ISSN: 2997-2256

Research Article

Journal of Investment, Banking and Finance

Presenting a Competitive Market Intelligence Model With the Approach of Improving Electronic Marketing Capabilities and its Impact on the Commercial Performance of Home Appliance Manufacturing Companies Located in the Industrial Towns of Isfahan Province

Mohammad Shokrollahi*

Teaching Assistant IAUN, Iran

*Corresponding Author
Mohammad Shokrollahi, Teaching Assistant IAUN, Iran.

Submitted: 2025, Jan 27; **Accepted:** 2026, Feb 18 **Published:** 2026, Mar 02

Citation: Shokrollahi, M. (2026). Presenting a Competitive Market Intelligence Model With the Approach of Improving Electronic Marketing Capabilities and its Impact on the Commercial Performance of Home Appliance Manufacturing Companies Located in the Industrial Towns of Isfahan Province. *J Invest Bank Finance, 4*(1), 01-18.

Abstract

The aim of this research is to know the role of competitive intelligent network on business performance with the mediating role of marketing capabilities and competitive advantage of home appliance manufacturing companies located in industrial towns of Isfahan province. This research is practical in terms of its purpose, and it is descriptive-survey in terms of data collection. Its statistical population was 500 people related to the subject, based on Morgan's table, 217 people were selected as a statistical sample. The measuring instrument of this research is a questionnaire that was examined in terms of validity and reliability. After collecting the questionnaires, the data were analyzed using the structural equation modeling method with the partial least squares approach with the help of SPSS21 and Smart PLS2 statistical software. According to the results of the research, it is suggested to use advanced and up-to-date systems, timely services, provide innovation in order to identify the needs of customers and discover creative opportunities in the importance market and obtain new information from customers and suppliers in the market and its effect on the performance of the companies. be evaluated. It is also suggested to use intelligence strategies and competitive intelligence networks more.

Keywords: Competitive Intelligence Network, Business Performance, Competitive Advantage

1. Introduction

In recent years, competitive intelligence has become one of the important concepts of management and has been associated with large companies. A smart company understands the competitors' strategy better and faster and learns from their failure and success, making it possible for managers to have a competitive company with high competitive power. The competitive intelligent network is a commercial tool that helps the strategic management process in organizations and increases business performance through increasing knowledge, internal communication and the quality of strategic plans. In this era, it is necessary to create a competitive environment and empower manufacturing companies to participate in a competitive environment. And in this situation, companies and enterprises have the ability to achieve high competitive power that benefit from intellectual capital and intelligence, especially competitive intelligence. The Professional Association of Competitive Intelligence states that competitive intelligence is a systematic process of collecting, analyzing, and managing external information that affects a company's plans, decisions, and performance. Companies with high competitive intelligence extract and analyze the information of competing companies and use the results for strategic decisions. Today, the desire for competitive intelligence and its actions is growing day by day according to the competitive conditions of the market and rapid environmental changes, and the strategic entrepreneurship paradigm is one of the main solutions for improving the performance and growth of organizations.

The more information an organization can obtain from competing organizations, the more likely it is to formulate and implement effective and successful strategies. Therefore, tracking, understanding and reacting to competitors is considered as a special aspect of marketing activity and it is necessary for organizations to implement an effective program called competitive intelligence.

In this way, the success of organizations depends on competitive intelligence. The versatility of this type of intelligence has drawn the attention of many organizations and companies to this issue. Now organizations are focused on new challenges and risks (new strategic mechanisms and techniques to predict and plan for emerging competitive information networks before they occur) and the growth of information needs and their potential. Strategic intelligence was first used in military operations in the fourth century BC, when it was employed by one of the world's most prominent military strategists, "so that a wise commander of military mastery can do things to be beyond the skill of ordinary leaders of the past [1]. This form of intelligence has a long history, but lacks consistent meaning and agreement. And this situation indicates that according to the duration and scope of historical experience, there is much more work in the field of discovering the limits and possibilities of this form of intelligence [2]. See to the Central Intelligence Agency (CIA), as the first organization that used this style of information in the implementation of arms control agreements and in providing strategic information to political decision makers and policy formulation. As organizations realized the importance of this type of intelligence and provided many metrics on the evolution of this intelligence, several institutions in Europe and North America began to create strategic intelligence units within organizations to provide insight to policy makers and academic programs. Present about smart style. Intelligence [3]. Many businesses are also developing strategic intelligence, which is created by a group of experts who provide basic recommendations that serve as the basis for top management decisions on issues such as mergers with other organizations and new product development [4]. The decision-making process will be more difficult in situations where the markets pay attention to different ways of development [5]. There are new products and other exiting and emerging products as well as an increase in the number of sellers or suppliers and other factors that affect the decision about products. This is a complex description of time marketing decisions, as they are more complex than any other decision made by the government [6]. The investigation between competitive intelligence and organizational performance of the country's industries will show that the dimensions of competitive intelligence and organizational performance in this industry have a deep relationship. Executive managers with a better understanding of competitors and the challenging environment of competition can, by relying on special tools and techniques of information related to capabilities, examine the strengths and weaknesses and intentions of competitors and choose the appropriate strategy and always be one step ahead of competitors. Thus, considering the importance of competitive intelligence network, this research tries to identify the role of these factors on organizational performance.

2. Theoretical Foundations and Research Background

2.1 Commercial Performance

The definition of performance has been introduced with wide applications in the theoretical foundations of business strategy. Ford and Eschenberg have identified three views of organizational performance: 1) the goal approach, in which performance is defined by achieving the goal. 2) Systems resource approach so that performance is defined through the organization's ability to preserve scarce and valuable resources. 3) The process approach so that the performance is defined according to the behavior of the participants of the organization [7].

The most famous definition of performance is provided by Neely et al. the process of explaining the quality of effectiveness and efficiency of past actions [8]. According to this definition, performance is divided into two components: 1) efficiency, which describes how the organization uses resources in the production of services or products, that is, the relationship between the actual and desired combination of inputs to produce certain outputs; and 2) effectiveness, which describes the degree of achievement of organizational goals. Venkatraman and Ramanjam look at performance as a subset of the organization's overall effectiveness, which includes financial and operational performance factors. In studies related to performance, researchers have used various components to measure it. A few researchers have placed the components of performance that are more related to each other in groups and named them. For example, Pelham placed performance components in three categories: organizational effectiveness, growth/share, and profitability. Also, the performance components have been placed in two categories of market performance, which includes the components of customer retention and new customer attraction, and financial performance, which includes the components of asset return rate, market share, and sales growth [8].

There are two major approaches in measuring performance: objective and subjective, and both approaches have their own merits and demerits. Objective scales are more realistic, but they are limited in scope to financial data and do not explain other organizational dimensions. On the other hand, subjective scales are less realistic, but provide a rich description of organizational effectiveness. These scales allow a wide range of organizations in different industries to be compared. Therefore, the generalizability of findings based on subjective scales is higher. Also, subjective scales cover elements of perception-based analysis, which has found a special place in social science research. The question of which of these approaches should be considered in measuring performance depends on the organizational orientation and the type of attitude of managers [9].

