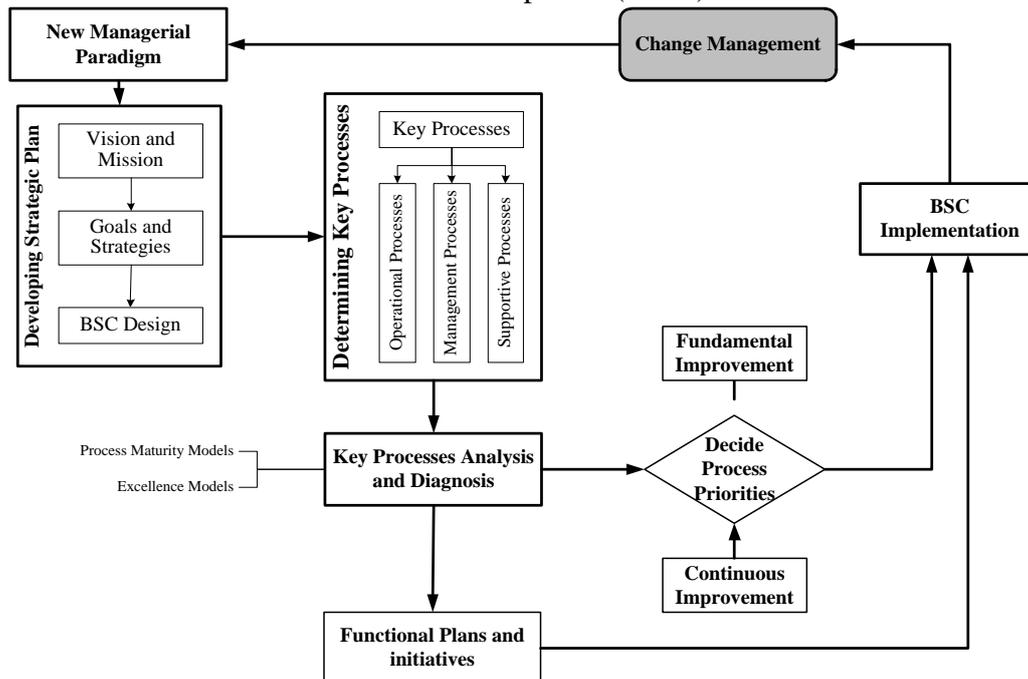
It was noticed that many local firms had started adapting some other management tools before the strategic plan was started which was against total organizational excellence concept. As a result, an accumulation of management tools were used and all implemented simultaneously. These facts made us turn our attention to tracking the common tools, the circumstance under which they were adapted and the degree of satisfaction with them so as to design a framework in which the location of strategic plan and other approaches, tools and techniques was determined clearly.

Although the primary framework of Oakland was a starting point to expand this thought, but a template was needed to suits well with our specific requirements. This article resulted in designing a framework called "*Road to Excellence of Iranian Companies (REIC)*". The main elements of this framework with its logical relationship and supplementary methods, instructions and guidelines are described as follows.

REIC framework

REIC framework, illustrated in figure 2, demonstrates the appropriate position and the logical precedent relationship among some common management approaches, tools and techniques used recently in Iranian companies, especially in the large and holding companies. This framework is a clear and comprehensive guiding map for incorporating the philosophy of business excellence based on TQM approach. Being adapted appropriately and considered as a basic steering guideline by top managers with sufficient commitment and support, the framework is able to take the full advantages of potential management tools, decrease the cost of adapting and implementing, making the necessary synergy and maximizing the efficiency and effectiveness of performing tasks.

