# Change Management of Banking System at National Level by **Rastin Banking**

(Knowledge Management, Empowerment, Prune and Graft, and Apprenticeship)

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## Abstract

**Purpose**: Changing huge structures such as banking sector of a country needs special innovative methods. This paper shows how we can manage change of a banking sector of a country.

Design: Grafting novel efficient processes, and pruning old inefficient ones, and harmonising the organisation with new processes and empowering the staff through apprenticeship and knowledge management can put forward the change management.

Findings: The proposed method of "Prune and Graft of Process" similar to grafting a shoot or bud of a sweet-fruited tree to a bitter-fruited base tree is significant in change management. Accordingly, new processes should be grafted to the system, and all processes that are theoretically or practically against the goals of the organisation should be pruned. New processes and innovations could automatically change the bank performance. Apprenticeship and knowledge management are highly effective in all stages of forming and implementing the change.

Research limitations: This plan was formed and tested in Bank Melli Iran in order to propose a model for other banks as well.

**Practical implications**: In a view to explain the applied method of change management in the banking system, we study the steps that Rastin Banking was formed in Bank Melli Iran as a sample.

Social implications: Efficient changes and reforms of large organisations can prevent the society from enormous hurts.

**Originality**: Regarding the applied method, the topic is novel.

Category: Technical paper.

Keywords: Change Management, Knowledge Management (KM), Prune and Graft, Apprenticeship,

Empowerment, Rastin Banking

JEL: G21, D83, L16, J53

# Introduction

Management and organisation were developed on the basis of Weber's Bureaucracy<sup>2</sup> and Taylor's scientific<sup>3</sup> and bureaucratic and administrative management principles in early years of 20<sup>th</sup> century<sup>4</sup>.

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Weber's ideal bureaucracy includes specialization of labor, formalization of rules and procedures, impersonality in application of rules and sanctions, formalization of lines of authority into a hierarchical structure, formalization of career advancement process to be based on merit.

Scientific Management is to use scientific methods to define the best way to do a job.

<sup>&</sup>lt;sup>4</sup> C.N. Parkinson, M.K. Rustomji, S.A. Sapre (2009), Great Ideas in Management, Vision Books. Kim, Sung Ho (2007). Max Weber. Stanford Encyclopaedia of Philosophy. Retrieved 2010.

Human relations and behavioural management movement<sup>5</sup> were introduced in the 1930s and systemic, and advisability theories were born, but by the emergence of corporate governance by Adrian Cadbury at the end of 1990s, management faced a new evolution. Three schools of thoughts including Scientific Management, Human Relations Management and Systems Management are seen in all various management theories. Classic school of thought deals with division of labour, hierarchy, supervision and logical structure. The neoclassic school is known by human relation movement<sup>7</sup> and Systemic school, which describes the organisation as a system with environmental depended variables. By emergence of Human Relation movement, the subjects of job satisfaction, job enrichment, democratic leadership and empowerment were set forth and employees' state of mind, energy creation, feeling responsive, believing in goals, individual structural participation and ultimately, issues of values, beliefs, faiths and moralities were considered. In Systemic school, the organisation is described as an integrated system arrangement consisting of interrelated and interactive components and what forms an organisation as a single system is an interaction among its parts which was not considered properly in other schools of thoughts. The organisation is defined as collection and cooperation of a number of people to reach mutual goals through division of labour and tasks via authority hierarchy and responsibility. Accordingly, division of labour, hierarchy, logical relation and supervision scopes are among organisation principles, which should be considered in designing each organisation. The forming components of an organisational structure include the goal of the organisation, division of labour, degree of becoming official, supervision scope, the number of organisation levels, the level of concentration, the degree of complexity, administrative units, the establishment of ranks and rows (lineup), committees and groups and connection channels.

Above items are differently emphasised in different schools of thoughts. In a structural framework, neither of them can be ignored. But, strategic design of evolution in massive structures such as banking sector of a country calls for an innovating approach so that it would evolve sub-organisations internally. No doubt, current prescriptions for structural change of banking sector cannot be effective, and we should look for a solution in which the system automatically changes itself through internal incentives. Usually, old systems cannot improve themselves through prevailing methods and because of traditional internal stability of these systems; the organisation will step back to its previous position after a while.

# **Knowledge Management and Organisational Change**

Knowledge Management<sup>9</sup> introduces another method for management. This concept operates on the basis of changing intellectual endowments of employees and their inherent powers. Knowledge management considers the relations of information with individual activities and information and fulfilment of collective knowledge and experience. In other words, knowledge management is a systemic approach to finding, understanding and applying knowledge and experience to achieve organisational goals through exchange, creation or promotion of human mental capital. Practically, knowledge management is smart designing of processes, instruments, structure, etc. with the aim of increasing, renovating, sharing or improvement of application of knowledge and practical experiment. Knowledge management helps organisations to collect, select and organise unwritten organisational memory.<sup>10</sup>

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<sup>&</sup>lt;sup>5</sup> The behavioral management theory is often called human relations movement and it addresses human dimension of work.

<sup>&</sup>lt;sup>6</sup> Clarke, Thomas (ed.) (2004) Theories of Corporate Governance: The Philosophical Foundations of Corporate Governance. London and New York. Routledge.

<sup>&</sup>lt;sup>7</sup> Mirsepasi, Naser, (1996). Human Relations Management and Labor Management, Ghazvin Publication, 15<sup>th</sup> ed., in Persian.

<sup>&</sup>lt;sup>8</sup> Harold Koontz, Heinz Weihrich (1990), Essentials of Management, McGraw-Hill.

<sup>&</sup>lt;sup>9</sup> Knowledge Management (KM) is the process of capturing, developing, sharing, and effectively using organizational knowledge to achieve organizational objectives.

Serenko, Alexander; Bontis, Nick; Booker, Lorne; Sadeddin, Khaled; Hardie, Timothy (2010). A scientometric analysis of knowledge management and intellectual capital academic literature (1994–2008). Journal of Knowledge Management 14 (1): 13–23. http://dx.doi.org/10.1108/13673271011015534

<sup>&</sup>lt;sup>10</sup> Correia Ann; M. Sarmento Anabela (2003), Knowledge Management: key competences and skills for innovation and competitiveness. The technology and HRM conference on the dual interaction between technology and human resource. France. 19-21 May.