2.2 Competitive Smart Network

Competitive intelligence is a tool that includes the process of: gathering information, analyzing and applying competitive information to improve the organization's performance against competitors. Competitive intelligence (CI) is one of the most important pieces of data you can use to inform your strategy. Closely monitoring your competitors' messages, offers, and tactics will keep you one step ahead, no matter what's happening in the market. CI is an essential component of business strategy

development. Competitive intelligence is the process of showing and clarifying the competitive environment. With more emphasis, competitive intelligence is a systematic and ethical program to collect, analyze and manage information that can influence the company's plans, decisions and operations. Competitive intelligence helps the company's chief executive at all levels to make unstructured decisions about everything from marketing to research and development to long-term investment tactics in business strategy. Mogo et al. (2020) state that product intelligence, market intelligence, technological intelligence, and strategic alliance are among the dimensions of the competitive intelligence network that lead to profitability and reducing organization costs. Nabati and Motoufi have mentioned the four dimensions of market intelligence, competitors' intelligence, competitive intelligent network and strategic intelligence as components of competitive intelligent network dimensions. Finally, in this research, all four components (market intelligence, competitors' intelligence, competitive intelligence network, strategic and social intelligence) have been used to investigate the effect of competitive intelligence on the company's business performance. Many studies have defined and investigated competitive intelligence. Gibbons and Prescott define it as competitor information as well as information gathered on the history of customers, suppliers, technologies, environment or potential business relationships. While some others consider competitive intelligence to be gathering information about the environment and competitors in order to create and maintain a competitive advantage. Competitive intelligence is a systematic process to ensure having up-to-date and accurate information about competitors [10].

2.3 Marketing Capability

Marketing capability is an integrated process in which companies use tangible and intangible resources to understand the complexity of specific customer needs, achieve a relative differentiation of products for competitive advantage, and finally achieve an appropriate brand quality. A company's capabilities It can develop its marketing when it has the ability to combine the individual skills and knowledge of its employees with the resources available to it. A company that spends most of its resources on interacting with customers can increase its ability to sense market needs. Song suggests that marketing capabilities help a company to build and maintain its relationship with customers and members of distribution channels. Marketing capabilities create a strong brand image that allows the company to have an excellent financial performance. Marketing capability can be considered as the process of sharing intangible (i.e. knowledge-based) and tangible resources with each other to create valuable outcomes. And their skills are combined through past experiences such as sales, new product development, and distribution [11].

This variable is measured by the following indicators:
New product development, advertising, public relations, sales promotion, environmental survey, development of marketing plans, implementation of marketing plans.

In recent studies, marketing capabilities have been defined as the process of applying knowledge, skills, and organization resources to create added value for goods and services, meet competitive demands, and respond to market-related needs. The importance of learning processes in the development of marketing capabilities has been emphasized, especially when employees can quickly use their knowledge and skills to solve the company's marketing problems [10,11].

2.4 Competitive Advantage

Competitive advantage is one of the basic concepts in international business that determines the competitive position of the organization and gives the organization the ability to create a defensive position against its competitors. Pitroff defines competitive advantage as maintaining income above normal. According to Barney, the company experiences a competitive advantage when its activities in the industry or market create economic value and a small number of companies are engaged in similar activities. Barney relates the competitive advantage to the company's performance and suggests that the company observes above-normal performance when it creates more value than the expected value of the available resources. The strategy literature on competitive advantage is dominated by the following two theories: industrial organization theory and resource-oriented theory. Now we will examine each of these theories [12].

1) Industrial organization theory: According to this theory, the external structure of the industry determines the economic performance of the company. The theory of industrial organization or the attitude of industrial organization, first emphasizes the external analysis of competition, which is best expressed by the framework of Porter's five competitive forces in the industry. In the models that are based on the attitude of the industrial organization, competitive advantage is a situation to achieve a superior performance that a business can do by offering undifferentiated products at a low price or by offering differentiated products that the customer is willing to pay the difference in price. , he achieves it. In this model, strategy is considered as a company's deliberate response to industry/market requirements.

2) Resource oriented theory: Empirical evidence consistently states that industry structure cannot be the only determining factor of competitive strategy and competitive performance. For this reason, a group of resource-oriented theorists emerged to prove that the possession of distinctive gifts of strategic resources is the ultimate determinant of strategy and performance. This attitude is exactly consistent with the phenomenon of competition based on knowledge. This kind of competition states that the long-term success of an organization depends on what it knows and understands, that's why competitors look at abilities and skills as the key to success against their competitors.

5.2 Research Background

In reviewing the background of the research, the researcher has

not been able to find a research in Iran that uses the promotion of business performance with an emphasis on market intelligence capabilities and the mediating role of marketing capabilities and competitive advantage. But in the review of foreign research, similar studies were found. Each of these studies, based on a specific index of the above model, investigated the promotion of business performance with an emphasis on market intelligence capabilities and the mediating role of marketing capabilities and competitive advantage. The indices of the variables of this research have been examined in other studies, some indices have been given more attention than others. But researchers have less investigated some other indicators. Table 1 summarizes the research results related to the research variables.

The most important results	Title	Year	researcher
The purpose of this study is to investigate and investigate the mediating role of the capabilities of the specialty water market) SMC . (In the relationship between market intelligence) MI (and business performance) BP (In small and medium fashion companies Indonesian retail . This study of 330 small and medium companies Maximum Assets of 10 billion Indonesian Rupiah) IDR (and a maximum turnover of 50 million IDR used in the year. We examined the relationship between MI dimensions : market intelligence generation (MIG) , market intelligence dissemination) MID , (and responsiveness to market intelligence) RMI . (with SMC and BP using SPSS and SEM with AMOS 22.0 .From the Sobel test for Testing the role of mediators SMC was used in the relationship between MI and BP dimensions .The results of analysis and data analysis show that SMC plays an important role as a partial mediator in the relationship between It has MIG ,MID and RMI with BP . This study shows that the owners and managers SME increase the important factors of market intelligence SMC and BP give a diagnosis . This helps them to make better investment decisions in developing the right SMC composition for growth. Adopt BP . This is the research of the dimensions of MI and K after the capabilities of the blue market . that 's mean It integrates SMC into an empirical model to gain a deeper understanding of the relationship between MI and SMC and how BP factors are formed.	Market intelligence on business performance : the mediating role of specialized market capabilities.	2020	Hender[1] et al
The competitive advantage of small and medium enterprises) SME (As an important issue for researchers who deal with internationalization SME deal, is known. Previous studies have long discussed the role of the company's competitive advantage as a determinant of international performance , but there are few studies that determine the factors of the company 's competitive advantage and the role of its potential in the relationship between organizational capabilities and international performance Analyze SMEs .In this paper , we identify four essential export capabilities (market intelligence , product innovation , pricing , and market communication) as determinants of competitive advantage for We assume exporting SMEs .Based on a sample of 119 small and medium exporting companies active Malaysia and using Partial Least Squares) PLS (Structural Equation Modeling , the results showed that three of the mentioned capabilities lead to	Internationalization SMEs : The role of product innovation , market intelligence , pricing and market communication capabilities as drivers of international performance . SMEs	2020	Falahat[2] et al