Figure 2- Road to Excellence of Iranian Companies (*REIC*) framework



Description of *REIC* framework

New Managerial Paradigm

It all starts with accepting a new management paradigm. By a new management paradigm, it could be meant that the behavior based on this framework requires an evolution in the accepted rules and defaults that determine values and specify ways of achieving success. Understanding the importance of this new paradigm is the first step to develop the capabilities required to adapt the framework. Given the fact that implementing this framework needs a revolution in old paradigms of managers, it is obvious that achieving success depends on a successful application of the framework in practice. [20]

Strategic Plan

The next step in this framework would be the organization strategic plan. Strategic management is the process of formulation, Implementation, assessment and review of organization's Strategies, developing Policies and Plans to achieve Goals by allocating resources. It is the highest level of managerial activity, usually performed by company's chief executive officer. Strategic plan is believed to be the prerequisite of all operational activities and decisions. It specifies a clear direction and route for the organization to reach its Mission and Vision. Many organizations have organized their Strategic Plan and promoted the performance of their employees towards mission and vision. This could be calculated using personal scorecard. The concept of BSC aligns all plans and activities in organizational, divisional and personal levels within the Strategy Map of organization. [21, 22]

Iranian Strategic Management models have been developed and many of them have been successfully applied recently. Technical reports of implementing these models in Iranian companies show that there is a meaningful gap between specifications of budget in Iranian organizations and its strategy alternatives. This gap imposed the necessity of considering many factors in developing a local Strategic Management model, such as the bureaucratic structures, specific decision processes, especially in cross-functional processes, etc. Also, having identified the strategic themes, the model continues with extracting Critical Success Factors (CSF) versus Organizational Competencies for developing a Strategy Map. CSF and

Competencies are identified using an integrated model [23]. The integrated model was developed based on primer CSF concepts [24].

In defining Key Success Factors (KSF) and identification of CSFs and competencies, it is important to identify the measures of your progress. "What cannot be measured cannot be managed" is a well-known rule which certifies the importance of putting this box as a vital element in the *REIC*. A good BSC should include a mix of fundamental measures and strategic metrics. These measures should be subjected to periodic review and change, depending on how you progress in achieving your Vision and Mission.

A distinction between designing and implementing BSC in the *REIC* has been made. The first designing step of BSC is determining the perspectives of the Score Card. The other steps are determining the strategic goals and their cause and effect relationships, designing the strategy map, developing KPIs to evaluate the progress of the company in achieving its goals, setting the desired value (Target) of each metric and developing initiative for each goal in order to obtain its defined Target [21, 25].

Determining Key Processes

After identifying the requirements of strategic plan, core processes of the organization must be recognized. In this step, a critical point especially for Iranian organizations has been found. Process identification could be regarded as the first activity in Process Management and could be a bottleneck for many organizations as they fail to recognize their real core processes correctly. It has been found useful to fill the Process Analysis Matrix in a way that it could be able to identify core processes correctly. This tool is fully congruent with the Road to Excellence concept and considers the CSFs and Strategies of the firm as the main inputs of process identification.

During this step, it would be helpful to make a distinction among different types of organizational processes. By this comparison, the appropriate tool for diagnosing core processes could be found. There exists a total agreement in the literature of Process Management about how to classify different processes of a firm. The Process Clarification Framework (PCF) [26] divides processes into three main categories of operating, management and support. The primary and support activities of Porter Value Chain [27] match with PCF conceptually. QMSs such as ISO 9001 also classify them into the same categories [28].

Key Processes Analysis and Diagnosis

Diagnosing key processes results in defining plans and initiatives of improvement. Identifying functional and operational initiatives depends on the type of the process that could be operational, managerial or supportive. Supportive and managerial processes diagnosis helps us to define improvement plans and initiatives when different departments or divisions of an organization are allocated. Process approach put emphasizes on the integration between activities and plans of different functions. So results of core processes diagnosis should be integrated to make sure that initiatives and plans defined for the improvement of each core process, not only are incongruent with other initiatives and plans but also are fully aligned and integrated with each other toward achieving Mission and Vision. The arrows illustrated in the framework between operational and functional plans and also among different functions and operations highlight this requirement. Process Clarification framework consists of managing Human Capital, Information Technology (IT), Financial Resources, Organizational Property, Environmental Health and Safety, External Relations, KM, and finally Improvement and Change Management. Porter's Value Chain consists of managing firm's Infrastructure, Human Resource Management, Technology Development and Procurement [29].

According to the Road to Excellence concept, the core processes of each firm depend greatly on the main elements of its strategic plan. Core processes in the framework are

analyzed and diagnosed by two powerful tools including, an appropriate self-assessment model and Process Maturity Model (PMM) [18, 30]. Self-assessment Models are proposed as a powerful tool for improving performance. Processes lie at the heart of these self-assessment models like EFQM or Malcom Baldrige models [31], and are harmonious with the process approach of the *REIC*. However, our main focus is on the PMM which are more useful for aims of process diagnosis in the *REIC*.

