Developing Knowledge Management in Strategic Framework of Mabena Model

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Abstract: This paper presents the overall framework of MABENA Model that is theoretically sound, yet practical and easily applicable. The approach is explicitly based on managing an organization's knowledge assets in order to create value. The framework has been developed as part of a holistic knowledge management solution within two applied research and technology development projects and was validated in many companies in broad categories such as financial services sector, IT sector and professional services sector. The framework builds upon and extends the knowledge-based view of the firm by explicitly treating knowledge assets as the main driver for innovation and learning and by consistently examining the links of knowledge assets with all the main components of a strategic approach. In this paper, we seek to present Mabena Model and then it introduces applications of knowledge management in this model. Finally, Hybrid model explains Strategic Framework of Mabena Strategic Management Model in knowledge base view. It is hoped that this paper will help managers to implement different corresponding measures. A case study is presented where this model measures and validates at the Petroshimi, Darupakhsh, keshtirani, Pegah and Kalem companies.

Key words: Strategic framework · Strategic management · Mabena, knowledge management · Knowledge-based view

INTRODUCTION

In a world that is becoming smaller and smaller due to internationalization and globalization trends and forces, international companies compete at an increasingly competitive level. The changes in the business environment occur at an extremely fast pace, so the multinational companies (MNCs) constantly have to upgrade their core competencies, resources and capabilities in order to develop and sustain their competitive advantage [1, 2].

The main drivers of globalization process are the increased deregulation of world trade, rapid development of new technologies and large privatization processes worldwide [3]. Consequently, this has boosted the rise of large international companies with global presence. The globalization of the business environment has faced companies with several enormous challenges, the most important of which are being Internationalization, market maturity and increased customer power. Developed countries still represent the most important markets for most of the large MNCs. These markets, however, are becoming increasingly mature and saturated. More often, the markets are characterized by over-capacity, low margins and lack of growth, as well as shorter product life cycles. This means that the competition is becoming more intense and companies can grow primarily at the expense of the competitors [4-6]. The processes of internationalization and globalization and trends mentioned above, are applicable to auto industry probably to a greater extent than many other industries. Companies operate and sell their products far away from their home. Production plants, sales and distribution networks are widely spread geographically. Companies compete for the share at the existing markets by introducing new products, offering better services and guaranties. They make huge investments in emerging economies and markets, some trying to get higher benefits of being first, others being more careful and waiting for the proper moment of entrance [7].

Firms can be viewed as networks of knowledge. Organizational forms provide the way in which firms decide how to govern the interaction among actors within the network. Firms may decide to use markets and prices, hierarchy and internal labor markets to create and redistribute rents. As the content of labor is increasingly

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knowledge-based, we expect that organizational forms will evolve reflecting changing incentives. Yet, the many effects of evolving nature of jobs on efficient organizational forms are still ambiguous and partially counterbalancing. To address the issue on how different incentives may tilt the evolution of organizational forms on to different trajectories, we present a first implementation and initial experiments with, an agent-based model. The model captures the dynamic of employee skill sets, firm performance and organizational form adaptation through the personal process of selective hiring, firing, firm creation and bankruptcy.

In many organizations, proponents of knowledge management struggle to gain its acceptance by senior management. The rhetorical question “is knowledge management tasked with: managing the knowledge that an organization has; or managing the knowledge that an organization needs?” is posed to knowledge management practitioners. The answer to the question lies in a theoretical model developed through a comprehensive review of literature covering the topics of strategic management, the knowledge based view of the firm. Through the identification of the nexus between strategic management and knowledge management, this research will provide knowledge management practitioners with justification for knowledge management initiatives. The aim of the research is to assist knowledge management proponents in their struggle to gain its acceptance by senior management.

The paper has the following structure. Section 2 is about strategic management. Section 3 describes Mabena strategic management model. Section 4 deals with theoretical frameworks of strategy. Section 5 describes a knowledge-based view of the organization. Section 6 introduces Research methodology and Hybrid model (strategic framework of MABENA strategic management model: knowledge base view). Section 7 gives discussion and section 8 presents conclusions. Finally, section 9 is devoted to the future extension.