competitive advantage . In addition , the results showed that competitive advantage is the only mediator between evaluability and international performance . SMEs operate . The main results of this research can be useful for small and medium - sized companies . Startups that intend to exploit From Opportunities in foreign markets are valuable.			
During the recent fluctuating and competitive environment , competitive intelligence) CI (has emerged and turned into a discipline to help organizations adapt to environmental changes . Although the existing literature does not provide adequate insight into the drivers of the activities CI provides organization , use and dissemination in companies , research on the results of activities . CI is rare in that these aspects of the patterns have a relationship with overall performance . In addition , no research on the effect of subgroup There is no CI on performance that can provide useful insight for managers to select areas of focus in their activities . CI and as a result provide Abi with effectiveness and efficiency in Abi 's marketing efforts . Especially, in today 's tough economic conditions , when companies are involved in cost- cutting and layoff programs , it can be even more important . Therefore , this article is influenced by R CI and its subtypes analyze market performance . The results show that CI has a positive effect on market performance . Among the types in the sub - set CI ,competitive intelligence , market intelligence , and technological intelligence , respectively , leave the most impact .	of competitive intelligence and its subtypes in achieving market performance	2018	Tahmasabi Fred[3]
An empirical study of frontline managers in service organizations ; They stated : This study develops and empirically tests a model that replaces strategic orientations with company performance through the mediation effect . The capabilities of the water market give a link . We also examine the influence of environmental factors and organizational characteristics on the decision to pursue profitable strategic directions .to be Using data collected from 316 bank branch managers , Noisandag found out that market turbulence , competition intensity , and decentralization in decision - making play a central role in determining priority . It has strategic management .In addition , competitive orientation and innovation significantly contribute to the development of water	Strategic orientations , market capabilities and company performance	2012	Theodo [4]et al
market capabilities .In turn , market capabilities have a positive effect on company performance . New concepts of management They discuss the implications of the study and provide guidelines for future research.			

This research was conducted in Greece. In this research, a questionnaire was used to collect information. The research questionnaire was compiled after interviewing 10 managers, and then 165 questionnaires were distributed, of which 158 questionnaires could be examined. The collected data have been analyzed using regression test. The findings of the research showed that companies that seek to obtain market information will have a more successful performance in the company's business performance.	Title: Obtaining market information: a requirement for the success of the company's business performance	2021	Kosglow [5] et al
In this article, the importance of competitive intelligence has been discussed and it has been shown that competitive intelligence in companies Widely accepted by Rash has been placed and the use of this tool has become a necessity.	The need for sophisticated competitive intelligence	2021	direction [6]
In order to classify the companies based on the advanced level of technological intelligence dimensions in them , three questions were asked about the processes of technological intelligence dimensions. The result of this research showed the existence of a positive relationship between the advanced level of the processes of technological intelligence dimensions and the rate of return on assets.	Examining the organizational performance and using the individual evaluation of the respondents to check the level of progress of the processes of the dimensions of technological intelligence in the organization	2020	Holt [7] et al
The research findings showed that the higher the level of business performance culture in a company, the more successful that company will be in business performance.	Entrepreneurial culture in small companies and Intermediate: Konya city case study	2020	Liu [8] et al
The findings of the research showed that the business performance of the company has a positive effect on the relationship between the business performance of the company and the performance of organizations. Also, the findings have shown that the business performance of the company has a positive and significant effect on the financial and non-financial performance of the company.	Firm's business performance: mediation between business performance orientation and performance	2016	Cont our
In order to collect necessary information, researchers have interviewed 27 hotel managers . The results also showed that they are involved with issues related to the dimensions of technological intelligence, but instead of thinking about its strategic goals, they are more concerned with the tactics of its implementation.	Remembering the dimensions of technological intelligence in hotels they have payed . This research is in North Dakota and in the hotel industry	2021	Gray et al

The research showed that the dimensions of technological intelligence have a positive effect on sustainable growth and increase the market share.	The effect of technological intelligence dimensions on the sustainable development and growth of the company	2021	Stefanikova et al[9]
In this research, business performance management and business performance orientation are expressed as independent variables and organization performance as a dependent variable .The results of this research showed that among these organizations, there is no such organization as an entrepreneurial organization.	The effect of organizational business performance on the performance of government organizations	2021	Moghadam et al
The results of the research showed that there was a positive and significant relationship between these departments and the performance of the companies.	"Performance of small and medium-sized enterprises in Russia: exploring and using the business performance of the firm".	2021	Shirkova et al
In this article, it is stated that the business performance of the company is a new word in management and business, and the use of the business performance of the company is necessary for companies to achieve maximum profit. In this research, the theoretical foundations related to the research subject have been discussed.	The intersection of business performance and strategic management: corporate business performance	2021	Dugan
.This research was conducted in handicraft companies in Indonesia. The research findings showed that the trend towards innovative business performance and product innovation has a positive and significant effect on market performance.	The effect of orientation towards innovative business practice and product innovation on market performance	2017	McLane
Research self sign They gave That Organization With Presentation Levels high from competitive intelligence, Can To performance financial better Hand find Also they statement they did that eight next environmental, customers, competitors, Agents international, economic, Technology , suppliers , laws And regulation And Dimensions social cultural, According to the decision of the Magistrate Organization the effect they let. Emphasis on every one From this Agents as Simultaneous, possible Is To decide the decision At every a company not suitable so Organization should proportional With The activities of Sh For every one From These factors , First of all particle for direct object in consideration take	competitive intelligence, Can To performance financial	2020	Adidam et al[10]

In this research, an attempt has been made to develop employment for the family, the role of the company's business performance in family companies that Seeking to discover and use opportunities should be investigated. The findings of the research showed that the business performance of the company has a positive effect on these companies.	Business performance of the firm within family firms: opportunities and challenges	2019	Web and Ireland

Table 1: Summary of Internal and External Research Results

In related studies, despite the great importance of its indicators, it has rarely been paid attention to. Therefore, considering the existence of a deep gap in the domestic literature and the deficiencies in the foreign studies, the researcher aims to present a model that, while being extensive, is void by using the indicators that have been studied the most and the least. eliminate existing in internal and external research.

