Studying the dynamic model of the competitive intelligence in insurance industry considering time factor

1Dr Moghadaseh Mohamadian, 2Dr Sedigheh Saemian, 3Farzaneh Shahrorkhy, 4Hamid Mirmoeini

1-2Business Management Group (International Marketing), Management and Accounting Department, Shahid Beheshti University, Tehran, Iran.
3Ph.D Candidate in Business Management-Marketing, Faculty of Management and Accounting, Shahid Beheshti University, Tehran, Iran,
4Ph.D Candidate in Business Management-Marketing, Faculty of Management and Accounting, Shahid Beheshti University, Tehran, Iran,

ABSTRACT

Background: Excessive accumulation of knowledge at competition levels is one of the features of new organizations so that increasing the amount of information in the organizations and the necessity of its use in organizational decision lead to the emergence of a phenomenon called competitive intelligence in the last two decades. Competitive intelligence is considered as a strategic management tool and one of the fastest development areas of business. It is also considered as an important technique in the creation of competitive advantage. With such a background, the presenting investigation was aimed to study design and explain a dynamic model of the competitive intelligence in order to achieve the sustainable competitive advantage in insurance industry from 2008 to 2013. The research methodology was practical and fundamental in terms of objective, exploratory-descriptive in terms of method and nature and a semi-experimental one method of implementation. The population consisted of insurance industry experts including senior and middle managers of the insurance company. The sampling method was purposeful, and the sample size method based on maximum precautionary estimation was employed in order to determine the sample size of the population considering the limited access to the sample experts. The measurement tool in the present study was the standard questionnaire of Simon et al. (2009). The validity of the questionnaire was confirmed using confirmatory factor analysis and interviewing with the experts of Asia insurance company and interviewing with university experts, advisors, and supervisors. The reliability was checked based on Cronbach’s alpha and system dynamism tests. The results demonstrated a high reliability of the measurement tool.

INTRODUCTION

Information explosion and globalization lead to the rapid development of information access and the sharp increase in competition in the field of business. This has made the companies to monitor the business environment, smart information acquisition, and decision-making and rapid response towards opportunities and threats. Future achievement in the field of business is for organizations that have more knowledge, insight and awareness towards themselves and competitive environment. Hence, the secret to survival and success of the organizations in today’s competitive environment is to create and maintain sustainable competitive advantage. According to Porter, competitive advantage is the values offered by the company to customers so that these values are higher than the costs of the customers [19].

The issue is that competition nowadays occurs globally and globalization collapses protection walls of countries of national industry one after another. In such a circumstance, countries and companies are able to exploit of global market opportunities that have the ability to create and develop a competitive advantage. On the other hand, companies need information in order to provide a higher value and customer satisfaction in every field. They should have different information of their rivals, dealers and other active agents in the market in order to achieve competitive advantage [28]. Competitive advantage consisted of a set of factors or abilities that always lead the companies to show better performance than their rivals. On other words, competitive advantage is a composition of factors that make the company more successful in an organizational competitive environment, and the rivals cannot imitate them easily [4].
Therefore, marketing Managers in today’s competitive world should be aware of their rival’s reaction in order to have more competitive advantages than they should. The importance of this issue will be clear when we realize that lack of precise information in this field is the major reason of inefficiency and lack of profitability in companies. In fact, the failure of marketing programs and strategies in a company is largely affected by lack of accurate recognition of how competitors behave and lack of employment of knowledge management system. Therefore, an organization is able to gain a competitive advantage and overcome its competitors in the market through the awareness of its competitor’s marketing activities and comparing it with its activities and development of special competitive mechanisms.