Adapting the process maturity concept with diagnosing core processes helps us assess the processes reasonably and give clear indications on how to improve and reach next levels of maturity. It also helps us to integrate improvement plans of all processes. If improvement plans are implemented continuously, processes should develop altogether in a balanced manner. A core process cannot reach high levels of maturity unless the others reach the same level of maturity.

However, it has also found useful to use Process Survey Tools (PST) designed, which are maturity grids designed for specific processes and functions by Philips Corporation. In this framework, each process is broken down into some elements or sub-processes that make up the entire process. There are ten levels of maturity starting from basic in step 1 and world-class performance in step 10. A maturity scale should be created for each element. Using assessment of organizations' position in maturity levels for each element; they could establish a maturity profile for a particular process and gain insight into the steps they need to take to be able to perform in world class. [32]

It has been tried to make contributions in developing diagnosis frameworks and models for the processes particularly missed or unavailable ones in the publications. A well-developed framework is a strategic planning roadmap for Research and Development process based on the technological Strategies of organizations.

Decide Process Prioritized

So far a list of improvement areas has been defined for different processes, including management, operational or supportive. Prioritization strongly depends on the targeted maturity level of each process defined in the previous steps. It also determines how the organization should improve the process: continuously or fundamentally. Imagine a firm which is in the lower levels of a specific maturity but have set its target to reach the high levels of maturity. It should be considered that this target might be affected by many parameters such as benchmarking against best practices, the levels of existing and targeted maturity of other core processes, competitor performance, etc. [20]

As a result, improving this process might be decided fundamentally by an appropriate tool such as BPR. Otherwise another tool such as Kaizen would be appropriate when there is a decision to continuously improve the process [33]. The concept of Reengineering has been widely accepted when many organizations attempted to improve their processes and found out that continuous improvement is time-consuming, expensive and simply unnecessary.

This research believe Change Management skills and tools cover the whole area of *REIC* and should not be considered as something which is entered somewhere in this road. Change Management skills are so important in all along the way and literature reviews has shown that Business Excellence is the result of successfully managed change in every organization [34]. However the whole process of Change Management should be considered, being adapted to all steps of the road. The process of Change Management consists of entering and contracting, diagnosing, data gathering and analysis, delivering diagnosis, analysis feedback, designing change interventions and finally leadership [35]. It is emphasized on the whole steps of the process of Change Management in *REIC*.

BSC Implementation

The statement "What must happen to all processes is measurement – performance based measurement to be precise. The results feed back to the benchmarking and strategic planning activities" [10, 36], defines the concept of process measurement but it have found useful to make distinction between strategic and operational metrics in performance appraisal topic. This is not only a new classification but also is the main objective in some other researches and publications [37].

Given this, strategic performance of a company might be evaluated by implementing a strategic performance system like BSC and evaluate its operational performance with the aid of criteria used in QMSs like ISO 9001. According to the fact that a good Score Card consists of both strategic and operational measures, it might be concluded that BSC is a comprehensive performance appraisal framework and the criteria used in ISO 9001 should strongly be in consistent with the measures defined in BSC. *REIC* certifies this argument as if the QMSs and strategic performance systems are considered as the same context. It was assured that the operational metrics defined in QMS were not in contrast with or different from the metrics defined in Strategic Performance System. Unfortunately this is a routine for many Iranian companies to run QMS without having a formal or informal Strategic Plan. [22, 25]

Table 2- A summary of comparing *REIC* framework with Oakland's model

CSFs of TQM Models [38]	Privilege of <i>REIC</i> framework (Percent)
The role of management leadership and quality policy	89.6
Supplier management	67.7
Process management	96.2
Customer focus	62.8
Training	87.9
Employee relations	71.3
Product/ Service design	84.7
Quality data	76.1
Role of quality department	66.7
Human resource management and development	58.0
Design and conformance	88.8
Cross functional quality teams	78.7
Benchmarking	79.5
Information and analysis	83.2
Total	79.1 %