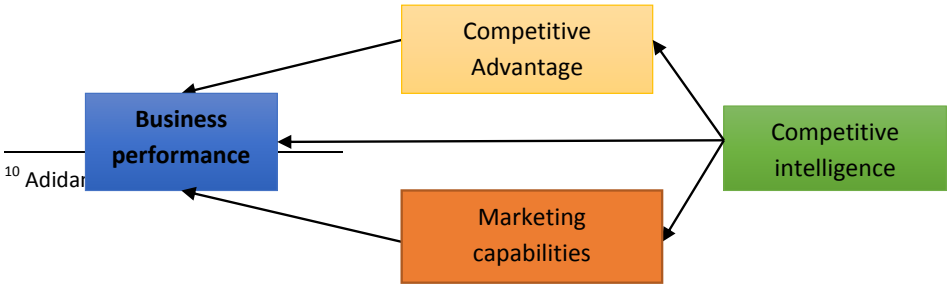

Figure 1: Proposed Conceptual Model

source taken from the studies of [13-15].

3. Research method

This research is practical in terms of purpose. If it is used by managers, it can also have a practical aspect. Due to the fact that in this research the description and study of what exists has been discussed, therefore it is a descriptive research and since in descriptive research the characteristics of the studied society can be evaluated through a survey, the present research is a descriptive research of a survey type. Is. "Survey" refers to the collection of information that is done with a plan and map as a guide for description or prediction, or for the purpose of analyzing the relationships of some variables.

The statistical population in this research is about 600 managers and senior experts of home appliance manufacturing companies located in the industrial towns of Isfahan province. The sample size was determined through Morgan's table with an error rate of 5%, 217. The sampling method is the random sample method available. Given that the research method in this study is descriptive-survey, therefore, the best tool for data collection in this type of research is a questionnaire. The scale type of the present questions is based on the Likert scale. The Likert scale includes 5 options, from strongly agree to strongly disagree, as shown below, which is used in this research. In this questionnaire, the questions in the following table cover the variables:

Source	Number of items	Number of questions	next	changeable
Hendar11 et al. (2020(	6	2-1	Production of market intelligence	Competitive intelligence network
		4-2	Responding to market intelligence	
		6-4	Dissemination of market information	
Tuisilo12 et al. (2012(	6	12-7	-	Marketing ability
Lee13 et al. (2020(	10	22-13	-	Competitive Advantage
Hendar14 et al. (2020(	5	27-23	-	Business performance

Table 2: Questionnaire and Items

In this research, Cronbach's alpha method was used to determine the end of the questionnaire.

Cronbach's alpha	changeable
0.841	**Competitive intelligence network**
0.801	Marketing ability
0.896	Competitive Advantage
0.929	Business performance

Table 3: Cronbach's Alpha

In this research, in order to be sure of the type of distribution of research variables in terms of normality or non-normality, we use Smirnov's Kolmograph test. In the analytical statistics of this research, single-variable linear regression test (t-test) was used to determine the effect of each of the identified factors on loyalty and word-of-mouth advertising. Data analysis was done using descriptive statistics and inferential statistics with the help of SPS and Smart PLS software.

4. Results and Findings

To analyze the collected data, first, descriptive statistics that examine the demographic variables of the research such as age, gender, education and service history; was investigated. Then inferential statistics were presented. In inferential statistics, the Kolmogorov Smirnov test was used to check the normality of the data. In order to know the current state of the research variables, the independent one-sample t-test was used.

4.1 Analysis of Demographic Characteristics of the Respondents

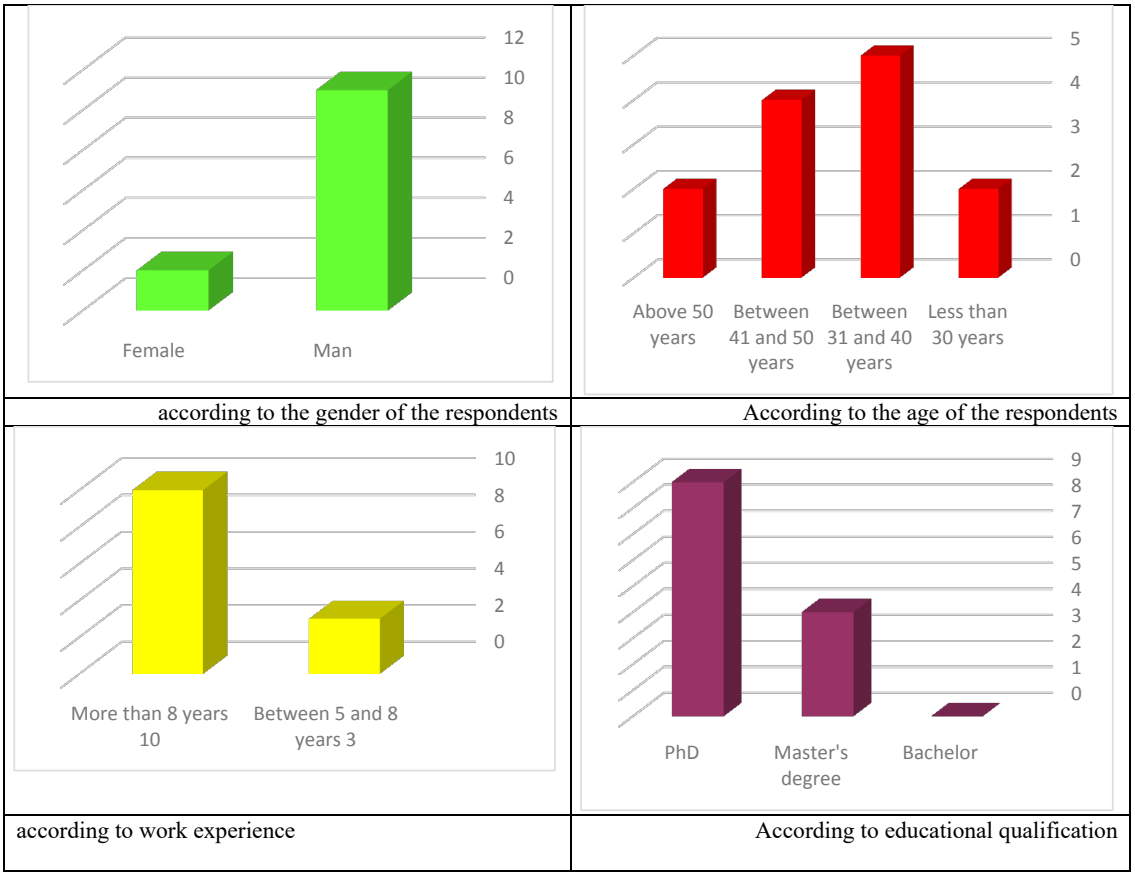

Figure 1: Demographic Characteristics of Respondents

As can be seen in the graphs of Figure 1, 39.15% of the respondents are in the age group of less than 30 years, 38.46% in the age group of 31-40 years, 30.77% in the age group of 41-50 years, and 15.38% in the age group of more than 51 years [16].

84.61% of respondents are men and 15.39% are women. 30.77% of the educational qualifications are master's degrees and 69.23% are doctorates. 23.08% of the sample have between 5 and 8 years of work experience and 76.92% have more than 8 years of work experience.

4.2 Inferential Statistics

4.2.1 Normality Test (Measurement of the Normality of the Distribution of Variables)

To show the normality or non-normality of the distributions (variables), the Kolmogorov-Smirnov (K-S) test was used, which is given in Table 4.