Excessive accumulation of knowledge at competition levels is one of the features of new organizations so that increasing the amount of information in the organizations and the necessity of its use in organizational decision lead to the emergence of a phenomenon called competitive intelligence in the last two decades. Competitive intelligence is considered as a strategic management tool and one of the fastest development areas of business. It is also considered as an important technique in the creation of competitive advantage [20]. Competitive intelligence, which is also called business intelligence, was developed in the context of business in 1980. Although the main source of it goes back to the decades before 1980, the main idea came from Michael Porter in order to use competitive intelligence techniques to analyze the rivals and industries. One reason for the emergence of the knowledge is explosion of information that has been developed through increasing information and reflection in the proliferation and dissemination of global commercial database. Another reason for the growth of the knowledge might be the nature of the period we are living in; time for major changes in the political and social globalization, increasing the speed of business, increasing global competition, more invasive competition and rapid technological change [7].

In fact, competitive intelligence is the ability of a systematic process of collecting and analyzing environmental data and information related to competitors, customers, suppliers, industry and market trends and future behavioral patterns. It is known as the art of attracting and transferring knowledge from outside of an organization and environment according to specific rules and certain regulations to the organization for protecting from competitive threats, identifying and exploiting potential opportunities and building the future [11]. In fact, competitive intelligence is purposeful and coordinated monitoring of competitor activity and identifying them within the framework of the target market, so it is the process of employing ethical and legal methods to discover, provision and delivery of required information to decision makers who want to enhance their business competitive potential. It can be said in the definition of competitive intelligence that it is gathering information about the environment and competitors intelligently in order to create and maintain competitive advantage [14]. Intelligent systems monitor the organization’s environment, take the events and phenomenon under their supervision and provide required knowledge. Therefore, competitive intelligence is a systematic process for acquiring the knowledge of rivals, evaluation of them in order to simplifying organizational learning and improving, isolation and targeting them in the context of the industry, market and customers [13]. Competitive intelligence cannot be considered aligned with other systems such as business intelligence and knowledge management. Therefore, competitive intelligence is beyond all of them so that business intelligence, knowledge management and some of other knowledge-based systems can be considered in the framework of competitive intelligence [23]. In fact, competitive intelligence is as an infrastructure that the foundation of competitive advantage is based on it and the strength of these systems provides sustainable capacity and capabilities for competitive intelligence [9]. A summary of previous researches in this area is mentioned in table 1.

**Table 1: Summary of previous research.**

<table>
<thead>
<tr>
<th>Researchers</th>
<th>Related Study</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mohr, 1989</td>
<td>How to create competitive intelligence in organizations</td>
<td>Indices of successful implementation of business intelligence in organizations: identifying management requirements, recruitment of qualified personnel, data collection, applying analytical procedures, formulation of appropriate strategies</td>
</tr>
<tr>
<td>Azevine, et al, 2006</td>
<td>Real time of business intelligence for adaptive entrepreneurship</td>
<td>Application of business intelligence at the strategic level of insurance industry, helping to increase the overall efficiency of the organization and optimizing processes</td>
</tr>
<tr>
<td>Dishman &amp; Calof, 2008</td>
<td>Competitive intelligence: a multi phase approach to marketing strategies</td>
<td>The most important problems in order to develop competitive intelligence in organizations: shortage of skilled labor, insufficient participation of executives and legal and ethical issues</td>
</tr>
<tr>
<td>Muller, 2009</td>
<td>Presentation of competitive intelligence model in South Africa car industry</td>
<td>The components of competitive intelligence: information technology, pay attention to the organization’s inner and outer processes and management approach to innovation and creativity</td>
</tr>
<tr>
<td>Mehr and Khodadad Hosseini, 2005</td>
<td>Designing the competitive advantage model of automotive industry in Iran</td>
<td>The dimensions of competitive intelligence: networking capabilities, process-orientation, organizational capabilities such as concentration, learning, creativity and development</td>
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New technologies are being developed at enormous speed so that insurance companies are looking for strategies in order to survive in the turbulent and chaotic field. Insurance companies should accept that their
philosophy of life has changed and it does not mean of achieving sustained profitability any more. Since companies nowadays do not run their business traditionally and away form new rules of the game, they should adapt themselves with the rules in order to stay in the competition. Therefore, new technologies such as competitive intelligence are an inevitable necessity and requirement in insurance companies.