In order to implement knowledge management process, the strategy of knowledge management should be in the same direction of the strategic view of the organisation and be acceptable by organisation manager, should be effective at every level of the organisation, and amalgamated in commercial processes and structure of the organisation. Allocation of enough funds and organisational culture based upon joint use of knowledge and recognising explicit and implicit knowledge, appropriate technology, measurement, remuneration and regular evaluation systems for permanent improvement are among the necessities of this process. Application of change management together with knowledge management will take place through the following stages:

- 1. Feasibility study: by studying the current condition and various aspects of organisation and shortcomings and restrictions in all related fields to change management.
- 2. Pilot design: including developing general strategies for limitations removal through studying the viewpoints.
- 3. Detailed design: entering into the details commensurate to organisation's needs and restrictions.
- 4. Implementation: training managers and employees, structural change of organisation and coordination and amalgamation of elements and individuals in the new process.
- 5. Preservation and Maintenance: in order to prevent the deviation of the process from its designed plan, some mechanisms should be developed and implemented to remove probable shortcomings and defects and impede the organisation from stepping back to the previous state.
- 6. Assessment: feedbacks should be analysed for correction of process and corrections should be implemented if needed.

Apprenticeship is selected as training method and change management starts by grafting new processes to the body of the organisation and pruning the old inefficient processes.

## **Change Management**

Change management in different organisations is carried out differently, and each organisation chooses a method according to its specific conditions, situation and characteristics, which are discussed, in the theories of organisation evolution in details, and we will not go through them here. In order to describe the proposed applied change management for changing the banking system the method of "prune and graft" is introduced in this paper. As a sample, the formation of Rastin PLS Banking in Bank Melli Iran will be studied that how new processes can automatically evolve the banks. In other words, by grafting Rastin PLS Banking process to a bank, we can change and evolve the bank. Although Rastin PLS Banking is not prevailing in all branches of Bank Melli Iran yet, but its operational processes is a significant sample of effective change management.

Change stages are both in domains of organisational software and hardware, but the basis of any change in an organisation is the human beings. Facing changes in organisations needs staff acceptance, and if they resist against, changes will be confronted with many problems. Therefore, change management - especially in old<sup>12</sup> organisations- should be designed in a way that the body of organisation can accept it in a proper period of time and by believing to the issue, considers the necessary incentive to further reach of the goals of the organisation.

Dierkes, M., Ed., (2001), Handbook of organizational learning and knowledge, Oxford, University Press, Oxford. Groff, T.G., Jones, T.P. (2003), Introduction to knowledge management: KM in business, Butterworth-Heinemann, Oxford. Santosus, Megan; Surmacz, (2005) The ABCs of Knowledge Management. Knowledge Management Research Center, <a href="http://www.cio.com/research/knowledge/edit/kmabcs.html">http://www.cio.com/research/knowledge/edit/kmabcs.html</a>.

Anna E. Flynn, (2004), Knowledge Management Process: The Care and Feeding of Knowledge Workers. 89th Annual International Supply Management Conference. Philadelphia, PA. <a href="http://www.ism.ws/files/Pubs/Proceedings/CBFlynn.pdf">http://www.ism.ws/files/Pubs/Proceedings/CBFlynn.pdf</a>
<sup>12</sup> Alvani, Mehdi. General Management, 19<sup>th</sup> print. Nei Publication, Tehran. In Persian.

# **Empowerment**

During the change, employees will react variously; this is because they guess that change is a threat to them and they do not accept them simply. Overcoming this resistance and leading it to the right direction is one of the most important tasks of change manager. Resistance against change has two individual and organisational initiations. Individual resistances are related to staff's personalities such as habits, security, fear of the unknown, economic factors, lack of self-confidence and other similar factors. Organisational resistances are such as fundamental mechanisms, feeling threat about specialists, group behavioural norms, and career investments. Robbins 13 proposes a method for managing change and confronting staff resistance, which includes effective communication of manager with staff during the modification, easing the change through training staff with new skills and giving them new privileges and finally applying force as the last option. In this regard, considering the required conditions of the organisation, staff and operational processes should become efficient. Empowering and making the staff more efficient is one of the most effective methods of increasing staff productivity and optimal use of their capacities and capabilities for achieving organisational goals. At first, empowerment was defined as giving authority to staff, but now it is referred to training new knowledge, skills and inducing staff by which they can improve their functioning. Therefore, this concept covers from top managers to the lowest levels of organisation staff. If we consider empowerment as empowering the staff and giving them internal incentive to strengthen their self-confidence and overcome their weaknesses, we have defined a two-way relation between empowerment and authorising. <sup>14</sup>There are generally three important empowerment approaches. 15 First, rational view, which believes in sharing organisational power with staff; the second considers giving incentive, and third proposes is to establish internal motivation through preparing the environment and creating transformational channels for feeling productive and becoming more energetic. We can conclude that if staff expectations such as work truth feeling, having a meaningful job and practical frankness are fulfilled, it can provide organisational interests as well as staff satisfaction and pride. Therefore, organisation empowerment should be accompanied with more enthusiastic feeling, ownership and pride of staff in the direction of their prevocational beliefs. 16

This is very basic in banking structural change of country. In other words, if we consider the empowerment theories in relation to such subjects as staff moralities, responsive feeling, believing in goals and values, faith and ethic, in connection with Human Relation management; we can conclude the source of inefficiency in Iran's banking system. After approval of "Usury-free Banking Operations" law in Iran, elimination of usury was considered the crucial goal of the banking system for about three decades; and since this principle was accepted and was among the beliefs of the banking personnel, they cared about it. But, this Law was an emerging Law and banks, practically couldn't manifest its essence in banking activities and were obliged to bypass it and find minor strategies to perform bank's current financial processes. This created a significant internal contradiction in banking personnel, which were conflicted with their beliefs. They knew they were going through daily operations, which were not based upon their beliefs (prohibition of riba); therefore, they conducted daily banking activities regardless of their organisational goals and against their values and beliefs. Disbelieving of staff to organisation activities can be the primary source of inefficiency in Iran's banking system at the macro level as well as other organisations. If we accept this subject as the main root of the inefficiency of banks, we can consider the next step by organisational empowerment as making staff capable of doing their duties and increasing their bodily, mental and incentive powers including technical skills and human perception. Apparently, staff career attitudes and their personalities, kind of structure consisting task, reporting, relations, authorities and structural goals, are also considered as staff coordination for achieving

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<sup>&</sup>lt;sup>13</sup> Stephen Robbins (2005), Organizational behavior, 11<sup>th</sup> ed., Prentice Hall.

