Surveying the Influence of Competitive Intelligence on Business Performance (Evidence from Iran)

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Abstract
In today's complex and competitive environment, competitive intelligence can help organizations to gain more competitive advantages rather than the others. Competitive intelligence like information explosion hand off all around the organizations and make them more productive. The main purpose of the current study is to survey the influence of competitive intelligence on business performance in Parsian Bank in Tehran/ Iran. The research is applicable from goal view and descriptive from data collection. Data gathering tool is questionnaire that library and fieldwork methods were utilized for its designing. Statistical society contains 2172 employees on Parsian bank which decreased into 327 ones applying sampling formula. Also sampling method is branch random. For measuring competitive intelligence seven main dimensions include market intelligence, technological intelligence and social intelligence were utilized. The results of applying Spearman and Friedman tests showed that competitive intelligence and its dimensions affect significantly on business performance, meanwhile market intelligence was selected as the most important one as Entropy technique indicated. Finally all variables were placed in favorable levels applying Binomial test in which social intelligence was the top one. As all competitive intelligence dimensions were affected on business performance- especially market intelligence- some suggestions were represented to the managers.

Keywords: competitive intelligence, business performance, market intelligence, technological intelligence, social intelligence

Introduction
Environmental scanning and information processing activities within marketing strategy have been found to be moderated by the level of environmental uncertainty (Daft and Macintosh, 1981). Daft et al. (1988) posited that as uncertainty increased, information processing activities increased. Environmental uncertainty therefore leads to increasing information processing activities within firms (Culnan, 1983; Daft et al., 1988; Tushman, 1977). Regardless of the complexity and uncertainty inherent in any environment, information processing (a firm's ability to adapt to existing market conditions) is largely dependent on its ability to process relevant market information effectively (Egelhoff, 1982). Brouard (2006) linked competitive intelligence and environmental scanning in the development of an instrument to measure companies' environmental scanning capability. In summary, the rational model of strategic decision-making suggests the need for environmental scanning in order to align the organization's strategy with its environment. This, in turn, requires the design of appropriate information processing infrastructures. The need for these infrastructures increase as environmental uncertainty and complexity increase. Competitive intelligence is a process involving the gathering, analyzing, and communicating of environmental information to assist in strategic decision-making. As such, it is the fundamental basis of the strategic decision-making process. Over the years, researchers have explored various antecedents and consequences of managerial scanning behaviors. Antecedents widely discussed include the sources (i.e. internal, external, personal, or impersonal sources) from which managers obtain information (Keegan, 1974; Kobrin et al., 1980); the environmental segments (i.e. economic, technological, political or social segments) in which managers exert scanning efforts (Hambrick, 1981; O'Connell and Zimmerman, 1979); and the modes (i.e. inactive, reactive, or proactive mode) with which managers scan the market (El Sawy, 1985; Jain, 1984). More recently, an increasing number of researchers have examined the effect of managerial perceptions, such as perceived uncertainty and perceived source accessibility, on managerial scanning efforts (May et al.,
2000; McGee and Sawyerr, 2003; Sawyerr, 1993). In the current paper we tried to survey the influence of competitive intelligence on business performance.