Validation of *REIC* framework

Literature review on TQM models presents a list of few vital CSFs to TQM for the benefit of researchers and industries. Karuppusami and Gandhinathan (2006) published their findings about the examination of 37 TQM empirical studies resulting in compilation of 56 CSFs. A Pareto analysis is a Quality Control tool that ranks the data classifications in the descending order from the highest frequency of occurrence to the lowest one. Then 14 CSF items of TQM models has been identified as "vital few" and they were used for validation of *REIC* framework. Then a questionnaire benefiting from those 14 CSF items was designed and distributed among selected Iranian TQM and Strategic Management experts from both academic and industrial population. Statistical analysis on data gathered from questionnaires denotes that 76.9 percent of Iranian experts in TQM and Strategic Management fields agreed on privilege of *REIC* framework in comparison with Oakland's model in Iranian companies. Also, a summary of comparing new framework with previous study is represented in table 2.

Conclusion

This paper presented a framework for guiding Iranian organizations toward sustainable excellence. *REIC* emphasizes on the logical sequence of adapting and implementing management approaches, techniques and tools together. These tools were selected among those which many Iranian organizations have tendency to adapt and implement. This paper could not claimed to prescribe a general and universal framework, but it claimed to be a development to the original Total Organizational Excellence model in Iran and strongly insisted on developing a clear guide with useful road maps; particularly for Iranian firms which suffer from poor adaptation of a package of management tools.

There are some extra researches which would be helpful to perform in order to compensate some gaps in our framework and improve them. First, no general study has been performed to distinguish the most commonly used techniques, tools and approaches the local organizations adapt recently. It have been recorded a three-year track of the selected firms but a comprehensive study might reveal more reliable results. Also other researchers were encouraged to complete *REIC* framework by finding the position of many other management approaches due to Road to Excellence concept.

References

- WTO, *Annual World Trade Reports*. 2010, World Trade Organization (www.wto.org).
- Foley, K.J. *From Quality Management to Organization Excellence: "Don't Throw The Baby Out With The Bath Water"*. in *First Research Conference on Organizational Excellence in the Third Millennium*. 2000. Estes Park, Colorado: Edgeman.
- Oakland, J.S., *Total Quality Management*. 1991: Butterworth-Heinemann Ltd. 256.
- Oakland, J.S., *Total Organizational Excellence*. 1st edition ed. 2001: Butterworth-Heinemann Ltd.
- Easton, G.S. and S.L. Jarrell, *The effects of total quality management on corporate performance: An empirical investigation*. *Journal of Business* 1998. 71(2): p. 253-307.
- Hendricks, K.B. and V.R. Singhal, *Don't count TQM out*. *Quality Progress*, 1999. 32(4).
- NIST, *Baldrige winners beat the S&P 500 for the eighth year*. 2002, National Institute of Standards and Technology (N.I.S.T).
- NIST, *Baldrige winners beat the S&P 500 for the eighth year*. 2004, National Institute of Standards and Technology (N.I.S.T).
- Przasnyski, Z.H. and L.S. Tai, *Stock performance of Malcolm Baldrige National Award winning companies*. *Total Quality Management*, 2002. 13(4): p. 475-488.
- Tanner, S.J., *Is Business Excellence of any Value? Does it generate and sustain organisational advantage?* 2005, Oakland Consulting's Research & Education Division, European Centre for Business Excellence.
- Mabena, *Strategic Management project of Toklan-Toos industrial manufacturing company*. 2005, Mabena, Energy and Industries Consulting Firm: Tehran.
- Mabena, *System Analyzing using Total Organizational Excellence model and Strategic Management Project Iran Milk Co. (Pegah)*. 2006, Mabena, Energy and Industries Consulting Firm: Tehran.
- Mabena, *Implementing Strategic Management Project in National Petrochemical Company-R&T (NPCRT)*. 2007, Mabena, Energy & Industries Consulting Firm: Tehran.
- Adizes, I., *Management/Mismanagement Styles*. 1st edition ed. 2004: The Adizes Ins.

