

Investigating the impact of brand equity on the competitive intelligence of knowledge-based companies

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Keywords: Brand equity, brand awareness, brand loyalty, brand association, perceived quality, competitive intelligence

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Abstract

Background and purpose: A powerful brand creates value for both the customer and the organization. On the one hand, brands provide a concise and useful tool to simplify the process of choosing and buying a product or service, and make the process of processing data and information easier and faster for them, thereby creating value for customers. Therefore, the present study deals with the effect of brand value on the competitive intelligence of Razavi Khorasan Islamic Azad University knowledge-based companies. **Methodology:** The research method used is descriptive, survey and correlation. Also, the statistical population in the present study is all managers of knowledge-based companies of Razavi Khorasan Islamic Azad University. The sample size was determined using the Cochran formula of 82 people, and the sampling method of the present study is simple random sampling. The library and field method collected the research data, and a questionnaire was used as the tool. The reliability of the questionnaires has been confirmed using Cronbach's alpha method of 0.859 and the instrument's validity using the content method. Research information was analyzed with the help of Lisrel software and using statistical, descriptive, and inferential tests. **Results:** The results of this research indicate that brand awareness, brand loyalty, brand association, and perceived quality have a positive and significant effect on competitive intelligence. **Conclusion:** Based on the research findings, it is suggested that, by taking a dynamic approach, managers pay attention to the special value of the brand and the development of competitive intelligence as two strategic functional areas of the company.

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Introduction

Today, many organizations believe that one of their most valuable assets is the brand of their products and services. Many researchers have also pointed out that creating a strong brand is one of the key factors for achieving competitive advantage and long-term survival in the market (Santos et al., 2013). A strong brand creates value for both the customer and the organization. On the one hand, brands provide a concise and useful tool to simplify the process of choosing and buying a product or service, and make the process of processing data and information easier and faster for them, thereby creating value for customers. On the other hand, product design and production processes may be easily copied. However, the lasting image and role left in the minds of individuals and organizations based on several years of marketing activity and brand experience must be retained and copied. (Keller, 2008). As a result, companies can set a higher price for their products based on a strong brand, create better commercial leverage, increase their sales and profit margins, and reduce their vulnerability to competitors (Aaker and Joachimsthaler, 2000). On the other hand, organizations need new decision-making tools to continue their economic life in a highly competitive environment. Among these tools is the intelligence of competitive intelligence, which is rapidly growing and expanding globally and among companies and is becoming a standard that can help managers and organizations make smart decisions. Competitive intelligence is a process whose product is evaluated information. Its most important task is to support the decision-making processes that executive managers usually carry out. The necessity of intelligence in reducing uncertainty and riskiness in decision-making is obvious. The main purpose of analyzing competitive information is to understand the industry and its competitors better and, as a result, achieve better results in business (Pirayesh & Alipour, 2012).

On the other hand, organizations in a competitive environment will win today if they have a deeper understanding and evaluation of their field of activity and provide themselves with more competitive advantages. In today's world, with the characteristics of fast-growing markets, relying on old information reduces insight and the loss of opportunities in front of the organization. Tomorrow's success in the field of business belongs to organizations with more insight and information about themselves and the competition environment. Information is considered one of the important items of strategic assets and marketing tools. Gathering and evaluating information related to competing companies plays a vital role in formulating strategies. Building the capacity to develop competitive intelligence requires providing the necessary training and skills with a market-oriented approach and developing brand value based on the needs of society at all levels. On the other hand, the development and growth of businesses require recognizing and removing obstacles and creating suitable fields for the development of activities based on branding value. The institutional framework affects the development of businesses, especially by influencing competitive