When an insurance company wants to compete successfully in the market, it is required to know a lot of information on rivals, their products and the way they react to each decision that the company may adopt. All actions of competitors should be reviewed precisely for direct or indirect references to purposes, motives and goals. Competitive researches are aimed to collect information on rivals in order to avoid being surprised by them and identify opportunities [10]. Collection and evaluation of information on rival insurance companies play an important role in strategies formulation. The more a company obtains information from competing firms, the more effective and successful strategies are likely to be developed. Therefore, realization of rivals and reaction against probable behaviors are considered as a special aspect of marketing activities, and it is necessary for insurance companies to implement an effective program named competitive intelligence. In fact, the true value of competitive intelligence is management support with organizational tools in order to realize the fact that what the rivals want to do and not what they do [18].

Insurance company reduces risk and lack of environmental assurance in the fields of property, business and entities. Experts believe that intensification of competition is predictable due to the inclusion scope of the insurance industry in all dimensions of human beings. It should be noted that different economic sectors are effective in sustainable development and growth through interaction. In the meantime, the insurance industry can provide and maintain public and private capital in addition to comfort and security for all individuals in the society with providing financial services and logical connection with other sectors of the economy such as industry, agriculture and services through the collection of low insurance premium from the policyholders and different economical sectors and timely payment of compensation.

Insurance companies are one of the most dynamic and important institutions in all countries. These companies are very important due to their features and benefits. Insurance companies bring about peace and welfare in societies with the transfer of risks from the societies to themselves. Moreover, they invest the insurance premiums in investment companies or bourse, and lead to economic growth. In order to provide good service to policyholders, these companies should be closely related to insurance buyers to make themselves aware of their needs and provide proper insurance for the insurance buyers, so they look for more precise information about customers. In such a situation, predicting the future and decision-making is considered the most sensitive part of administrators and insurers. Therefore, by turning to information technology and the use of intelligent information systems such as competitive intelligence, insurance companies seek to increase profitability and customer satisfaction and competitive advantage as a result through effective decision-making [27]. Today’s business environment has created an environment with a high degree of uncertainty and complex effective mechanisms by using the characteristics of complex changes and developments in technology that lead to the formation of new components and frameworks. If the functions of strategic planning are known as the empowerment of managers to create competitive advantage in today’s turbulent world, the necessity of paying attention to issues of organizational competition and customer preferences will be inevitable. Hence, according to the mission of the insurance industry in line with the financial, economical and product markets of the country, the use of competitive intelligence indices in order to increase market intelligence and identify new areas of the influences of insurance will be important. Therefore, considering what has been mentioned, we are aimed to answer to the following question. What is the dynamic model of competitive intelligence in insurance industry in order to achieve competitive advantage considering time factor?

Operational model of the research:

The basic model was figured according to the research background and the dimensions and components were extracted, then some interviews was conducted with academic and insurance experts commensurate with the extracted dimensions and some variables removed and some variables added. The final variables of the research are mentioned in table 2.

Table 2: removed, endogenous and exogenous variables of the dynamic model of competitive intelligence.

<table>
<thead>
<tr>
<th>Endogenous variables</th>
<th>Exogenous variables</th>
<th>Removed variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. to train how to find key information</td>
<td>1. Familiarity with diverse cultures</td>
<td>Creation of specialized knowledge-sharing networks</td>
</tr>
<tr>
<td>2. staff training</td>
<td>2. Sense of belonging and commitment of staff</td>
<td>Staff self-awareness</td>
</tr>
<tr>
<td>3. to publish information on competitive intelligence within the organization</td>
<td>3. Uncertainties in the data</td>
<td>To educate employees on what information they are looking for in the negotiations and trade fairs</td>
</tr>
<tr>
<td>4. to motive staff</td>
<td>4. lack of information sources</td>
<td>Variety of ways to present the findings of competitive intelligence</td>
</tr>
<tr>
<td>5. strategic planning of competitive intelligence</td>
<td>5. shortage of expert labor</td>
<td>To use the analytical model of rivals</td>
</tr>
<tr>
<td>6. to analyze plans and strategies</td>
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Finally, the conceptual model of the research is presented in figure 2 according to the variables in table 2.