- Mabena, *Strategic Management Project of Khuzestan Water & Power Authority*. 2008, Mabena, Energy and Industries Consulting Firm: Tehran.
- Mabena, *Applying Road to Excellence Model and Implementing Strategic Management Project in Raja Passenger Trains Co*. 2009, Mabena, Energy and Industries Consulting Firm: Tehran.
- Adizes, I., *Corporate Lifecycles: How and Why Corporations Grow and Die and What to Do About It*. 1st edition ed. 1990: The Adizes Institute. 384 pages.
- Mierlo, J.V., *Process Survey Tools- Philips's experience with accessing the maturity of business excellence*, in *EIPM 11th Annual Purchasing Conference*. 2006: Geneva.
- Humphrey, W.S., *Characterizing the software process: a maturity framework*. IEEE Software, 1988. 5(2): p. 73–79.
- Oakland, J.S. and S. Tanner, *Best Practice Benchmarking – a true driver of change*. 2006, Oakland Consulting plc.
- Kaplan, R.S. and D.P. Norton, *The Strategy-Focused Organization: How Balanced Scorecard Companies Thrive in the New Business Environment*. 1st edition ed. 2000: Harvard Business Press. 416 pages.
- Kaplan, R.S. and D.P. Norton, *Strategy Maps: Converting Intangible Assets into Tangible Outcomes*. 1st edition ed. 2004: Harvard Business Press. 454 pages.
- Moghaddam, M.R., K.M. Cyrus, and S.M.P.S. Aghaei, *A New Integrated Model to Identifying Critical Success Factors and Organizational Competencies (RAJA Passengers Train Co.)*, in *1st International Strategic Management Conference*. 2006: Tehran, Iran.
- Rockart, J.F., *Chief executives define their own data needs*. Harvard Business Review 1979. 2: p. 81-93.
- Brown, M.G., *Winning Score: How to Design and Implement Organizational Scorecards (Quality Management)*. abridged edition ed. 2000: Productivity Press. 336 pages.
- Andersen, A., *Process Classification Framework (PCF) : The Framework for Process Improvement, Version 5.0.3-en-XI*. 2008, American Productivity & Quality Center (APQC)'s International Benchmarking Clearinghouse (www.apqc.org).
- Porter, M.E., *Competitive Advantage: Creating and Sustaining Superior Performance*. 1 edition ed. 1998: Free Press. 592 pages.
- Hoyle, D., *ISO 9000 Quality Systems Handbook - updated for the ISO 9001:2008 standard*. Sixth Edition ed. 2009: Elsevier Ltd.
- Porter, M.E., *What is strategy?* Harvard Business Review, 1996 (Nov): The value chain.
- Schaeffer, M.D., *Capability Maturity Model Process Improvement*. 1998, Software Engineering Institute (SEI): Pittsburgh, PA.
- Lee, S.M., B.H. Rho, and S.G. Lee, *Impact of Malcolm Baldrige National Quality Award Criteria on organizational quality performance*. International Journal of Production Research, 2003. 41(9): p. 2003-2020.
- EFQM-Philips, *Process Survey Tools*, in *Process Survey Tools for Process Management*. 2004, The European Foundation for Quality Management (www.efqm.org).
- Imai, M., *Kaizen: The Key to Japan's Competitive Success*. 1st edition ed. 1986, New York, NY, US: Random House: McGraw-Hill/Irwin. 260 pages.
- Bauer, J., F. Richard, and O. John, *Implementing Business Excellence*. Total Quality Management, 2005. 16(4): p. 543-553.
- Cummings, T.G. and C.G. Worley, *Organization Development and Change*. 008 edition ed. 2004: South-Western College Publication. 720 pages.

- Oakland, J.S., *Oakland on Quality Management*. Third Edition ed. 2004: Butterworth-Heinemann Ltd. 488.
- Cyrus, K.M. and A.H.S. Tinat, Mabena Strategic Management Model (In Presian). 2009, Tehran: Amirkabir University of Technology Publication.
- Karuppusami, J. and R. Gandhinathan, Pareto Analysis of Critical Success Factors of Total Quality Management: A Literature Review and Analysis. *The TQM Magazine*; Emerald Group Publications, 2006. 18(4): p. 372-385.