**Literature review**

The concept of intelligence has a rich history of over 2,000 years (Juhari and Stephens, 2006). The intelligence concept of intelligence as part of marketing strategy has long been proposed as an effort to increase the firm’s competitiveness and its strategic planning process (Guyton, 1962; Montgomery and Urban, 1970; Pearce, 1976; Montgomery and Weinberg, 1979; Porter, 1980). In 1966, William Fair proposed the formation of a corporate “Central Intelligence Agency” within the firm whose function it would be to “collect, screen, collate, organize, record, retrieve and disseminate information” (Fair, 1966). Since that time, this proposition has grown to become an emerging business construct with delineated job functions directly responsible for intelligence collection, analysis, and dissemination (Kahaner, 1996). The concept of CI has a rich heritage (Juhari and Stephens, 2006) and can be traced back over 5,000 years of Chinese history (Qingjiu and Prescott, 2000). These and other authors point to examples in various religions and historical contexts which address intelligence concepts. Many CI texts and articles refer to the work of Sun Tzu who, some 2,400 years ago, wrote The Art of War, a seminal text which provides a detailed description of how to develop intelligence for military applications (Sun, 1988). Similarly, many intelligence authors cite Frederick the Great (1740-1786), who was once quoted as saying “It is pardonable to be defeated, but never to be surprised” (Fuld, 1995). Wright et al. (2004) remind us that competitive intelligence is not a new concept. This is evidenced by Nathan Rothschild’s timely intelligence to make a fortune on the London Stock Exchange following the Battle of Waterloo in 1815. Among Rothschild’s intelligence network was an agent who watched Napoleon’s defeat at Waterloo and subsequently sent carrier pigeons to Rothschild, who the following morning sold large volumes of shares. Observers wrongly concluded that the French had won the battle, and shares slumped. Rothschild then bought back and awaited the news, which arrived conventionally, that Wellington had won. The market correction helped Rothschild to his fortune (Ferguson, 1998). Historical records point towards commercial collection activities happening even earlier. The Byzantine emperor Justinian I (483-565) in the sixth century used monks to steal silk worms from the Chinese in an attempt to understand how to make silk (Fraumann, 1997). Although this is more an example of what would now be termed “industrial espionage” than CI, it does demonstrate how long there have been efforts to scan the environment for information that will provide organizations or countries with a business performance. The British tea industry has its roots in CI, going as far back as 1615. Mr R.L. Wickham, who worked as an agent for the English East India Company, was sent to China to gather intelligence and he relayed the importance of tea and its potential to contribute to the British economy. Wickham learned about the Chinese production of tea over ten years and then, thanks to various inventions such as tea boxes and chests, he was able to successfully start a tea industry in Britain (Breed, 1999). As can be seen from the examples given above, whilst today it is reported that 87 per cent of all large companies, regardless of locations, have an intelligence capability (Global Intelligence Alliance, 2005), it can be seen that the commercial application of competitive intelligence, as we know it, has been around for at least 5,000 years if not longer. The analysis of the literature allows to state that the term of “Competitive Intelligence” dates back to many years ago. Sawka (1996) defines CI as a knowledge and foreknowledge about the external operating environment. The author considers CI as a prelude to informed decision-making. He argues that intelligence can be viewed as any actionable information about a customer, market situation, regulator and competitor. The Society of Competitive Intelligence Professionals, an official US-based intelligence organization, defines Competitive Intelligence as “timely and fact-based data on which management may rely on decision-making and strategy development. It is carried out through industry analysis, which means understanding the players in a industry; competitive analysis, which means understanding the strengths and weaknesses of competitors; and benchmarking i.e. the analysis of individual business process of competitors” (Calof, 1997).

**Conceptual framework and hypotheses**

Figure 1 illustrates the influence of competitive intelligence on business performance. In the model, competitive intelligence and its dimensions include market intelligence; technologic intelligence and social intelligence are independent variables and business performance in dependent one.
1.1. Market intelligence affects business performance significantly.
1.2. Technological intelligence affects business performance significantly.
1.3. Social intelligence affects business performance significantly.

**Research methodology**

Statistical society of the current research is 2172 employees of different branches of Parsian Bank in Tehran/Iran. As the number of employees is too much, so sampling strategy in limited society was done. Statistical sample decreased into 327 people.

Current study can be considered as a descriptive survey if we observe it from data collection aspect and it would be an applied research if the goals of the study are considered. To collect the data, library method (refer to books, articles, libraries, etc...) and fieldwork (questionnaire) were used. To analyze the data, SPSS 19 and Kolmogorov-Smirnov, Spearman, Friedman and Binomial tests were applied. Management experts were asked to evaluate the validity of questionnaires. To do this, the questionnaire was given to some university professors and experts in management. Then, they confirmed the applied modifications and the questionnaires were given to the participants. To determine the questionnaires' reliability, the 'Cronbach Alpha technique' was applied. For this purpose, 35 people were chosen randomly (from the participants) and the questionnaires were given to them. The 'Cronbach’s Alpha' value for business performance and business performance questionnaires were calculated 0.845 and 0.821 respectively. The value supports the reliability of questionnaires, because the calculated results for Cronbach's alpha are more than 0.7.

**Data analysis**

**Kolmogorov-Smirnov test**

This test was applied to survey normality of statistical society. The results are shown in tables 1:

<table>
<thead>
<tr>
<th>Variables</th>
<th>Statistics</th>
<th>Sig</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business performance</td>
<td>8.222</td>
<td>0.000</td>
<td>Abnormal</td>
</tr>
<tr>
<td>Business performance</td>
<td>6.493</td>
<td>0.000</td>
<td>Abnormal</td>
</tr>
</tbody>
</table>

Table 1 illustrates that the sig amount for both variables are less than standard error (0.05), so abnormality of statistical society was accepted. Therefore to survey hypotheses, some non-parametric tests were applied.