Fig. 1: final dynamic model of competitive intelligence.

Methodology:
The research methodology was practical and fundamental in terms of objective, exploratory-descriptive in terms of method and nature and a semi-experimental one method of implementation. The present study is aimed to identify valid variables in the model and dynamic relationships among these variables by using focal group of experts and confirmatory structural equation, and dynamic relationships is defined and tested after the verification process. In the present research, in addition to gaining an overview of relevant variables, an
investigation is conducted towards the dynamic relationships among these variables. The following steps are passed for modelling in the present investigation.

Problem expression and boundary selection for the dynamic model of competitive intelligence and competitive advantage

Identifying key concepts and variables affecting the competitive intelligence in insurance: main variables including variables collected from studying research background and experts’ opinions

Development of dynamic hypotheses: outlining different scenarios and relationships between variables

Development of simulation model for simulating using Vensim software that is used for simulating dynamic models, determining structure, behavioral relationship and representation of plausible and possible model behavior and the relationships between the variables are simulated after figuring cause and effect and flow and state models.

Implementation of model:

Checking the validity of the model: the validity of the model is evaluated using sensitivity analysis methods. Some scenarios are presented in the sensitivity analysis that shows the variation of the model in the predicted circumstances.

The population consisted of insurance industry experts including senior and middle managers of Asia insurance company. The company is one of the oldest and largest insurance companies in Iran and allocates a vast volume of insurance activities to it. The population is used to determine the key factors of competitive intelligence and behavior test and the structure of the simulated model with the approach of system dynamics. The sampling method of the research is purposeful, and the sample size method based on maximum precautionary estimation was employed in order to determine the sample size of the population considering the limited access to the sample experts.

In the present investigation, library and internet resources including books, articles and English and Persian theses were used in the theoretical principles formulation for the confirmation of competitive intelligence variables and creation of scientific framework. Moreover, expert opinions based on focal interview relying on Delphi method according to the researcher made questionnaire was used in the test and development of basic theoretical framework of research model. Eventually, the methods of inferential statistics and system dynamism were used after data collection and summarization.

The methods of systems dynamism and related functions such as pulse and step functions and sensitivity analysis using Vensim software were used in the present investigation; moreover, structural equations were used in order to determine the relationships of research model variables and associated tests.

The dynamics approach of the system in the present investigation is a method for analyzing, problem solving and simulating competitive intelligence [3]. Hence, it could be used for system analyzing and complex problems could be simulated using computer simulation [1]. However, the system dynamics method is an appropriate approach to the analysis of competitive intelligence, which cause and effect relations form logical infrastructures and their feedback loops.

Findings:

In this section, the research questions is studied according to available software.

What is the dynamic model of competitive intelligence in insurance industry considering time factor?

The dynamic model of competitive intelligence considering all determined variables was modelled. For the modelling, a conceptual model named sub-system model was presented firstly, which demonstrated the overall architecture. For evaluating the accuracy of the model, the reliability of the model was checked through LISREL software. The employed indices were Goodness of Fit Index (GFI) and GFI adjusted for degree of freedom (AGFI), and their values were 0.91 and 0.84, respectively. Considering that a value more than 0.9 for GFI and more than 0.8 for AGFI shows the significance of the model, the overall model depicted in figure 2 is significant.

This is a conceptual model, which make the understanding of the problem and the dynamic model more intelligible more individuals who have not specialized knowledge of the system dynamics. In order to use the model and analyze it, it is necessary to define state and flow diagram and dynamo relations. The dynamo relations were obtained through collected information of interviews, historical information and questionnaires, and required mathematical relations were defined. The model was performed and the results recorded. The final cause and effect model, the relations between three sections (background, process and competitive intelligence advantage) and the main dynamic loop in the final model was determined, which are shown in figure 3.
Fig. 2: Final cause and effect model.