<sup>&</sup>lt;sup>14</sup> Whetten, David A., Cameron, Kim S. (1991) Developing, Management Skills. 2<sup>nd</sup> Edition. New York: Harper Collins Publishers Inc.

<sup>&</sup>lt;sup>15</sup> - Conger, J. A., Kanugo, R., N. (2005). The Empowerment Process: Integrating Theory and Practice. Academy of management review, Vol. 13, n.3.

<sup>&</sup>lt;sup>16</sup> Stephen Robbins (2005), Organizational behavior, 11<sup>th</sup> ed., Prentice Hall.

organisation goals. Designing jobs by considering clarity of role, relationship with higher rank managers and lower grade staff, task diversity, decision-making participation, method of operations evaluation, supervisor support, job grading situation, accessibility to necessary sources, training, rewarding and punishment system and similar items are considered in this direction. Accordingly, we have to establish an evolution method for the banking system, which includes automatic mechanisms that consider all the above subjects.

## **Prune and Graft of Process**

The proposed method is similar to grafting a shoot or bud of a sweet-fruited tree to a bitter-fruited base tree. In order to change a low-quality tree into a high-quality one, gardeners graft a bud of a high quality sweet-fruited tree to the bad quality ample-roots low-fruit or bitter-fruited tree, and take care of it, until the base tree accepts the good bud and interact with it positively. Then gradually the gardener will prune the old shoots of the base tree to strengthen the interaction of the base tree with the new bud. After a while that the grafted shoot become vivacious, the gardener will prune all old base shoots until the base tree has its own root and stem but only good shoots. In this way, the change takes places. Grafting often is used with the goal of increasing fruiting, quantity and quality of fruit, improving growth and fruiting structure of the base tree, regulating pollination in the garden, obtaining shorter stature and stronger tree and recovery of the wounded stem, root or main shoots of the tree, fast-fruiting, etc. A precondition for grafting is typical similarity of the base tree and grafted shoot as far as possible; otherwise, the base tree will not accept the new bud and change process will not take place. Moreover, a beneficial grafting needs proper environmental and physiological conditions.

Pruning useless shoot is one of the important stages of this process. Fruit trees, usually after a few years are condensed with shoots and leaves; some shoots dry gradually and decrease tree productivity. The tree should be pruned to improve this condition. In gardening, pruning includes cutting old shoots, root, ross, leaves, blossoms and fruits of the plant to conduct its growth and productivity. Therefore, pruning of a plant is to cut old, dried, broken, disturbing and pest-ridden sick shoots, which prevent the plant to access sunshine and oxygen and fruiting periodicity; and making the old plant younger, and preventing overgermination growth versus over-procreation that leads to fruiting, and balancing stem and root, increasing fruit quality and quantity, shortening plant stature to improve fruit-picking and extermination spraying. Usually pruning is done when the plant is asleep and before budding in winter (winter prune), or in summer when the plant is covered with leaves (summer prune). In other seasons, when the plant is budding, or fruit is at the plant, pruning hurts the plant. In all types, pruning should be done carefully and moderately; otherwise, will damage the plant. Therefore, if the plant is old and has not been pruned for several years, pruning should be done gradually and limited. Pruning should be done at the joint of the shoot and parallel to the trunk of the plant as possible, to not budding from the cut point again. Pruning thick shoots should be done in several stages to prevent breaking the plant when pruning. Buds around the stem should be cut entirely to avoid competition with the main body.

All these considerations are significant in change management that should be considered in banking system restructuring in applying new banking methods and processes. Accordingly, new processes should be grafted to the system, and all processes that are theoretically or practically against the goals of the organisation should be pruned. Anyhow, we should adopt a strategy that by harmonising the organisation with new processes and interrupting inefficient and disturbing old processes and aligning staff with new goals of the organisation, change their resistances into consistent powers. Therefore, organisation should be developed in a direction that can be better coordinated with changes and evolutions; and human resources should be guided in a way that while new organisation goals and system missions are achieved, their needs be also satisfied; so that the organisation could reach the desired level of achievement in its role and preserve it.

# Steering the Change

The framework of Rastin PLS Banking of Bank Melli Iran is an excellent sample for presenting stages of change management in the form of pruning and grafting of processes. Our sample is in conformity to Buckingham and Cliftton's findings. By studying 400 successful companies around the world and conducting 80000 interviews with managers and more than 1.7 million professionals from varying fields, these two authors, together with their colleagues in Gallup Organisation recognised the bases for strength-building employees. <sup>17</sup>

On the other side, our sample also conforms to management methods of Collins<sup>18</sup>. By studying and analysing many companies, he concludes why some companies make leap and others do not. He finds some measures used by successful companies. A Level 5 leader<sup>19</sup> sits on top of the hierarchy of

<sup>17</sup> - Marcus Buckingham, Donald O. Clifton (2001). Now, Discover Your Strengths, Gallup Organization Free Press.

- Achiever one with a constant drive for accomplishing tasks
- Activator one who acts to start things in motion
- Adaptability one who is especially adept at accommodating to changes in direction/plan
- Analytical one who requires data and/or proof to make sense of their circumstances
- Arranger one who enjoys orchestrating many tasks and variables to a successful outcome
- Belief one who strives to find some ultimate meaning behind everything they do
- Command one who steps up to positions of leadership without fear of confrontation
- Communication one who uses words to inspire action and education
- Competition one who thrives on comparison and competition to be successful
- Connectedness one who seeks to unite others through commonality
- Consistency one who believes in treating everyone the same to avoid unfair advantage
- Context one who is able to use the past to make better decisions in the present
- Deliberative one who proceeds with caution, seeking to always have a plan and know all of the details
- Developer one who sees the untapped potential in others
- Discipline one who seeks to make sense of the world by imposition of order
- Empathy one who is especially in tune with the emotions of others
- Focus one who requires a clear sense of direction to be successful
- Futuristic one who has a keen sense of using an eye towards the future to drive today's success
- Harmony one who seeks to avoid conflict and achieve success through consensus
- Ideation one who is adept at seeing underlying concepts that unite disparate ideas
- Includer one who instinctively works to include everyone
- Individualization one who draws upon the uniqueness of individuals to create successful teams
- Input one who is constantly collecting information or objects for future use
- Intellection one who enjoys thinking and thought-provoking conversation often for its own sake, and also can data compress complex concepts into simplified models
- Learner one who must constantly be challenged and learning new things to feel successful
- Maximizer one who seeks to take people and projects from great to excellent
- Positivity one who has a knack for bring the light-side to any situation
- Relator one who is most comfortable with fewer, deeper relationships
- Responsibility one who, inexplicably, must follow through on commitments
- Restorative one who thrives on solving difficult problems
- Self-Assurance one who stays true to their beliefs, judgments and is confident of his/her ability
- Significance one who seeks to be seen as significant by others
- Strategic one who is able to see a clear direction through the complexity of a situation
- Woo one who is able to easily persuade
- <sup>18</sup> James C. Collins (2001), Good to Great: Why Some Companies Make the Leap...And Others Don't. Harper Business.
- <sup>19</sup> Jim Collins's classification hierarchy:
- Level 5 Executive: Builds enduring greatness through a paradoxical combination of personal humility plus professional will.
- Level 4 Effective Leader: Catalyzes commitment to and vigorous pursuit of a clear and compelling vision; stimulates the group to high performance standards.