Test result	Meaningful amount	Kolmogorov Smirnov	Components
normal	0.189	1.12	Competitive intelligence network
normal	0.22	1.06	Competitive Advantage
normal	0.125	1.179	Marketing capabilities
normal	0.179	1.08	Business performance

Table 4: Kolmogorov Smirnov Test (K-S)

➢ **Statistical Inference:**

The results of Table (4) show that the variables of competitive intelligence network, competitive advantage, strategic marketing capabilities and business performance have a normal distribution. According to the results obtained in this part, we will use the t-test of an independent sample to determine the status of the research variables [16].

4.2.2 A Population Mean Test (T-test)

The independent one-sample T-test is used to compare the mean of a variable with a hypothetical or expected number. In fact, by using this test, we will examine whether the condition of the research variables is suitable or not. The hypotheses presented in

Average value equal to 3						Variable
%95confidence interval for the difference		difference in averages	significant number	Degrees of freedom	The value of t	
upper line	lower limit					
1.213	1.0199	1.213	0.000	216	27.01	Competitive intelligence network
1.242	1.0583	1.224	0.000	216	26.105	Competitive Advantage
1.091	0.9046	0.9967	0.000	216	22.01	Marketing capabilities
1.203	1.0189	1.124	0.000	216	24.014	Business performance

Table 5: Sample T-test Results

➢ **Statistical Inference:**

According to tables (4-6), the value of sig, which means the significant number for the variables, is less than 0.05, and therefore, at the 5% error level, the null hypothesis is rejected and the one hypothesis, which includes the researcher's claim, is confirmed. As a result, the average value of this variable has a significant difference with the number 3.

Also, since the values of the upper limit and the lower limit (both of which are positive) and considering that the value of t>1.96, we conclude that the average of these variables is greater than 3 and this means that the variables are from the situation They are favorable.

4.3 Structural Equation Modeling

Structural equation modeling is one of the types of statistical methods that provide examination of the relationships between several variables in a model. The first generation of this technique has been introduced with software such as Lisrel, Amose and EQS. The weaknesses of these softwares include the need for a large number of samples, the normality of data distribution, and the existence of at least three questions for each structure, which led to the introduction of the second generation of structural equation modeling methods. The smart pls software is one of the second generation software for structural equation modeling using the pls method, which has been chosen in the data analysis of this research due to its advantages over the first generation.

The steps of Analysis by pls Method are as Follows:

Fitting the measurement model, examining the relationships between the questions and the related latent variables.

Fitting the structural model, examining the relationships between the underlying variables.

Overall model fit

And finally, after confirming all 3 steps, we test the proposed hypotheses.

4.3.1 Checking the Measurement Model

In the current research, as seen in Tables (6) and (7), the results of Cronbach's alpha coefficient, composite reliability and convergent validity are given, and according to the mentioned limits for all 3 criteria in the tables, we conclude that the value Cronbach's alpha and composite reliability coefficients for all variables in the research are greater than 0.7 and AVE values are greater than 0.5.

Composite reliability coefficient)Alpha>0.7 (	Cronbach's alpha coefficients)Alpha>0.7 (	AVE>0.05	Title in the model
0.94	0.81	0.53	Competitive intelligence network
0.92	0.91	0.77	Competitive Advantage
0.85	0.81	0.68	Marketing capabilities
0.85	0.82	0.53	Business performance

Table 6: The Results of Cronbach's Alpha Coefficient, Composite Reliability and Convergent Validity

Composite reliability coefficient)Alpha>0.7 (	Cronbach's alpha coefficients)Alpha>0.7 (	AVE>0.05	Title in the model
0.96	0.95	0.66	Competitive smart grid
0.96	0.96	0.57	Business performance

Table 7: The Results of Cronbach's Alpha Coefficient, Composite Reliability and Convergent Validity Related to Independent and Dependent Variables

Divergent validity is the third criterion for examining the fit of measurement models, which examines the comparison of the correlation between the questions of a construct with that construct versus the correlation of those questions with other constructs. Table (8) shows the different validity of the research model. As it is clear in the table taken from the method of Fornell and Larker, the root value of the AVE of the variables in the present study, which are located in the houses in the main diameter of the matrix, is from the correlation value between them, which is in the lower and left houses of the main diameter of the order [17]. are given, it is more. Therefore, it can be stated that in the above model, the constructs (substantive variables) in the model interact more with their questions than with other constructs. In other words, the validity of model divergence is at a reasonable level.

Structures	Competitive smart grid	Competitive Advantage	Marketing capabilities	Business performance
Competitive smart grid	0.83			
Competitive Advantage	0.69	0.72		
Marketing capabilities	0.63	0.71	0.75	
Business performance	0.57	0.71	0.71	0.80

Table 7: Divergent Validity Results

Another test to evaluate the measurement model is its quality check test. The quality of the measurement model is calculated by the index of commonality with cross-validity (Cv Com). This index actually measures the path model's ability to predict observable variables through their corresponding latent variable values. If this index shows a positive number, the measurement model has the required quality. To check the entire measurement model, the average of this index is taken and if it is positive, the entire measurement model is of good quality [18]. The results of this test are given in table (9) and as you can see, this index is positive for all the variables in the research and the total average of this index is 0.63, which shows the good quality of the measurement models.

CV Com	Title in the model
0.79	Competitive smart grid
0.68	Competitive Advantage
0.53	Marketing capabilities
0.56	Business performance

Table 9: The Results of the Measurement Model Quality Test

According to the values obtained and presented in the above tables, all the criteria we have used to check the measurement model show the appropriateness of the measurement part of the model.

4.3.2 Review of the Structural Model

Unlike measurement models, the structural model has nothing to do with the questions (manifest variables) and only the hidden variables are examined along with the relationships between them. In the review of the structural model, the significance coefficients of z (t-values), the criterion and the criterion of the structural model are examined. The results of these criteria are mentioned in the form of tables in the analysis.

The first criterion of examining the fit of the structural model is the significant coefficients z. If the value obtained above the minimum statistic is considered at the reliable level, that relationship or hypothesis is confirmed. At the significance level of 90%, 95%, and 99%, this value is compared with the minimum t statistic of 1.64, 1.96, and 2.58, respectively.

The second criterion for examining the structural model is the coefficients related to the endogenous (dependent) hidden variables of the model. and it indicates the influence of an exogenous variable on an endogenous variable, and three values of 0.19, 0.33 and 0.67 are considered as the criterion values for weak, medium and strong values. The more related to the endogenous structures of a model, the better the fit of the model.

The third criterion is structural model review. This criterion, which was introduced by Stone and Geiser, specifies the predictive power of the model in the dependent variables. According to them, the models that have an acceptable structural fit should be able to predict the indicators related to the endogenous structures of the model. This means that if in a model, the relationships between the structures are defined correctly, the structures will be able to have a sufficient impact on each other's indicators, and in this way, the hypotheses will be checked correctly. The value should be 0.02, 0.15, and 0.35 for all endogenous structures as low, medium, and strong predictive power [18,19].