Strategic Management: Strategic management is the process of specifying an organization’s objectives, developing policies and plans to achieve objectives and allocating resources to the plans. It is the highest level of managerial activity, usually performed by company’s chief executive officer and team. An organization’s strategy must be appropriate for its resources, circumstances and objectives. This process involves gaining strategic advantages in accordance of business environment. A good corporate strategy should integrate organizational goals, policies and actions cohesively. Strategic management operates on several time scales. Short term strategies involve planning and managing for the present. Long term strategies prepare company for preempting the future. The main elements of strategic management are [8, 9]: business environment, complexity. Strategic management affects strategy formation and implementation and planning at various levels, conceptual and analytical processes. In general terms, there are two approaches of strategic management: industrial approach and sociological approach. Strategic management theories can also be divided into those that concentrate mainly on efficiency and those concentrating mainly on effectiveness. Strategic management techniques can be viewed as bottom up, top down or collaborative. Strategic management is the broadcast, applying to all parts of the firm. It gives direction to corporate values, culture, corporate and mission. Strategic management approach of this paper is industrial approach and it will be present as a Mabena model.

Mabena Model: According to the trend of the country toward competitive markets and free economy, it is vital for Iranian active organizations to take the highest advantages from existing opportunities and prevent threats following clear plans. Developing long-term plans with strategic perspective, guarantees the healthy progress of a firm in its life-cycle and helps entrepreneur executives to make strategic decisions with the aim of guiding units properly. The importance of mentioned items beside deficiencies found in CMS model resulted in defining improvement projects of CMS model. These improvements upgraded CMS model and changed it into HCMS (Mabena) model [8, 9, 10]. It is important to note that the differences between HCMS (Mabena) and CMS are wide and these changes are in both model elements and element’s analysis methods and also in logical relationship among model elements. Figure 1 shows the HCMS (Mabena) model roadmap:

It is possible to introduce Mabena model elements as follows. However, it is important to mention that Mabena model is dynamic and the stages do not necessarily imply sequence of activities. To obtain a full understanding of Mabena model, it is possible to purchase the book of Mabena model or call Mabena firm:
Fig. 1: Mabena model

**Entering, Recognition and Commitment Generation:** In this stage, the consultant becomes responsible for developing and designing a strategic management system in a formal process. In this stage, the steering committee of strategic planning is shaped and commitment to the planning process is generated.

**Visioning:** In this stage, based on Mabena approach in developing vision statement, the vision of the organization is specified. The ideal, acceptable and challenging prospect of organization is identified.

**Developing Mission Statement:** This activity is perhaps the most important element of Mabena model in which major activities and direction of organization's strategic plan in its first period of planning is identified. There is a standard checklist of mission statement evaluation in Mabena model.

**Designing the Overall Structure of Organization Score Card:** In this stage, scorecard perspectives of the firm are specified based on its vision and mission. Score card structure provides a basis for setting goals in a clear framework.

**Setting Goals in Scorecard Perspectives:** In this stage, it is necessary to define goals in each of scorecard perspectives according to mission and vision. This process in Mabena model is accomplished by a logical method and results in designing the scorecard framework and strategy map.

**Critical Success Factors (CSFs):** In this stage, critical success factors (CSFs) of the organization is identified and derived by means of a model called "CSF method" which is a systematic method of CSF identification. This stage also requires a full training of the senior management team and committee members with CSF principles and the model. According to CSF method, it is necessary to have some structured interviews with organization management team.
Internal Factors Analysis with EFQM Approach: In this stage, EFQM approach (which itself is part of strategy formulation process in Mabena model) is used for identifying strengths and area of improvements. Management team and committee members are trained about fundamental concepts of EFQM excellence model and then, the appropriate method of self-assessment is selected based on firm maturity against EFQM fundamental principles. Finally the self-assessment is completed beside its training needs and requirements. Consultant plays the role of a facilitator.

Organization Diagnosis with Life-cycle Approach: In this stage, due to extreme importance of life-cycle concepts in formulating appropriate strategies (so that strategies fit well with location of firm in its life-cycle), the location of firm is identified in its life-cycle using suitable technique. This stage not only reveals some strengths and weaknesses, but also may correct and review the strengths and weaknesses identified in the previous stages.