capabilities and is a necessary requirement for transforming an organisation from good to great. <sup>20</sup>

- Level 3 Competent Manager: Organizes people and resources toward the effective and efficient pursuit of predetermined objectives.
- Level 2 Contributing Team Member: Contributes to the achievement of group objectives; works effectively with others in a group setting.
- Level 1 Highly Capable Individual: Makes productive contributions through talent, knowledge, skills, and good work habits. Jim Collins (2001), Level 5 Leadership, The Triumph of Humility and Fierce Resolve. Harvard Business Review, January. <sup>20</sup> The measures are:

## ➤ 1. Level 5 Executive Leadership

- Personal Humility (Demonstrates a compelling modesty, shunning public adulation; never boastful. Acts with quiet, calm determination; relies principally on inspired standards, not inspiring charisma, to motivate. Channels ambition into the company, not the self; sets up successors for even more greatness in the next generation. Looks in the mirror, not out the window, to apportion responsibility for poor results, never blaming other people, external factors, or bad luck.).
- Professional Will20, almost fanatical (Creates superb results, a clear catalyst in the transition from good to great. Demonstrates an unwavering resolve to do whatever must be done to produce the best long-term results, no matter how difficult. Sets the standard of building an enduring great company; will settle for nothing less. Looks out the window, not in the mirror, to apportion credit for the success of the company to other people, external factors, and good luck.).
- Workmanlike diligence more plow horse, than show horse
- Ambitious for the company, not themselves

#### ➤ 2. First Who, Then What

- Getting the right people on the team comes before vision, strategy and tactics
- Get the right people on the bus
- Get the wrong people off the bus
- Put your best people on your biggest opportunities, not the biggest problems

## ➤ 3. Confront the Brutal Facts (But Never Lose Faith in the Potential for Greatness)

- Impossible to make good decisions without an honest confrontation of the brutal facts
- Create a culture wherein the truth can be heard
- Lead with questions, engage in dialogue not coercion and conduct autopsies without blame
- Charisma can be as much a liability as an asset because a strong personality often deters people from presenting the brutal facts
- Don't waste time trying to "motivate people". The right people are self-motivated but can be de-motivated.

#### ➤ 4. The Hedgehog Concept

- Organizations should only do what they 1) can be great at, 2) can make money at and 3) have a passion for doing.
- The Hedgehog Concept is not a vision or strategy, but an understanding.
- Good-to-great companies set their goals and strategies based on understanding; others set their goals and strategies based on bravado.
- Getting the Hedgehog Concept is an iterative process.
- Hedgehog companies are simple creatures that know one big thing and stick to it. Other companies are more like foxes that know many things but lack consistency.

# > 5. A Culture of Discipline

- Sustained great results depend upon building a culture of disciplined people who take disciplined action within the three circles of the Hedgehog Concept.
- A culture of discipline requires disciplined people who engage in disciplined thought and then take disciplined action.
- The single most important form of discipline for sustained results is fanatical adherence to the Hedgehog Concept and the willingness to shun opportunities that fall outside the three circles.
- The purpose of budgeting in a good-to-great company is not to decide how much each activity gets, but to decide which areas best fit within the Hedgehog Concept and should be fully funded and which should not be funded at all.
- "Stop doing" lists are more important than "to do" lists.

## ➤ 6. Technology Accelerators

- Good-to-great organizations avoid technology fads but become pioneers in applying carefully selected technologies.
- Good-to-great organizations use technology as an accelerator of momentum, not a creator of it.
- The key technology question is does it fit directly your Hedgehog concept? If yes, then becoming a pioneer in the technology makes sense. If no, you can settle for parity or ignore it entirely.

## > 7. The Flywheel and the Doom Loop

- Good-to-great transformations look dramatic and revolutionary on the outside but actually are organic, cumulative processes on the inside. There is no single defining action, no grand program, no one lucky break or miracle moment.
- Sustainable transformations follow a predictable pattern of buildup and breakthrough like pushing on a giant, heavy flywheel.

# **Apprenticeship**

The practical method of implementing evolution in Bank Melli Iran was designed by establishing a Rastin PLS Committee consisting of change manager and experts from various sectors of the bank. The regular weekly sessions of the committee, which lasted for two years, started to introduce a new banking system with a novel definition, studied, and compiled the matters systematically. Members of the committee were responsible for drafting the defined ordered subjects in each session and presenting it in the next meeting. The drafts were read in next session and by measuring them with primary pillars of the plan, were edited and asked for reform or rewriting. In this way, the main Rastin PLS Banking instructions were compiled which was conforming to the views of committee members. The result of these sessions was the detailed report of Rastin PLS Banking Base System. This method of designing and compiling instructions was accompanied with a particular method of training, which is referred to as apprenticeship. Many studies have admitted the effectiveness of this type of training. 21 Compiling instructions and operating organisation of the plan carried out by those people who had to implement Rastin Banking. Therefore, in addition to becoming experts in the plan, they accepted and defended the plan, and this eliminated any future resistance against the change. Practically, the slow and prolonged period of designing led to the evolution among the committee members and widened the number of protectors of Rastin PLS Banking, and their interaction with their sovereign departments had considerable effects on forming the culture of this system in the bank.