Figure 2 shows the final cause and effect model. The variables of competitive advantage are shown with red color and the letter "C" at the end of their name in the bottom part and right side. The variables of competitive intelligence process are shown with violet color and the variables of competitive intelligence background are shown with blue color, and the letter "P" and "B" are specified in their name, respectively. The black variables are complexity of the environment and competitor performance that are shown with the letter "CE" and "CP", respectively. Variables that have not letters in their names are covariate of the model, which are not placed in any of the categories but are necessary for the model (e.g. potential costumers). Colored arcs in the model specify the relations between competitive intelligence advantage, competitive intelligence process and competitive intelligence background. On other words, the influence of these three main parts is shown with these arcs.

In the following, one of the dynamic arcs of the system is explained and demonstrated. It should be noted that there are several feedback loop in the model and this loop is mentioned as a sample.

Loop 1: current customers> active agents> time taken for solving the client’s problem > customers’ loyalty> potential customers> rivals’ customers> market share> supporting of senior managers> staff training> to interview with key individuals outside the organization> understanding intelligence necessities > to train how to find key information> Recognizing the plans and objectives of the stakeholders> to analyze plans and strategies> Understanding the strengths and weaknesses of competitors> strategic planning of competitive intelligence> Ability to attract customers of the company> current customers.

Increasing current customers in the company in the loop, the attractiveness of the insurance company increases and more active agents appeal to the company. Consequently, the duration of solving the client’s problem decreases, and the loyalty of the customers to the company increases. Increase in the loyalty of the customers makes them to extend their insurance after the expiration of their previous insurance and fewer customers become potential customers. Therefore, number of customers that other companies can attract decreases. More market share decrease the motivation of the managers and their support, so training programs within the company and efficiency of the interviews decrease. Therefore, the company act weaker in the realization of intelligence necessities and this lead to weakness in the procedure of identifying programs and objectives of the stakeholders, so there will be little information for analyzing strategies and our understanding of the strengths and weaknesses of competitors will face to problems. Consequently, less effective competitive intelligence program will achieve and the number of current customers decreases. Briefly, increasing the number of customers in this loop has negative effect on them. Figure 3 shows the loop.
Fig. 3: Loop number 1.

Consider that there is no apparent continuity in the loop because of using shadow variables. We can find the rest of the loop by disconnecting the continuity through finding shadow variables.

Presenting the final model of the cause and effect model is a part of answering to the second question, which is shown in figure 4.

Fig. 4: Final model of state and flow.

Conclusion:

Competitive intelligence is an ongoing and growing process that organizations evaluate their business, capabilities and performances towards their existing and potential competitors, and protect their competitive advantage and develop it in this way [26]. Competitive intelligence is a commercial tool that helps the strategic management process and enhances the performance of business through increasing knowledge, internal communication and the quality of strategic plans. Competitive intelligence indicates the direction of competition and allows the company to predict and develop its market through the analysis of competitor’s moves. This leads to competitive advantage in long term. In fact, competitive intelligence is the art of attracting and transferring knowledge from outside of an organization and environment according to specific rules and certain regulations to the organization for protecting from competitive threats, identifying and exploiting potential opportunities and building the future, and can be effective on competitive position of companies [21].
The present investigation was aimed to present a dynamic model of the relationships among the components of competitive intelligence in an organization and the sustainable competitive advantage. It was also aimed to present a dynamic model of competitive intelligence of insurance industry. Since the insurance industry has a dynamic environment, the system dynamism model is utilized in the present research. After providing the model, which was provided using system dynamics model and was simulated using Vensim software, it was tested. Then, the tests of scenarios were conducted and sensitivity analysis was carried out eventually. The explanation of each of the research questions are mentioned in the following.

What is the dynamic model of competitive intelligence in insurance industry in order to achieve competitive advantage considering time factor?