Identifying Core Competencies of Organizations: Core competency-a resource based approach in strategic plan- is of great importance in strategic plan. Recently, Mabena firm, has designed a model to identify core competencies of organizations. This model does not view core competencies isolated and is aware of the effects of CSFs and mission.

External Environment Analysis (Remote Environment) with PEST Analysis: Following some studies, PEST model for analyzing opportunity and threats of general environment of organizations, developed to PEEST model. PPEST analysis is used as a part of organizations external analysis to identify opportunity and threats in Mabena model.

External Environment Analysis (Near Environment) with Porter Framework: Porter framework (Porter five forces model) is used in Mabena model to identify opportunities and threats posed by external near environment. Parameters of each of these five factors are defined in Mabena model.

Stakeholder Analysis: Stakeholder theory is used in Mabena model beside mentioned techniques as a supplementary in external and internal analysis. In Mabena model, there is a four step procedure for this purpose.

Swot Matrix Formation: One of the major techniques of strategy formulation in Mabena model which uses the results of a comprehensive analysis of internal and external factor analysis, is forming SWOT matrix.

Diagnosing Organizations with WCM Approach: WCM approach is also applicable in Mabena model as a tool of organization diagnosis and formulating strategies relevant to world class manufacturing principles for those organizations which have paid attention to these concepts in their mission or vision statements.

Formulating Master Strategy with IEFE Matrix: Master strategy in Mabena model is determined by Internal and External Factors Evaluation (IEFE) matrix. This method is based on quantifying strengths, weaknesses, opportunity and threats identified in previous stages.

Defining Key Performance Indicators (Metrics) for Goals and CSFs: Because of strategic importance of goals and CSFs identified in previous stages and the necessity of evaluating the achievement of goals, in this stage, KPIs are identified for goals and CSFs based on BSC principles in a systematic method. Before this, we should assess final strategies with previously specified goals. This results in preparing strategy map.

Setting Objectives: In this stage, goals and CSFs are quantified using complementary methods such as competitor study, benchmark and using the results of based line data with KPI tool.

Evaluation of Threats and Opportunity Profile (ETOP): Prediction of external factors is accomplished by analytical methods and applying credible references such as EIU.

Strategic Advantage Profile (SAP): Another required activity to prepare a basis for strategy prioritization in Mabena model, is predicting internal factors trends with SAP tool.

Quantitative Strategic Planning Matrix (QSPM): QSPM matrix is used in Mabena model to prioritize strategies. In addition, one of the modifications to this matrix is entering the results of stakeholder risk analysis.

Establishing Tactics, Action Plans and Projects: Operational details of strategies are expressed in form of tactics, action plans and projects and this provide a basis
to identify functional strategies. Resource allocation and projects time table is performed regarding budget limitations and strategy prioritizations.

Theoretical Frameworks of Strategy: Strategy is a method/plan adopted by a firm to balance its external environment with its internal capabilities. Various management consultants and thinkers have defined the process of strategy in various ways. Porter’s model focuses on defining a firm’s strategy in terms of its product/market positioning. Building on Porter’s notion of competitive advantage, the resource-based view of strategy argues that the resources and capabilities of an organization can be a source of competitive advantage if they possess certain characteristics of being rare, durable and difficult to imitate, flexible and durable. If firms have resources with these characteristics, they can position themselves strategically on the basis of these resources and capabilities. Most of the tangible resources may not have these characteristics. Hence organizations have to focus on intangible assets to gain a source of competitive advantage. Many authors have stressed on the strategic importance of intangible assets for firms to achieve competitive advantage [11-13]. Teece et al (1990s) in their paper on "dynamic capabilities" emphasize on knowledge as a source of competitive advantage through the definition of the term. They define the term dynamic capabilities as follows: “The term ‘dynamic’ refers to the shifting character of the environment, certain strategic responses are required when time-to-market and timing is critical, the pace of innovation is accelerating and the nature of future competition and markets is difficult to determine. The term “capabilities’ emphasizes the key role of strategic management in appropriately adapting, integrating and re-configuring internal and external organizational skills, resources and functional competencies toward changing environment”. The emphasis, from this definition, is on adapting to the changing environment, through organizational learning and innovation, for which knowledge is the base. This knowledge based view of strategy, which emphasizes on building and sustaining competitive advantage on the basis of the knowledge resources and capabilities of a firm has gained currency due to the following reasons [14,15].