At that time, the plan was supported by committee members, and it was necessary that bank managers at various levels be accompanied. Therefore, we started to introduce the program to high and middle-level managers, and premium and first-grade branches through many lectures and discursive meeting. Discussions and presentations at various levels in the bank continued and led to the public acceptance of the plan. Meanwhile, Rastin PLS Committee continued its sessions, with different members that resulted in designing Rastin PLS Financial Subsystems and other Complementary Systems. At this time coding Rastin PLS Banking web-based software, which had been started after designing the general structure of the system, reached its final stages.<sup>22</sup> Discussion sessions and presentations inside the bank continued, and by reducing their resistance against new change, they were accompanied with us. But, resistances against change at higher levels and outside the bank were observed. Discussion sessions outside the bank for managers and banking experts in various economic and banking institutions, including Ministry of Finance and Economic Affairs, Central Bank and Stock Exchange Higher Council were persistently continued. Various scientific dimensions and features of the plan were presented in different conferences and provided a background for acceptance of Rastin PLS Banking at different levels. Several scientific and expert papers were written by the scientific manager and committee members.<sup>23</sup> Presenting these papers at several scientific conferences, and domestic and international media interviews, and discussions with national and international experts about various aspects of the plan strengthened theoretical basis of the plan, and Rastin PLS Banking, which was built upon explicit and implicit knowledge management process became a new banking paradigm.

Conditions for evaluating the implemental capability of the plan were ready. Rastin PLS Banking started at a new branch of Ghoba in Bank Melli Iran.<sup>24</sup> Public advertisement and meeting of bank's managers and experts with authorities and various interested people provided the necessary conditions for expanding PLS branches. Primary training with the goals of educating and introducing the expert body of the bank in different provinces started and this plan was included in the agenda of Workgroup of Banking Evolution

http://ded.mo.gov/Content/Jim%20Collins,%20Good to Great Summary Principles%5B1%5D.pdf

Average organizations follow the "doom loop" pattern. They try to skip buildup and jump immediately to breakthrough.
Then, with disappointing results, they lurch back and forth, failing to maintain a consistent direction.
 Jim Collins (2001), Level 5 Leadership, The Triumph of Humility and Fierce Resolve. Harvard Business Review, January.

<sup>&</sup>lt;sup>21</sup> Fox, J, (2006). Employee empowerment: an apprenticeship model. Barney School of Business, Hartford University.

<sup>22</sup> http://pls.bmi.ir

<sup>23</sup> http://www.bidabad.ir

<sup>24</sup> http://www.bmi.ir/Fa/ShowNews.aspx?nwsId=6053

Plan of the government as a solution for getting rid of the complex phenomenon of *riba* in Iran's modern banking structure.

# **Grafting New Processes**

Designing financial systems are principally complex, and when combined with ideological subjects, the complications increase. Usually, parts, internal and external processes and subsystems of such systems are facing various problems that cannot be covered easily. By increase of complexity, management of the system needs complex and especial tools and since the subject of the system is financial issues, and pecuniary matters are beloved by people, by considering the most pessimistic conditions, all probable types of failures to fulfillment of obligations should be recognized and predicted in advance to reduce all cases of dishonest behaviors. Because of this issue, even well-equipped fertile banks throughout the world, in spite of knowing Islamic banking advantages, have not been able to implement the task adequately; or changed their minds and returned back to interest-based banking to escape the complexities of real Islamic banking and went back to prefixed interest rate banking processes, instead of profit and loss sharing.

Designing true Islamic banking needs comprehensive knowledge of ideological (Fiqh, Sharia principles, commandments and logic), philosophic (individual rights and social justice concepts), economic (individuals, firms and market behaviors), financial (accounting, auditing, financial engineering), banking (project assessment and supervision, credit operation, transaction, investment and risk), legal (laws and regulations, contract, legal and arbitration procedures), informatics (computer systems, network, communication, programming), organisation (pillars and institutions), management (administration, control, supervision, assessment), mathematics (applied mathematics, financial mathematics, mathematical modeling), financial instruments (prevailing financial papers and securities in financial markets), business and trade (business administration, marketing, international trade), capital market (capital market structure, laws and regulations), insurance (commercial, responsibility, assets, and accident insurances), standards (commodity and production) issues; and in addition, should be aware of sociology and individual and social psychologies and their corresponding problems and many other various matters.

As it was mentioned, in order to evolve the bank, new processes and innovations should be grafted to bank's operations, so these processes could automatically change the bank performance. The new processes should have the following characteristics as preconditions:

- 1. Be based upon faith and beliefs of staff and clients
- 2. Be transparent in all dimensions
- 3. Be based upon information technology
- 4. Have maximum efficiency
- 5. Be accessible for all people throughout the world  $(7\times24)$
- 6. Be based upon advanced national and international standards
- 7. Operational methods be documented and accessible
- 8. Satisfying bank's goals and interests
- 9. Minimises financial risks
- 10. Providing necessary attraction for personnel and clients
- 11. Be enough understandable and easy for the staff and clients
- 12. Having enough supervision mechanisms to prevent any deviation
- 13. Be based on responsibility and responsiveness
- 14. Permanently increases bank's and staff's creditability
- 15. Official divisions, tasks domain, hierarchy and reporting method be defined
- 16. Providing job satisfaction and job enrichment and democratic leadership
- 17. Degrees of formalities, organisational levels, concentration, complexity and communication channels be set.

By considering the above subjects, Rastin Banking<sup>25</sup> is defined as the main process to be grafted to the bank.

# **Rastin Banking**

Many economists have done their best to discard Riba (usury) from banking operations, but thy have not gotten achievemen much. In this direction, Rastin Banking has been compiled not only to eliminate Riba but also to institutionalise various teachings of human justice and Islamic ethics in banking operations. Good approaches of Rastin Banking made it as a base to improve banking structure. All features of this type of banking in banking, financial, economic, social, ethical and international operations are so developed that made it reliable to be used for banking system restructuring.