The dynamic model of competitive intelligence was modelled considering all identified variables. As it was mentioned, the out of LISREL software demonstrated that the final model is significant. The modelling should be done in three stages of casual figures, flow figures and dynamo equations (mathematic equations) with identifying theoretical stages of model preparation in the dynamism of the system and realizing variety of models [12].

The dynamo relations were obtained through collected information of interviews, historical information and questionnaires, and required mathematical relations were defined. The model was performed and the results recorded. The final cause and effect model, the relations between three sections (background, process and competitive intelligence advantage) and the main dynamic loop in the final model was determined. Describing competitive intelligence advantage sub-system eliminates many relations and describing this sub-system lonely is less effective without considering other variables. Therefore, the final model is mentioned, relations are described and dynamics of the system is specified in order to realize the problem better.

Colored arcs in the model specify the relations between competitive intelligence advantage, competitive intelligence process and competitive intelligence background. On other words, the influence of these three main parts is shown with these arcs.

Purple arcs show the effects of competitive intelligence background variables on the process of competitive intelligence. These relations are mentioned in the following.

To train the employees to interview with key individuals outside the organization: training employees in the context of competitive intelligence empower them in benefiting from their interview with key individuals outside the organization.

To train the employees to attend in intelligence seminars: similarly, trained employees in intelligence seminars can more acquire what is considered in intelligence seminar.

Understanding of the manager of competitive intelligence on strategic planning in competitive intelligence: achieving appropriate strategic planning demands inform managers on competitive intelligence

Supporting of senior managers in encouraging agencies: it is obvious that supporting of senior management of competitive intelligence in the organization will provide the necessary facilities including discounts encourage agencies

Supporting of senior managers in the dissemination of competitive intelligence findings in the organization': senior managers can improve the process of dissemination of competitive intelligence findings in the organization, and this information is available to everyone in the organization in different ways. Such a thing can be developed for example with the deployment of Enterprise Resource Planning systems such as SAP in the organization. Management can provide some instructions for this affair in smaller scale.

Green arcs show the the feedback of competitive intelligence process variables on competitive intelligence background variables. These relations are as,

Dissemination of competitive intelligence findings in the organizations on the realization of the employees of competitive intelligence: It is obvious that availability of intelligence information within the organization can provide necessary information for the employees and improve their understanding of competitive intelligence.

Strategies and planning analysis on employees training: one of the results of strategies and planning analysis is specifying the necessities of competitive intelligence, and it will be determined consequently that how much the organization needs to more employees training.

Strategies and planning analysis on deeming competitive intelligence necessary in the organization: this one is similar to the previous one so that competitive intelligence in organizations will be necessary after strategies and planning analysis and create a greater understanding of them.

Indigo arcs specify the effect of competitive intelligence process variables on competitive intelligence advantage variables.

Strategic planning of competitive intelligence on the company’s ability to attract customers: it is obvious that effective strategic planning lead to increase in customer attraction power.

Strategic planning of competitive intelligence on active agents: the company can have agents that are more active through a targeted strategic plan.

Encouraging agents on active agents: the effect of encouraging agents on active agents is obvious, because encouraging leads to motivation in them and improves their activities and effectiveness.
Information audit on understanding the strengths and weaknesses of competitors; in order to understand the strengths and weaknesses of competitors, we need information that exists out of the organization, and information audit and using important and related information make this understanding better.

Strategies and planning analysis on understanding the strengths and weaknesses of competitors: strategies and planning analysis give us a better insight into the status of the company against competitors within the organization.

Orange arc show the direct effect of one of the competitive intelligence variables on competitive intelligence advantage. This relationship is the effect of employees’ understanding of competitive intelligence on active agencies. Related employees with agents who have proper understanding of competitive intelligence can help the agents and empower them in their own duties in order to achieve competitive intelligence advantage.