The t values for all questions are greater than 1.96 and are significant at the 95% confidence level. Also, Figure (2) which is related to the main model of the research, the t values for most paths are 1.96 and even 2.58, which shows the correctness of the structural relationships between the variables of the model. The results of this criterion are shown in figure (3) and table (10) for secondary hypotheses and figure (2) and table (11) for the main research hypothesis.

According to table number (10) and figure (number 2-4, numbers in circles), the value for the main endogenous variables is more than 0.67, which is acceptable and desirable.

According to table (11), since the amount of endogenous structures of the model is more than 0.33, it shows the strong predictive power of the model regarding this structure and once again confirms the fit of the structural model of the research.

Therefore, all the criteria we used to measure the structural model show the optimal fit of the structural model.

Description	R^2	Structures
Three values of 0.19 0.33 , and 0.67 respectively as the criterion value for weak, medium and strong values.	0.879	Competitive smart grid
	0.720	Competitive Advantage
	0.789	Marketing capabilities
	0.723	Business performance

Table 10: Coefficients of Research Variables

Description	Q^2	Pre - built structures
Three values of 0.02 ,0.15 , and 0.35 are low , medium , and strong predictive power , respectively.	0.422	Competitive smart grid
	0.354	Competitive Advantage
	0.423	Marketing capabilities
	0.312	Business performance

Table 11: Coefficients of Research Variables

4.3.3 Review of the General Model

The general model includes both parts of the measurement model and the structural model, and with the confirmation of its fit, the examination of the fit in a model is complete. There is only one criterion called GOF to examine the fit of the general model. The GOF criterion was invented by Tenenhaus and colleagues and is calculated according to the following formula. Three values of 0.01, 0.25 and 0.36 have been introduced as weak, medium and strong values for GOF.

* In the calculation, it is only related to the first order structures, and the second and third order structures do not have a role in the calculation of the average shared values. But in calculating the value of all the structures, including the first and second order, it is taken into account.

The mean value of shared values is 0.63 and the mean value is 0.76. According to the following formula, the standard value of GOF equal to 0.69 was obtained, which shows the strong fit of the overall research model according to the above classification [20].

Description	GOF
Three values of 0.01 0.25 ,and 0.36 are respectively weak, medium and strong fit.	$GOF = \sqrt{\overline{Communalities} \times \overline{R^2}} = \sqrt{۰.۶۳ \times ۰.۷۶} = ۰.۶۹$

Table 12: The Results of the General Fit of the Model with the GOF Criterion

After confirming the fit of the general model that was introduced as the conceptual model of the research, we will examine the research hypotheses. It should be noted that in order to investigate the sub-hypotheses of the research, we have done modeling using smart pls software using the variables examined in the main research model, which is shown in figure (2) of the model related to the sub-hypotheses of the research. In this model, Cronbach's alpha coefficient, AVE and composite reliability coefficient are all higher than the standard value. Also, the value of the GOF criterion for the model related to the sub-hypotheses of the research in Figure (2) was equal to 0.66, which shows the high fit of the model [21-28].

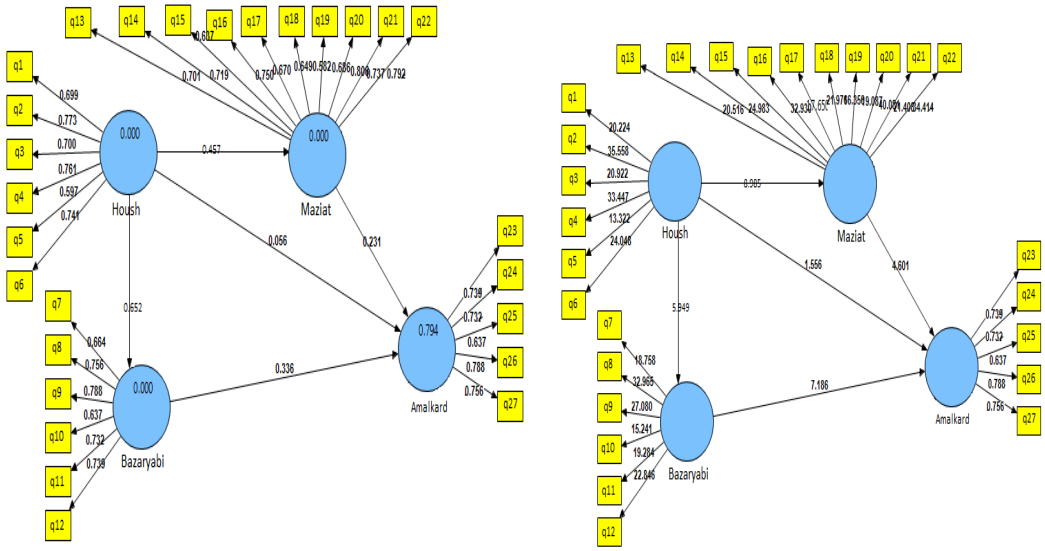

Figure 2: Standardized factor loading coefficients and t-values coefficients of the research structural model (sub-hypotheses)

4.4 Testing Hypotheses

After confirming the model in the structural, measurement and general sections, we will examine the proposed hypotheses. We use the t statistic and the regression beta coefficient (path coefficient) to check the hypotheses. In fact, by using the t statistic, we find out whether one structure has an effect on another structure or not. The next step is to determine the intensity of the influence of the variables on each other using the standardized path coefficients. After determining the t coefficients and the factor loadings extracted from Figure (2), we present the values in the table below and state the results of the sub-hypotheses test of the research.

Test result	t statistic	Path coefficient	Direction	
Confirmed	4.601	0.231	Business performance	Competitive intelligence network
Confirmed	3.556	0.756	Competitive Advantage	Competitive intelligence network
Confirmed	7.186	0.336	Marketing capabilities	Competitive intelligence network
Confirmed	8.985	0.457	Business performance	Marketing capabilities
Confirmed	5.949	0.652	Business performance	Competitive Advantage

Table 13: Investigating the path of research

5.2 Findings, Discussion and Conclusion

One-sample T-test has been used to check the state of the competitive intelligence network. The significance level of 0.000 indicates that this variable has a favorable situation. In this section, to confirm or reject this hypothesis, we use the coefficients obtained after running the model, which after running the model with the method of modeling structural equations with the partial least squares approach Smart pls2 statistical software was obtained and shown in table (12). The results of Table (12) and Figure 2 show that the coefficient of significance between the two variables of competitive intelligence network and business performance is equal to 4.601, which is greater than 2.58. The higher value of the t statistic than the boundary limit of 2.58 shows that according to the collected data and with a probability of 99, we conclude that the hypothesis proposed in this section that the competitive intelligence network affects business performance is confirmed. Also, the beta coefficient (effect coefficient) between these two variables in this model is equal to 0.231, which shows

the good effect of the competitive intelligence network on business performance.