Regarding the above subjects, Rastin Banking System was designed in Bank Malli Iran. Designer team of Rastin Banking tried to consider the processes, procedures, rules and organisation of the system comprehensively and after six years of continuous work designed a total solution for Islamic banking which is unique and distinguished at international level. Rastin Banking system has all banking operations in itself. Establishment of the first profit and loss sharing branch (Ghoba) in November 2010 clarified the deficiencies of the system and new financial subsystems and complementary systems were designed and connected to Rastin Banking PLS Base System because of the derived operational feedbacks. Development of Rastin Banking came to a phase that other banks were interested in applying it to their own institutions. Therefore, the "Compiling Committee of Operational Rules and Regulations of Rastin Banking" was established to compile the legal draft bills.<sup>26</sup>

Rastin Banking fulfils all ethic definitions ever defined for ethic finance and even more. It holds the virtues of justice, charity and generosity regarding dispositions to act in ways that benefit both the person possessing them and the person's society.<sup>27</sup> Hence, Rastin Banking benefits both the financial institution that adopts it and broader community as well. In Rastin Banking humans are bound, from knowledge of their duty as a rational beings, to obey the categorical imperative to respect other rational beings. <sup>28</sup> This is extended in Rastin Banking that everybody had specific duties in relation to his role and endowed ability for financial intermediation. Moreover, in Rastin Banking, based on utilitarianism<sup>29</sup> that asserts the guiding principle of conduct should be the greatest happiness or benefit of the most significant number is observable. In this context, Rastin Banking has been developed to ensure the facilitation of benefit for the greatest number of people, while not harm to anyone. Rastin Banking fulfils Islamic principles of ethics, wherein individuals and bank are duty bound to be accountable for each and every action conducted by them and to do right in the context of God's laws.<sup>30</sup>

To gain the compliance of banking system with principles and rules of Islam, and having better access to safe financial operations and helping the economy to bloom, fair distribution of opportunities and possibilities, employment creation and growing the welfare of the society, Rastin Banking System was brought forth and all conventional and Islamic banks can carry out their activities on this basis. Actually,

<sup>29</sup> Utilitarianism approach

<sup>&</sup>lt;sup>25</sup> Bidabad, Bijan. (2014). New Operational Islamic Banking System, Volume One, Theoretical Foundations, LAP Lambert Academic Publishing, OmniScriptum GmbH & Co. KG, ISBN: 978-3-659-54463-7.

Bidabad, Bijan. (2014). New Operational Islamic Banking System, Volume Two, Applicational Issues, LAP Lambert Academic Publishing, OmniScriptum GmbH & Co. KG, ISBN: 978-3-659-55210-6.

<sup>&</sup>lt;sup>26</sup> Bidabad, Bijan; Azarang Amirostovar, Saeed Abdollahi, Mahmoud Allahyarifard, Eskandar Pordel, Maryam Heidari, Alireza Shafiei, Mohammad Ali Pourbehrouz. (2012) Draft of Rastin Banking Bill, Bank Melli Iran. http://www.bidabad.ir/doc/rastin-banking-bill.pdf

Bidabad, Bijan, Azarang Amirostovar, Saeed Abdollahi, Mahmoud Allahyarifard, Eskandar Pordel, Maryam Heidari, Alireza Shafiei, Mohammad Ali Pourbehrouz. (2012) Draft of Rastin Banking Executive Regulation, Bank Melli Iran. http://www.bidabad.ir/doc/rastin-banking-regulation.pdf

Definitions from the Oxford Dictionary, http://www.oxforddictionaries.com/definition/english/ethics

<sup>&</sup>lt;sup>28</sup> Kant definition

<sup>&</sup>lt;sup>30</sup> Accounting and Auditing Organization for Islamic Financial Institutions (GSIFI). Governance Standard No. 7: Corporate Social Responsibility Conduct and Disclosure for Islamic Financial Institutions.

it is a new Islamic banking, which has studied the theoretical and operational difficulties of banking system of country and offer legal and operational solutions on the basis of the latest scientific and operational achievements of humankind in the field with the aim of economic and banking growth and development of the society. Each subsystem, instrument, innovation and operational procedure of Rastin Banking has been designed to remove a particular difficulty and satisfy markets and peoples' needs.

As a brief description, the principles and characteristics of Rastin Banking are based on the following bases and principles:

- 1. **Operational Principles:** By elimination of *Riba* from banking operations, Rastin Banking forbids superficial application of Islamic contracts and applies them in their real form, and bank acts as an intermediate between depositors and those who receive finance, and bank earns income through offering capital management services and not through interest rates spread. By allocating yield to the money source, the assets owners receive their share of profit or loss. All activities will be carried out mechanically and transparently through the internet according to compiled documented regulations. While safeguarding the interests of depositors, the bank is the trustee of the related parties, and the entrepreneur is certain that in the case of loss will not become bankrupt because of insurance coverage safeguards to depositors' deposits. Assessment, supervision and operation of projects will be based on speciality, responsibility and independent decision and position of assessor and trustee. The capability and credibility of entrepreneur will be measured considering his previously tax payments records. The entrepreneur is responsible for his prepared information in his submitted project proposal.
- 2. Financial Principles: No bad or delayed loans will be created, and the bank will not bankrupt during the crisis. Because of lower associated risk, bank's capital adequacy rate decreases and bank free reserves increase; and regarding depository characteristic of the bank resources, the legal and precautionary reserves of banks besides central bank will decline. Depositor, entrepreneur and bank will receive their fair share of the yields of sharing. Various financial instruments and banking processes satisfy different society needs; and by relating Rastin Certificates prices to real sector returns, their prices are stabilised and not only bubble prices emerge, but people with various risk tastes are also attracted and increase the positive interaction between return and risk. Without needing any intermediary, everybody can enter Rastin Certificate Market. Information transparency will make the related systems such as tax and social security systems transparent regarding economic activists. Reliable assessment mechanisms have been defined, and solid supervision background has been provided. The entrepreneur is obliged to observe information disclosure rules relating his project; and by supervision on his operations, corporate governance rules are applied to entrepreneur's company, which leads to the transparency of all information and operations related to the project and asymmetric information and informational rents will be prevented and by applying for insurances, risks are minimised. While facilitating and speeding up the operations, it prevents money laundering and strengthens auditing and internal control of entrepreneur's company. Online impalpable inspective monitoring prevents bank staff breaches. By separating the accounts, the account of each project and depositor will be kept separately, and credibility of bank and banking operations increase.
- 3. Economic Principles: Rastin Banking decreases capital market deficiencies and contradictions of capital and money markets, and expands and strengthens insurance sector in the economy. The increased confidence because of bank supervision on entrepreneur and internet accessibility to Rastin Certificate Market provide capital absorption and attraction capability and provides a safe competition environment for entrepreneurs, depositors, transactors and banks with the rivals. New financial instruments diversify financial assets, and by assigning Rastin Certificates to specific projects, goods or assets, paper markets are not generated. The involvement of capital in project prevents quick movement of assets, which create a financial crisis because of liquid flow of funds and by eliminating superficial paper market prevents a debt-leverage based crisis. Whoever is capable of conducting economic activity can receive financial fund or be employed in job vacancies created by entrepreneurs of the financed projects. Moreover, application of various financial expertises expands related employment opportunities and all of these provisions

improve investment, employment, production and social welfare and restrict economic and financial fluctuations.