Gray arc show a feedback from competitive intelligence advantage on competitive intelligence background. This relationship shows the effect of market share on supporting of the managers. When senior managers relatively own a high percentage of customers in the market, they are less motivated to move towards competitive intelligence and when they lose some of the market share, they supporting of competitive intelligence program within the organization increases.

One of the dynamic loops (loop 1) was mentioned and studied before. The most important loops in the system are mentioned and presented in the following. This loop in this section consisted of background variables, process and competitive intelligence. It should be noted that there are many feedback loops in the model and we just mention to the most important ones.

Loop 2: strategic planning of competitive intelligence > Ability to attract customers of the company > current customers > potential customers > competitors’ customers > market share > supporting of senior managers > staff training > Resistance to organizational information sharing > to publish information on competitive intelligence within the organization > employee’s realization of competitive intelligence > manager’s realization of competitive intelligence > strategic planning of competitive intelligence.

The ability to attract customer improves and current customers increase through improving strategic planning of competitive intelligence. Similar to loop one, the supporting of senior managers and training the employees decrease and this lead to resistance to share organizational information and the dissemination of findings of competitive intelligence also decreases within the organization. Consequently, realization decreases in the staff and this lead to less understanding of managers of competitive intelligence. This leads to weaker strategic planning. In this loop, which is an equilibrium loop, improvement of strategic planning has a negative effect of it.

Loop 3: supporting of senior managers > staff training > Recognizing the plans and objectives of the stakeholders > strategies and planning analysis > to deem competitive intelligence necessary in the organization > supporting of senior managers

In this loop, more supporting of senior managers lead to improve in staff training. Therefore, recognizing the plans and objectives of the stakeholder increases and analysis of strategies and planning improves, so deeming competitive intelligence necessary in the organization and supporting of the senior managers increases. Consequently, increase in the supporting of senior manager increase the variable itself and create an amplifier loop.

Loop 4: Recognizing the plans and objectives of the stakeholders > strategies and planning analysis > staff training > interviewing with key individuals outside the organization > understanding intelligence necessities > training how to find key information > Recognizing the plans and objectives of the stakeholders

In this loop, with increase in the recognition of plans and objectives of the stakeholders, more effective strategies and planning analysis will be done and better training program will be determined for the employees. Therefore, employees are more effective in interviewing with key individuals outside the organization and understanding intelligence necessities will be more effective too. Consequently, they act better in training how to find key information and increase the recognition of plans and objectives of the stakeholders, which a positive feedback loop is created.

Loop 5: employee’s realization of competitive intelligence > to deem competitive intelligence necessary in the organization > supporting of senior managers > staff training > resistance in sharing organizational information > dissemination of competitive intelligence findings in the organization > manager’s realization of competitive intelligence > employee’s realization of competitive intelligence

This explanation is similar to the previous loop. Eventually, increase in the employee’s realization of competitive intelligence lead to deem competitive intelligence necessary in the organization. Therefore, staff training improves and resistance in sharing organizational information decreases, so dissemination of competitive intelligence findings in the organization increases and manager’s realization of competitive intelligence improves. Consequently, realization of the employees of competitive intelligence improves.

Loop 6: understanding intelligence necessities > training how to find key information > recognizing the plans and objectives of the stakeholders > strategies and planning analysis > to deem competitive intelligence necessary
in the organization> supporting of senior managers> staff training> attendance of the employees in intelligence seminars> understanding intelligence necessities

In this loop, increase in understanding intelligence necessities makes the training how to find key information more effective and a better understanding of the plans and objectives of the stakeholders is provided and better analysis can be performed. Therefore, competitive intelligence is deemed more necessary within the organization and supporting of senior managers increases. Consequently, staff training is improved and they acquire much better information in intelligence seminars and understanding of intelligence necessities increases and an amplifier loop is created.

There are so many different loops in the model, which all of them can be studied. Only the most important loops were mentioned in the present investigation. Many loops are similar to some of the loops mentioned in the present investigation.

Presentation of a final model was a part of answering to the second question. Combining different sectors, state flow models were presented, which the model was shown in findings.

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