Stefanikova et al. in their research have shown the relationship between the competitive intelligence network and the sustainable growth of the company at the 95% level using the regression test. Nabati and Matofi have confirmed the relationship between the competitive intelligence network and organizational learning using the Pearson test with an impact factor of 0.559. also investigated the effect of competitive intelligence network on organizational innovation in a research. In this research, researchers have used structural equation modeling, which has been confirmed with a significant number of 2.827 and an influence coefficient of 0.306 [21-25].

To check the state of competitive advantage, the sample t-test has been used. A significance level of 0.000 indicates that this variable has a favorable situation. In this section, in order to confirm or reject this hypothesis, we use the coefficients obtained after running the model, which were obtained after running the model with the method of structural equation modeling with the partial least squares approach, using the Smart pls2 statistical software, and are shown in table (16-4) it has been shown. The results of table (12) and figure (2) show that the coefficient of significance between the two variables of competitive advantage and business performance is calculated equal to 1.556, which is less than 1.96. The fact that the value of the t statistic is less than the boundary limit of 1.96 shows that according to the collected data and with a probability of 99, we conclude that the hypothesis proposed in this section that the competitive intelligence network influences business performance with the mediating role of marketing capabilities is rejected. Also, the beta coefficient (effect coefficient) between these two variables in this model is equal to 0.056.

Stefanikova et al. in their research have shown the relationship between competitive advantage and sustainable growth of the company at the 95% level using the regression test. Nabati and Matofi have confirmed the relationship between competitive advantage and organizational learning using Pearson's test with an impact factor of 0.736. have also investigated the effect of competitive advantage on organizational innovation in a research. In this research, researchers have used structural equation modeling, which has been confirmed with a significant number of 6.28 and an influence coefficient of 0.775 [26-31].

To check the status of marketing capabilities, a sample T-Tech test has been used. The significance level of 0.000 indicates that this variable has a favorable situation. In this section, to confirm or reject this hypothesis, we use the coefficients obtained after running the model, which after running the model with the method of modeling structural equations with the partial least squares approach Smart pls2 statistical software was obtained and shown in table (12). The results of Table (12) and Figure (2) show that the coefficient of significance between the two variables of marketing capabilities and business performance is equal to 7.186, which is greater than 2.58. The fact that the value of the t statistic is greater than the limit of 2.58 shows that according to the collected data and with a probability of 99, we conclude that the hypothesis proposed in this section that the competitive intelligence network influences business performance with the mediating role of marketing capabilities is confirmed. Also, the value of the beta coefficient (effect coefficient) between these two variables in this model is equal to 0.336, which shows the good effect of the competitive intelligence network variable on business performance with the mediating role of marketing capabilities. Stefanikova et al. in their research have shown the relationship between marketing capabilities and sustainable growth of the company at the 95% level using the regression test. Nabati and Matofi have confirmed the relationship between the organization's marketing and learning capabilities using the Pearson test with an impact factor of 0.736. Allameh et al. also investigated the effect of marketing capabilities on organizational innovation in a research. In this research, researchers have used structural equation modeling, which has been confirmed with a significant number of 5.731 and an influence coefficient of 0.266 [32-36].

Based on the findings of the present research and comparing these results with similar researches, as a general conclusion, it can be said that the role of competitive smart network has a very high impact on business performance with the mediating role of marketing capabilities and competitive advantage of home appliance manufacturing companies located in the industrial towns of Isfahan province. The obtained correlation coefficient shows that the intensity of this effect is also very high. After that, competitive intelligence network, competitive advantage and marketing capabilities respectively have the greatest effect on business performance in home appliance manufacturing companies located in industrial towns of Isfahan province [36-48].

References

1. Ali, B. J. (2021). Assessing (The impact) of advertisement on customer decision making: Evidence from an educational institution. Ali, BJ (2021). Assessing (The impact) of advertisement on customer decision making: Evidence from an educational institution. *Afak for Science Journal, 6*(01), 267-280.
2. Anwar, G., & Shukur, I. (2015). Job satisfaction and employee turnover intention: A case study of private hospital in Erbil. *International Journal of Social Sciences & Educational Studies, 2*(1), 73-80.
3. Anwar, G., & Abd Zebari, B. (2015). The relationship between employee engagement and corporate social responsibility: A case study of car dealership in Erbil, Kurdistan. *International Journal of Social Sciences & Educational Studies, 2*(2), 45-50.
4. Abdullah, M. S., Toycan, M., & Anwar, K. (2017). The cost readiness of implementing e-learning. *Custos E Agronegocio On Line, 13*(2), 156-175.