- 4. **Ethical Principles:** Obligation to release real and precise information and documents will persuade honesty and personal peace, and conformity of word and practice, and application of true supervision and decrease of uncertainty and social and individual mental tensions. Forbidding tricks and drop of financial corruption because of the designed method of assessment, supervision and monitoring systems and removal of moral hazards potentials lead to put everything in its right place and remove the injustice. False devour, incurring a loss to others, betray, gambling and lottery, unfairness, grabby, extortion, waste and squandering and speculation, conspiracy and bribery all are forbidden in Rastin Banking and will be fought against systematically. Observing the rights of weak, implementing economic justice, honouring and respecting rights of people increases mutual consent and benevolence and prevents *riba* and waste debaucheries openly.
- 5. **Social Principles:** Conducting activities according to pre-described procedures and rules provides the necessary background for regulating right financial behaviours of people of society and obliges individual discipline. No discrimination, difference or priority among those with similar characteristics is accepted in Rastin Banking. It teaches people to plan, forecast and design their financial activities.
- 6. **Legal Principles:** Respecting property rights and individual rights in Rastin Banking is strong. By specifying various aspects of obligations of contracting parties, there will be less reason for juridical settlements; and arbitration facilitates dispute resolution among dissident parties. Moreover, queries of online databases restrict abuses. The new method of execution of enforceable documents in bank facilitates the collection of claims.<sup>31</sup>
- 7. **International Principles:** 7×24×365 internet accessibility to banking services throughout the world promotes foreign investment absorption, which provides international mutual interests and political stability background. The virtues of Rastin Banking system introduce it as an operational ideal banking model at international level, and development of Rastin Certificate Market at a global scale provides stable assets' anchor.
- 8. **Organisational Principles:** Commensurate of the organisation to needs, together with proper position appointment and promotion, and generally meritocracy including assignment of qualified persons, regulatory communications, duties, responsibilities of personnel and adequate punishment and award system are considered and defined in Rastin Banking. Organisational evolution, change and stability are accompanied by standardisation and documentation. Responsiveness of all personnel for their granted authorities prevents the appearance of harmful effects of unofficial organisations and political pressure.

# **Pruning Old Processes**

It can be shown that many Islamic contracts applied in "Usury-Free Banking Operations Law" (approved in 1983), are not usury-free!<sup>32</sup> According to the precise definition of *riba*, "*instalment purchase*", "*rent leading to ownership*", "*debt purchase*" and "*delay fine (indemnification)*" etc. include *riba*. Of course, extending "*interest-free loan (or good loan)*", "*civil partnership*", "*legal partnership*", "*direct investment*", "*mudarabah*", "*advance-purchase (salaf)*", "*Joalah*", "*muzaraah*", "*musaghah*" and "*ijarah (rent)*" are not usury if special conditions be considered. Except for *interest-free loan* and *ijarah* 

<sup>&</sup>lt;sup>31</sup> Bijan Bidabad, Saeed Abdollahi, Mahshid Sherafati, (2017) Enforcement of the Purports of Binding Banking Documents in Rastin Banking – Part I. International Journal of Law and Management, Vol:59, Iss:1.

Bijan Bidabad, Saeed Abdollahi, Mahshid Sherafati, (2017) Enforcement of the Purports of Binding Banking Documents in Rastin Banking – Part II. International Journal of Law and Management, Vol:59, Iss:2.

<sup>&</sup>lt;sup>32</sup> Bidabad, Bijan, Economic-juristic analysis of usury in consumption and investment loans and contemporary jurisprudence shortages in exploring legislator commandments. Proceedings of the 2<sup>nd</sup> International Islamic Banking Conference. Monash University of Malaysia. 9-10 September 2004. Reprinted in: National Interest, Journal of the Center for Strategic Research, Vol. 2, No. 1, winter 2006, pp. 72-90. Tehran, Iran. <a href="http://www.bidabad.ir/doc/reba-en.pdf">http://www.bidabad.ir/doc/reba-en.pdf</a>

(rent) which do not have interest, if the interest rate is prefixed, the above contracts will include usury.<sup>33</sup>

Regarding from riba dimension, "instalment purchase", "rent leading to ownership" and "debt purchase" and "delay fine (indemnification)" -which has interest on interest- should be gradually eliminated from banking activities.

Regarding transparency dimension, all nontransparent activities that create doubts and even provide the conditions for misuse of processes should also be pruned. Manual financial activities should be eliminated and replaced with information technology-based mechanisms. Inefficient, under-standard, undocumented operations that are in contradiction with bank's goals and interests, risky, unattractive, unsupervised and irresponsible activities should be pruned. Administration divisions with overlapping responsibilities and duties with overlapped administrative domains and mutual management of several managers on a single office should be pruned. Causes of job dissatisfaction and weakening personnel and autocratic management should be recognised and eliminated. Practical evidence of these subjects can be detected by conducting a comprehensive study of the bank.

# Safeguarding

As it was cited earlier, one of the stages of installing knowledge management system and according to prune and graft steps is to safeguard the newly grafted process. Therefore, to preserve the process from probable deviation from designed plan, some organisational mechanisms were defined to remove forthcoming imperfections and weaknesses to keep the bank from returning to its previous state. Regarding these matters, establishing a committee composed of experienced experts in this field is necessary. This committee as "Vigilance Rastin Banking Committee" is responsible for the virtue of implication, training, development and solving probable deficiencies and obstacles of Rastin Banking system, for five years under the supervision of central bank. The organisation and activities of this committee have been specified and written in Rastin Banking regulations. The Ministry of Science, Technology and Research will also define Rastin Banking and related financial services courses and degrees for universities such as financial marketing, assessing, supervision, intermediation and consultancy with observing the concepts and regulations of Rastin Banking system and its future reforms and developments.

In order to safeguard Rastin Banking system and the rights of depositors and entrepreneurs and all those who trust to the bank, all banking personnel, from top to bottom, at managerial and execution levels should implement the regulations of Rastin Banking system, and abstain any violation; otherwise, the wrongdoer will be encountered legally. Various violations and punishments and the method of investigation of violations of the employees have been defined in Rastin Banking regulations.