- Tacit knowledge gained through years of experience is not easily replicable.

And hence any strategy based on market and product mix or resources and capabilities may not provide the firm with a sustainable competitive advantage. The importance of integration of knowledge available in the organization is also stressed upon by authors like Huff, who argue that managers look upon collective knowledge and experience in constructing mental models of strategic issues and terms this as 'strategic frames' and any strategic decision is a combination of multiple strategic frames. There are ninth approaches for analysis of strategic management models in organizations [16].

Knowledge as a Strategic Resource: The strengths and weaknesses side of SWOT has been significantly more developed in terms of the role of knowledge and is coming to be referred to as the knowledge-based view of the firm [18-20]. As resource-based view suggests having unique access to valuable resources (e.g., the deed to a diamond mine or a particular store location), it is one way to create competitive advantage. However, not all organizations are so lucky. Most competing organizations hire from the same labor pools, use similar raw materials and have access to the same information technology, energy resources, plant, equipment and other traditional resources. Even if a resource is unique, competitors might imitate it or develop an adequate substitute.

Knowledge as a Strategic Position: The external side of SWOT as exemplified by Porter’s work is often referred to as the strategic-positioning school. By that we mean that strategy can be represented by the competitive position of a firm in an industry [21], as opposed to the specific bundle of resources and capabilities it controls. There can be many factors on which firms compete in particular industries (e.g., price, service, location, reputation, time to market, etc.) and these can form the dimensions by which to identify traditional strategic positions or regions in a strategic space.
A Knowledge-based View of the Organization:
The traditional neo-classical economic perspective, views organizations as rational entities, choosing amongst a set of feasible alternatives in order to maximize utility given internal and external constraint [22, 23]. This interpretation of the organization is static in the sense that the distribution of knowledge is given and the model does not explain how knowledge is created and changes over time [24]. This static perspective has influenced organizational theory in viewing the firm essentially as an information processing machine [25] and strategy as a game of positioning and competition [23]. The knowledge-based view of the firm assumes that organizations operate in dynamic environments, where markets and technology are changing fast and in unpredictable ways. It also assumes a highly competitive setting, with firms functioning within ecologies of learning [20, 21], interacting and adapting to the environment. Organizational capabilities or competencies are understood as clusters of knowledge sets and routines that are translated into distinctive activities. Dynamic capabilities are those that enable an organization to build, integrate and reconfigure internal and external competencies [23] thus matching emerging environmental opportunities. The knowledge that is embedded in capabilities is a complex and dynamic combination of individual tacit knowledge and more explicit forms of knowledge. Individuals operate within organizational contexts to share and use their complementary specialized knowledge [22]. In a nutshell, the firm is a locus for knowledge creation and application. The development of the knowledge-based view thus requires a richer understanding of what is the knowledge of the organization. Researchers have begun constructing a knowledge-based view of the firm that builds on the resource-based view [21]. These researchers suggest that knowledge is the key resource—and perhaps the only resource—capable of creating sustainable competitive advantage [22, 23]. In the knowledge-based view of the firm, internal resources and Capabilities, such as worker know-how, designs, customer knowledge and efficient processes, are keys to achieve sustainable competitive advantage. Knowledge is an especially valuable category of resources and meets Barney’s (1991) criteria for resources capable of providing sustainable competitive advantages. Knowledge resources are highly valuable, unique to the organization, difficult to copy and substitute [15]. A firm’s capabilities for creating and sharing knowledge come from several factors including: 1) The special facility the firms have for creation and transfer of tacit knowledge [19, 22]; 2) The organizing principles by which individual and functional expertise are structured, coordinated, communicated and through which individuals cooperate [17] and 3) The nature of organizations as social communities [18]. Organizations able to manage knowledge more effectively than their competitors will be able to achieve competitive advantages.