**Spearman test**

First of all to survey the relationship between business performance and its indices with business performance, Spearman test was applied. The results are shown in table 2:

![Conceptual framework of the research](https://www.jsstm-ump.org)
Table 2: The results of applying Spearman test

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Sig</th>
<th>Statistics</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business performance and BP</td>
<td>0.000</td>
<td>0.719</td>
<td>Positive and significant correlation</td>
</tr>
<tr>
<td>Market intelligence and BP</td>
<td>0.000</td>
<td>0.751</td>
<td>Positive and significant correlation</td>
</tr>
<tr>
<td>Technological intelligence and BP</td>
<td>0.000</td>
<td>0.679</td>
<td>Positive and significant correlation</td>
</tr>
<tr>
<td>Social intelligence and BP</td>
<td>0.000</td>
<td>0.691</td>
<td>Positive and significant correlation</td>
</tr>
</tbody>
</table>

Table 2 shows that there are positive and meaningful correlations between business performance and its dimensions with business performance.

**Friedman test**

To survey the influence of competitive intelligence and its dimensions on business performance, Friedman test was applied.

Table 3: The results of applying Friedman test

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Sig</th>
<th>Standard error</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business performance on BP</td>
<td>0.000</td>
<td>0.05</td>
<td>Significant influence</td>
</tr>
<tr>
<td>Market intelligence on BP</td>
<td>0.000</td>
<td>0.05</td>
<td>Significant influence</td>
</tr>
<tr>
<td>Technological intelligence on BP</td>
<td>0.000</td>
<td>0.05</td>
<td>Significant influence</td>
</tr>
<tr>
<td>Social intelligence on BP</td>
<td>0.000</td>
<td>0.05</td>
<td>Significant influence</td>
</tr>
</tbody>
</table>

Table 3 explains that competitive intelligence and its dimensions have positive influence on Business performance.

**Entropy technique**

To rank competitive intelligence dimensions, Entropy technique was used.

Table 4: The results of applying Friedman test

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Weight</th>
<th>Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market intelligence</td>
<td>0.37</td>
<td>1</td>
</tr>
<tr>
<td>Technological intelligence</td>
<td>0.35</td>
<td>2</td>
</tr>
<tr>
<td>Social intelligence</td>
<td>0.28</td>
<td>3</td>
</tr>
</tbody>
</table>

As table 4 shows “market intelligence” was selected as the most important one and “social intelligence” was posed in last place.

**Binomial test**

To survey the variables levels Binomial test was applied. Table 5 shows the results of applying Binomial test:
Table 5: The results of applying Binomial test

<table>
<thead>
<tr>
<th>Variables</th>
<th>Observed Prop.</th>
<th>Test Prop.</th>
<th>Sig</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitive intelligence</td>
<td>0.60</td>
<td>0.5</td>
<td>0.000</td>
<td>Favorable level</td>
</tr>
<tr>
<td>Market intelligence</td>
<td>0.57</td>
<td>0.11</td>
<td></td>
<td>Favorable level</td>
</tr>
<tr>
<td>Technological intelligence</td>
<td>0.63</td>
<td>0.000</td>
<td></td>
<td>Favorable level</td>
</tr>
<tr>
<td>Social intelligence</td>
<td>0.68</td>
<td>0.000</td>
<td></td>
<td>Favorable level</td>
</tr>
<tr>
<td>Business performance</td>
<td>0.56</td>
<td>0.000</td>
<td></td>
<td>Favorable level</td>
</tr>
</tbody>
</table>

Table 5 shows that all variables were placed in favorable levels.

Conclusion and suggestions

The main purpose of writing the current paper is to survey the influence of competitive intelligence on business performance in Parsian bank. The results showed that competitive intelligence and its dimensions affect significantly on business performance. Meanwhile market intelligence was the most important and social intelligence was the last one. Also all variables were placed in favorable levels as Binomial test proved. Also social intelligence current situation was better than other variables.

Attending to the results, managers are advised to:

- Creating data base for goal customers
- Identifying customers’ needs and desires and representing services in terms of their wants
- Utilizing quality improvement methods like six sigma, EFQM and . . .
- Considering specified budget for more researches
- Employing expert and experienced people even reemploying retired ones
- Identifying and analyzing internal strengths and weaknesses and external opportunities and treatments
- Formulating short and long term goals, mission, vision for strategy formulation

References