5. Anwar, K. (2017). Analyzing the conceptual model of service quality and its relationship with guestsâ€™ satisfaction: a study of hotels in erbil. *The International Journal of Accounting and Business Society, 25*(2), 1-16.
6. Andavar, V., & Ali, B. J. (2020). Rainwater for water scarcity management: An experience of Woldia University (Ethiopia). ANDAVAR, V., ALI, BJ, & ALI, SA (2020). Rainwater for Water Scarcity Management: An Experience of Woldia University (Ethiopia). *The Journal of Business Economics and Environmental Studies, 10*(4), 29-34.
7. López-Robles, J. R., Otegi-Olaso, J. R., Arcos, R., Gamboa-Rosales, N. K., & Gamboa-Rosales, H. (2018). Mapping the structure and evolution of JISIB: A bibliometric analysis of articles published in the Journal of Intelligence Studies in Business between 2011 and 2017. *Journal of intelligence studies in business, 8*(3).
8. Koriyow, O. I., & Karugu, L. (2018). Competitive intelligence strategies and performance of commercial banks in Garrisa County, Kenya. *International Academic Journal of Human Resource and Business Administration, 3*(1), 371-394.
9. Falahat, M., Ramayah, T., Soto-Acosta, P., & Lee, Y. Y. (2020). SMEs internationalization: The role of product innovation, market intelligence, pricing and marketing communication capabilities as drivers of SMEs' international performance. *Technological forecasting and social change, 152*, 119908.
10. Xuefei, F., Jian, H., & Hongmei, Y. (2018). Research on Enterprise Competitive Technology Intelligence Based on Improved Patent Portfolio. *Journal of Intelligence. 47* (12), 243-244.
11. Gatibu, J., & Kilika, J. (2017). Competitive intelligence practices and performance of Equity Bank in Kenya. *International Academic Journal of Human Resource and Business Administration, 2*(4), 219-239.
12. Hendar, H., Ratnawati, A., Ab Razak, W. M. W., & Abdullah, Z. (2020). Market intelligence on business performance: The mediating role of specialized marketing capabilities. *Journal of Intelligence Studies in Business, 10*(1).
13. Kumar, V., Saboo, A. R., Agarwal, A., & Kumar, B. (2020). Generating competitive intelligence with limited information: a case of the multimedia industry. *Production and Operations Management, 29*(1), 192-213.
14. Muñoz-Cañavate, A., & Hípola, P. (2017). Information resources for competitive intelligence: An approach to the information available on the European Union's websites. *Journal of Business & Finance Librarianship, 22*(1), 32-45.
15. Mehl, E., & Le Bon, J. (2019, May). Social Listening: Adapting Customer and Competitive Intelligence to the Digital Era: An Abstract. In *Academy of Marketing Science Annual Conference* (pp. 243-244). Cham: Springer International Publishing.
16. Akaba, S. K. (2015). Investigating Electronic Marketing and Hotel Performance in Ghana: The Customers' Perspective (Doctoral dissertation, University of Ghana).
17. McCarthy, D. J., Puffer, S. M., & Darda, S. V. (2010). Convergence in entrepreneurial leadership style: Evidence from Russia. *California management review, 52*(4), 48-72.
18. Peteraf, R. E. & Madhavaram, S. (1993). What Firms Learn Depends on What Firms Know: The Implications of Prior Knowledge for Market Orientation. *Marketing Management Journal, 17* (1): 178 – 190.
19. Hoopes, D. G., Madsen, T. L., & Walker, G. (2003). Guest editors' introduction to the special issue: why is there a resource-based view? Toward a theory of competitive heterogeneity. *Strategic management journal, 24*(10), 889-902.
20. Barney, M. (2021). Key Intelligence Topics in Competitive Intelligence and GlobalBusiness. *London: Westport, Connecticut: Greenwood. 11*(3), 402-418.
21. Pickvan, M. (2018). A look at how and why entrepreneurship and corporate entrepreneurship would be. *Journal of Business Studies, 34*(1), 58-39.
22. Foss, N. J., & Lyngsie, J. (2011). The Emerging strategic entrepreneurship field: Origins, key tenets, and research gaps. Edward Elgar.
23. Raduan, C. R., Jegak, U., Haslinda, A., & Alimin, I. I. (2009). Management, strategic management theories and the linkage with organizational competitive advantage from the resource-based view. *European Journal of Social Sciences, 11*(3), 402-418.
24. Neli, H. (2018). Factors affecting the competitiveness of the insurance industry: Using a structural equation model (SEM). *Ph. D. Dissertation in Business Management, Tehran, Payam Noor University, 59*(2), p 50-62.
25. Venkatraman, N., and Ramanujam, V. (1986). "Exploring corporate entrepreneurship in privatized firms", Journal of World Business, 45, 2–8.
26. Ford, J. D., and Schellenberg, D. A. (1982). In Search of Best Practice in Global Competitive Intelligence. *London, Westport, Connecticut: Greenwood Publishing. 42*(2): 814-836.
27. Tej Adidam, P., Gajre, S., & Kejriwal, S. (2009). Cross-cultural competitive intelligence strategies. *Marketing Intelligence & Planning, 27*(5), 666-680.
28. Tej Adidam, P., Banerjee, M., & Shukla, P. (2012). Competitive intelligence and firm's performance in emerging markets: an exploratory study in India. *Journal of Business & Industrial Marketing, 27*(3), 242-254.
29. Bose, R. (2008). Competitive intelligence process and tools for intelligence analysis. *Industrial management & data systems, 108*(4), 510-528.
30. Calof, J. L., & Wright, S. (2008). Competitive intelligence: A practitioner, academic and inter-disciplinary perspective. *European Journal of marketing, 42*(7-8), 717-730.
31. Sewdass, E. P. (2009). The Relationship between Business Intelligence and Business Success. *Journal of Competitive Intelligence and Management, 3*(1), 6-15.
32. Chen, M. H. (2007). Entrepreneurial leadership and new ventures: Creativity in entrepreneurial teams. *Creativity and*

innovation management, 16(3), 239-249.
33. Gupta, V., MacMillan, I., & Surie, G. (2003). Entrepreneurial leadership: Developing a cross-cultural construct. Journal of Business Venturing, in press.
34. Hitt, M. A., Ireland, R. D., Camp, S. M., & Sexton, D. L. (2001). Strategic entrepreneurship: Entrepreneurial strategies for wealth creation. *Strategic management journal, 22*(6-7), 479-491.
35. Hitt, M. A., Ireland, R. D., Sirmon, D. G., & Trahms, C. A. (2011). Strategic entrepreneurship: creating value for individuals, organizations, and society. *Academy of management perspectives, 25*(2), 57-75.
36. Jaworski, B. J., Macinnis, D. J., & Kohli, A. K. (2002). Generating competitive intelligence in organizations. *Journal of market-focused management, 5*(4), 279-307.
37. Kraus, S., & Kauranen, I. (2009). Strategic management and entrepreneurship: Friends or foes?. *International Journal of Business Science & Applied Management (IJBSAM), 4*(1), 37-50.
38. Kraus, S., Kauranen, I., & Henning Reschke, C. (2011). Identification of domains for a new conceptual model of strategic entrepreneurship using the configuration approach. *Management research review, 34*(1), 58-74.
39. Kyrgidou, L. P., & Hughes, M. (2010). Strategic entrepreneurship: origins, core elements and research directions. *European business review, 22*(1), 43-63.
40. Auxiliadora do Nascimento Mélo, M., & Dumke de Medeiros, D. (2007). A model for analyzing the competitive strategy of health plan insurers using a system of competitive intelligence. *The TQM Magazine, 19*(3), 206-216.
41. Mugo, H. W., Wanjau, K., & Ayodo, E. (2012). An investigation into competitive intelligence practices and their effect on profitability of firms in the banking industry: A case of Equity Bank.
42. Štefániková, Ľ., & Masàrovà, G. (2014). The need of complex competitive intelligence. *Procedia-Social and Behavioral Sciences, 110*, 669-677
43. Tamayo-Torres, I., Ruiz-Moreno, A., & Verdú, A. J. (2010). The moderating effect of innovative capacity on the relationship between real options and strategic flexibility. *Industrial Marketing Management, 39*(7), 1120-1127.
44. Tsai, I. C., & Lei, H. S. (2016). The importance and satisfaction of collaboartive innovation for strategic entrepreneurship. *Eurasia Journal of Mathematics, Science and Technology Education, 12*(3), 569-582.
45. Shokrollahi, M. (2025). Explaining and comparing the level of customer satisfaction with the quality of electronic services of public and private banks (Case study: Tejarat Bank and Saman Bank).
46. Shokrollahi, M. (2025). Studying the Role of Organizational Culture and Artificial Intelligence Integration in Business Performance. Available at SSRN 5361971.
47. Shokrollahi, M., Eftekhari, E., Mostahfezian, M., & Zahedi, H. (2024). Adoption of strategies of electronic digital innovation and transformation and new information technologies via application of AI based on organizational culture within commercial companies. *Power System Technology Journal, 48* (2), 418.
48. Shokrollahi, M. (2026). Leveraging AI, Neuromarketing, and Organizational Culture to Draw Foreign Investment into Iran's Real Estate Sector. Available at SSRN 6039815.