Research Methodology and Hybrid Model: It was decided to adopt a case study approach for this paper as there is little existing research on analysis of Mabena model. It has been based on the descriptive Research. This descriptive type research has been carried out using the questionnaire as the research tool for gathering the required data. Data gathering involved both reference material and a questionnaire survey. Sampling was simple random sampling and the data gathering instrument was the questionnaire. In December 2008 a request for interviews and questionnaires was sent to a number of the strategic managers (15 persons, 80% Male and 20% Female) and strategic staff (45 persons, 60% Male and 40% Female) in the Petroshimi, a number of the strategic managers (30 persons, 60% Male and 40% Female) and strategic staff (60 persons, 70% Male and 30% Female) in the Darupaksh, a number of the strategic managers (25 persons, 45% Male and 55% Female) and strategic staff (35 persons, 60% Male and 40% Female) in the keshitirani, a number of the strategic managers (10 persons, 70% Male and 30% Female) and strategic staff (40 persons, 60% Male and 40% Female) in the Pegah and a number of the strategic managers (20 persons, 80% Male and 20% Female) and strategic staff (30 persons, 60% Male and 40% Female) in the Kaleh company. Prior to the interview and fill the questionnaire, the author explained the purpose of the research and made it clear that this information would be in the public domain, so any confidentiality concerns could be noted. The interview and questionnaire, from December 2008 to May 2010, lasted ten hours per week. The interview and questionnaire was semi-structured in nature, starting off with general questions on the company background, knowledge management and Mabena model to put the respondent at ease. Detailed questions based on the Mabena model and related frameworks were then used to gather information, with other questions included so as not to limit the information collected. Care was taken not
to produce expected answers and flexibility was allowed in the process which enabled an effective two-way dialogue to emerge. To ensure internal validity the interview and questionnaire was transcribed and sent to strategic managers and staff in the Petroshimi, Darapkhish, keshtirani, Pegah and Kaleh companies for check that no commercially sensitive information had been included.

Within a review of Mabena model that comprises a knowledge-based view of the firm, a distinction is drawn between viewing knowledge as resource and a process of ongoing social construction [40]. This paper is considered a newer and challenging epistemology that seeks to understand knowledge as socially constructed in context. Given this paper’s attention to the importation and impact of reengineering with a hospital we are encouraged to utilize insight from both perspectives whilst being most sympathetic to this newer critical perspective and the particular contribution of Cook and Brown, (1999). Nonaka’s work with Takeuchi (1995) and Tysam and Byosiere (2001) theorize knowledge creation as a multi-layered dynamic social process involving interactions between individuals employing explicit and tacit knowledge. The former is expressed and experienced as formal objective knowledge, specified and context free, for example, data and formulae. Tacit knowledge is more subjective, personal, rooted in action, procedures and routines. Interaction (‘Ba’) is the foundation of knowledge creation, providing the context or space in which knowledge is shared, created and utilized. Knowledge assets are shared, converted and amplified in a knowledge spiral involving processes of socialization, externalization, combination and externalization (SECI) [19,20]. Though sharing the same overall perspective on knowledge Cook and Brown (1999) by contrast, regard tacit and explicit knowledge at both individual and group levels as distinct, irreducible forms of knowledge and hence reject the idea of knowledge creation as a process of conversion between types of knowledge. They also contend that not everything individuals do is explicable in terms of the knowledge they possess and that human action does epistemic work of its own. Their theory of new knowledge creation is thus articulated as a ‘generative dance’ whereby new knowledge is created through the use of knowledge as a tool of knowing in situated interaction within the social and physical world (1999,383). Knowledge itself does not enable knowing but does provide tools to use in addressing a problem at hand, in interacting with it. Accomplishment requires interaction between knowledge we possess and the activity, with the activity itself as a form of knowing because it is action or practice doing its own epistemic work distinct from the knowledge we possess. Cook and Brown’s theory of knowledge is thus rooted in understanding the interaction between knowledge possessed and materials associated with social and physical world. This epistemology is one that suggests which we can do and which we can know are not discovered through abstract experiment but through concrete interaction with social and physical context or circumstances as a given time. In this way we encounter ‘facilities’ and ‘frustrations’ that are properties not of the world but our interactions with it. The concept of ‘dynamic affordance’ directs attention to situations, materials or designs as resources that afford doing something in interactions with them. Without the dynamic affordance of that interaction there is no learning or enactment of what is learned. Dynamic affordance is what becomes possible when knowledge is used as a tool in the context of situated activity. Interaction dynamically affords both the acquisition of knowledge and the use of knowledge. Once acquired it does epistemic work that knowledge alone cannot do. Effective interaction with the world requires “honoring” its constraints, discovering what is possible and impossible. Dynamic interaction with the world opens up the realm in which knowing takes place: the activity of addressing facilities and frustrations dynamically affords knowing and plays an enormous role in how knowledge (tacit and explicit at individual and group levels) is generated, transferred and used in organizations. This reciprocal interplay between knowledge and knowing bridges epistemologies of possession and practice which is at the heart of the ‘generative dance’. Combining insight from both perspectives, points to a need for this study to address interaction between reengineering as explicit knowledge and organizational context. In particular at how individuals and groups may receive a reengineering change program in the context of their skills, experiences, sensitivities and negotiate what this means for them, their functioning, further relations and action. Also, how interaction is mediated through organizations’ embedded structural and relational dynamics [22,23,24].