# References

- Accounting and Auditing Organisation for Islamic Financial Institutions (2008) (GSIFI) Governance Standard No. 7: Corporate Social Responsibility Conduct and Disclosure for Islamic Financial Institutions.
- Alvani, Mehdi. (2016) General Management, 53<sup>rd</sup> print. Nei Publication, Tehran. In Persian.
- Flynn, Anna E. (2004), Knowledge Management Process: The Care and Feeding of Knowledge Workers. 89<sup>th</sup> Annual International Supply Management Conference. Philadelphia, PA. http://www.ism.ws/files/Pubs/Proceedings/CBFlynn.pdf
- Bidabad, Bijan, (2004) Economic-juristic analysis of usury in consumption and investment loans and

<sup>&</sup>lt;sup>33</sup> Bidabad, Bijan, Non-Usury Bank Corporation (NUBankCo), The Solution to Islamic banking, Proceeding of the 3<sup>rd</sup> International Islamic Banking and Finance Conference, Monash University, KL, Malaysia, 16-17 November, 2005. http://www.bidabad.ir/doc/NUBankCo-en.pdf

- contemporary jurisprudence shortages in exploring legislator commandments. Proceedings of the 2<sup>nd</sup> International Islamic Banking Conference. Monash University of Malaysia. 9-10 September 2004. Reprinted in: National Interest, Journal of the Center for Strategic Research, Vol. 2, No. 1, winter 2006, pp. 72-90. Tehran, Iran. <a href="http://www.bidabad.ir/doc/reba-en.pdf">http://www.bidabad.ir/doc/reba-en.pdf</a>
- Bidabad, Bijan, (2005) Non-Usury Bank Corporation (NUBankCo), The Solution to Islamic banking, Proceeding of the 3<sup>rd</sup> International Islamic Banking and Finance Conference, Monash University, KL, Malaysia, 16-17 November. <a href="http://www.bidabad.ir/doc/NUBankCo-en.pdf">http://www.bidabad.ir/doc/NUBankCo-en.pdf</a>
- Bidabad, Bijan; Azarang Amirostovar, Saeed Abdollahi, Mahmoud Allahyarifard, Eskandar Pordel, Maryam Heidari, Alireza Shafiei, Mohammad Ali Pourbehrouz. (2012) Draft of Rastin Banking Bill, Bank Melli Iran. http://www.bidabad.ir/doc/rastin-banking-bill.pdf
- Bidabad, Bijan, Azarang Amirostovar, Saeed Abdollahi, Mahmoud Allahyarifard, Eskandar Pordel, Maryam Heidari, Alireza Shafiei, Mohammad Ali Pourbehrouz. (2012) Draft of Rastin Banking Executive Regulation, Bank Melli Iran. <a href="http://www.bidabad.ir/doc/rastin-banking-regulation.pdf">http://www.bidabad.ir/doc/rastin-banking-regulation.pdf</a>
- Bijan Bidabad, Saeed Abdollahi, Mahshid Sherafati, (2017) Enforcement of the Purports of Binding Banking Documents in Rastin Banking Part I. International Journal of Law and Management, Vol:59, Iss:1.
- Bijan Bidabad, Saeed Abdollahi, Mahshid Sherafati, (2017) Enforcement of the Purports of Binding Banking Documents in Rastin Banking Part II. International Journal of Law and Management, Vol:59, Iss:2.
- Buckingham, Marcus; Donald O. Clifton (2001), Now, Discover Your Strengths, Gallup Organisation Free Press.
- C.N. Parkinson, M.K. Rustomji, S.A. Sapre (2009), Great Ideas in Management, Vision Books.
- Clarke, Thomas (ed.) (2004) Theories of Corporate Governance: The Philosophical Foundations of Corporate Governance. London and New York: Routledge.
- Collins, James C. (2001), Good to Great: Why Some Companies Make the Leap...And Others Don't. Harper Business.
- Collins, Jim (2001), Level 5 Leadership, The Triumph of Humility and Fierce Resolve. Harvard Business Review, January.
- Conger, J. A., Kanugo, R., N. (2005). The Empowerment Process: Integrating Theory and Practice. Academy of management review, Vol. 13, n.3.
- Correia Ann; M. Sarmento Anabela (2003), Knowledge management: key competences and skills for innovation and competitiveness. The technology and HRM conference on the dual interaction between technology and human resource, France. 19-21 May.
- Dierkes, M., Ed., (2001), Handbook of organisational learning and knowledge, Oxford, University Press, Oxford.
- Fox, J, (2006). "Employee empowerment: an apprenticeship model." Barney School of Business, Hartford University.
- Groff, T.G., Jones, T.P., (2003), Introduction to knowledge management: KM in business, Butterworth-Heinemann, Oxford.
- http://ded.mo.gov/Content/Jim%20Collins,%20Good to Great Summary Principles%5B1%5D.pdf
- Kim, Sung Ho (2007). Max Weber. Stanford Encyclopaedia of Philosophy. Retrieved 2010.
- Koontz, Harold; Heinz Weihrich (1990), Essentials of Management, McGraw-Hill.

- Mirsepasi, Naser, (1996). Human Relations Management and Labor Management, Ghazvin Publication, 15<sup>th</sup> ed., in Persian.
- Oxford Dictionary. <a href="http://www.oxforddictionaries.com/definition/english/ethics">http://www.oxforddictionaries.com/definition/english/ethics</a>
- Rastin Banking documents: <a href="http://www.bidabad.ir">http://www.bidabad.ir</a>.
- Robbins, Stephen (2005), Organisational behavior, 11<sup>th</sup> ed., Prentice Hall.
- Santosus, Megan; Surmacz, (2005) The ABCs of Knowledge Management. Knowledge Management Research Center, http://www.cio.com/research/knowledge/edit/kmabcs.html.
- Serenko, Alexander; Bontis, Nick; Booker, Lorne; Sadeddin, Khaled; Hardie, Timothy (2010). A scientometric analysis of knowledge management and intellectual capital academic literature (1994–2008). Journal of Knowledge Management 14 (1): 13–23. http://dx.doi.org/10.1108/13673271011015534
- Whetten, David A., and Cameron, Kim S. (1991) Developing, Management Skills. 2<sup>nd</sup> Edition. New York: Harper Collins Publishers Inc.