Figure 2 presents knowledge based view of Mabena model. It is described in relationship between knowledge management and Mabena strategic management model in organization.
Mabena model leads organizations to the knowledge based organizations; figure 2 presents the organizational knowledge creation process. It is a spiral process starting at the individual level, working through the team and ultimately crossing the boundaries of the organization. In this spiral process, the socialization within the team plays a critical role in creating new tacit knowledge that can lead to creating a competitive advantage.

RESULTS AND DISCUSSIONS

The aim of this paper is to develop effective model for strategic management of organizations by knowledge based view. In order to use the results of Mabena model, it is required to be understandable by organizations. For the matter of understandability we distinguish symbolic and sub-symbolic methods. This paper presents useful method, applied in our case to Iranian organizations, based on the knowledge management and organizational learning for implementation of organizational strategies. The method presented in this paper is tested in many organizations and the results are approved by them. According to the calculated data we have: The mean square error reached to its minimum value using the above function: 0.12, The $R^2$ value reached to 91% which indicates the model validity, The Cronbach alfa value is 94.6%, confirming the validity of the model. In addition, interviews with the experts based on the Delphi method confirmed the above values in 97% of the cases. The important outputs of this model in companies are as follows;

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<tr>
<th>Approach</th>
<th>Satisfaction index%</th>
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<tr>
<td>Proposed model</td>
<td>96</td>
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<tr>
<td>Porter</td>
<td>87</td>
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<tr>
<td>Hax</td>
<td>78</td>
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<td>Daivid</td>
<td>63</td>
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<tr>
<td>Armastrang</td>
<td>59</td>
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- Creating climate for sharing knowledge and improvement of process time and cost
- Creating intellectual property rights in organizations
- Developing knowledge mission and vision in organizations.
- Developing knowledge management process in Mabena strategic management model

The results gained from the suggested model in comparison with the results of the other models showed. On the contrary, our paper includes comprehensive tests and comparing the results with all the rival models, as shown in Table 1. As can be seen from the results, the Mabena model incurs the optimum possible rank.

CONCLUSION

In this paper we explored the possibility to build a Mabena model on knowledge based view. The model is developed as a replacement of any organizations of Iran. There is a major difference among existing models and Mabena model: Mabena model is very suitable for Iran because has been developed according to Iranian organization parameters.
This paper describes also Mabena that is created to assess knowledge worker attributes.

In this paper, several objectives have been concerned. First, Mabena model has been created, which can be used in a knowledge worker development. Second, the suggested model was tested in the Petroshimi, Darupaksh, Kashirani, Pegah and Kalseh companies. The validity of the model was tested based on the Face Validity approach and other statistical analysis methods. Also the suggested model was compared with other models like Porter, Hax, Daivid and Amestrang models. The results of this comparison showed that our method is the most suitable model for strategic management; in other words, it entails the max satisfaction rank. The above mentioned research has been carried out for the first time using the introduced tool of the knowledge management in strategic management models which is important by itself. Third, Mabena has been created to help organizational managers.

**Future Research:** The future extension of this paper is conducted to improve the Mabena in the following aspects:

- Equipment of the Mabena model to have a more advanced expert system.
- Supporting the Mabena with organizational memory.
- Dynamic analysis of Mabena model.
- Incorporating the estimation of Markov probabilities for success or failure for implementation of Mabena model in organizations before real implementation.

**REFERENCES**