behavior, and for this reason, it is necessary to investigate and analyze (Wright et al., 2002). Therefore, due to the abundance of information in today's world, it is no longer considered to collect as much information as possible. However, it has become important to benefit from the information and turn it into practical intelligence to guide organizational decisions to develop the brand's special value. The more information a company can obtain from competing companies, the more likely it is to formulate and implement successful strategies based on competitive intelligence and brand equity (Pirayesh and Alipour, 2012). These approaches require managers who are determined to succeed and capable of turning dreams into reality. However, among the study approaches on competitive intelligence, the systemic approach seems complete. Understanding competitive intelligence for the growth of entrepreneurial companies as a system will be a comprehensive approach to understanding this phenomenon, a phenomenon that consists of different components, including branding managers, society, and the environment (Kamelia, 2014). Therefore, the ability to discover opportunities, provide the required financial resources, identify businesses, hire marketers to develop operational processes, and provide the human resources needed to manage physical facilities and services to develop competitive intelligence is very important. In such an environment, successful companies, especially entrepreneurial knowledge-based companies, seek to use competitive intelligence, exploiting current competitive advantages and discovering innovations that will create future competitive advantage, as a key factor in achieving brand equity enhancement. However, the necessity of activities based on competitive intelligence and special brand value simultaneously significantly impacts the success of knowledge-based companies, developing effective competitive intelligence resources appropriate for current and future activities (Håkansson and Nelke, 2015). Finally, this issue is considered a kind of weakness both from the competitive and economic aspects of services. The special value of the brand in knowledge-based companies is facing problems. It seems to be due to the use of incorrect strategies in the field of marketing, brand, and advertising, as well as neglecting the values of authentic brands and paying little attention to the customer's point of view. In our country, despite the presence of reliable and long-standing brands, so far, there has not been much activity in the field of brand valuation and adaptation of its desirability components to customers' wishes and needs and, ultimately, purchase intentions. In sum, the current brand situation in Iran has many problems. To a greater extent, some reputable brands have been forgotten over time due to the negligence of the authorities. Nevertheless, the lack of field research to create a model and experts' reliance on the review of existing literature is very impressive in the existing studies. Therefore, the brand equity model based on competitive intelligence as a framework to achieve the vital goal of sustainability in knowledge-based companies of the Islamic Azad University, and its antecedents and consequences, have shortcomings that the researchers themselves recognize. According to

the issues raised, a concern arises as follows: the presentation of a model of special brand value based on competitive intelligence in the knowledge-based companies of Azad Islamic University of Khorasan Razavi province.

Literature Review

Brand equity: One of the most famous and perhaps the most important concepts of marketing today, which was first formed in the 1980s, is the concept of brand equity (Aaker, 1991). However, the emergence of this concept for marketing professionals includes both positive and negative aspects. The positive side is that brand equity makes and emphasizes the importance of the brand in the marketing strategy, maintains its focus on research activities, and ultimately responds to the demands of the organization's top management (Keller, 2008). However, the negative side is that this concept has been presented in different ways and with different goals, and there still needs to be a single attitude about how to introduce, portray and measure the special value of the brand. In general, the emphasis of the branding discussion is on creating products and services with impressive and superior brand power. However, according to many different views, brand equity includes marketing influences that are unique to a brand. In other words, brand equity describes the various achievements of marketing activities on branded products and services (Keller, 2008; Yoo, Donthu, and Lee, 2000).

Brand Awareness: Brand awareness is the potential buyer's ability to recognize or remember that the brand belongs to a particular product class. If a brand is the first name that comes to mind, that name is the top name in terms of awareness. Our awareness of the brand is related to the power of the information node in the memory. The ability of customers to identify the brand under various conditions shows their awareness of the brand. Brand awareness is one of the main factors in creating added brand value, and it is also one of the key factors influencing the level of customer knowledge about the brand (Behnam and colleagues, 2015).

Perceived quality of the brand: Today, service provision in sports is more focused on customers. This includes not only the quality of the existing processes but also the awareness of the customers about the product (Rajabi et al., 2012). Most marketers understand the importance of providing a quality service experience, including fewer complaints, more positive word of mouth, additional product purchases, less competition, lower transaction costs, and lower marketing costs. All these positive results contribute to the profitability and sustainability of non-profit organizations such as service centers (Ahmadi, 2012).

Brand loyalty: Loyalty is an important concept in marketing strategy, and according to Aker, brand loyalty is the core of brand equity. In researching brand loyalty, the main challenge is defining this concept and its measurement criteria. The American Marketing

Association (2013) defines brand loyalty as the advantage that a customer repeatedly buys from one supplier instead of buying a product from several suppliers (Behnam et al., 2015). Brand association: Keller (2008) defines brand association as what the brand is believed to mean to consumers. Anything that is associated with the brand in memory is defined as a brand association. The brand association can influence consumers' purchase intention based on the recall of brand information (Jung and Sung, 2008). Brand associations include brand meanings to consumers (Pappu, Quester, & Cooksey, 2005). Brand evokers are anything that brings the brand to mind. These associations are connected, creating a seamless network of brand knowledge (Aaker, 1991). In this regard, Asadollah et al. (2009) investigated the development of a relationship model between customer-based brand equity and brand performance in a competitive market. This article correctly identified, selected, and operationalized the structures of customer-based brand equity and brand performance in the market. Also, by examining how their effects and relationships are related, a model should be developed that examines and tests the special value of the brand, for example, in the dairy industry and in the city of Tehran (Asadollah et al., 2009).

Competitive intelligence: Competitive intelligence is a strategic management tool and one of the fastest-growing business areas in the world. Also, competitive intelligence is one of the important techniques in creating a competitive advantage. Competitive intelligence is the art of finding, collecting, and storing information for access and use by personnel at all levels of the organization to support the existing position against competitive threats while shaping the organization's future (Nazaripour et al., 2016).

By examining the relationship between the two variables in the studies of Ebrahimzadeh and Rajaei (2015) as a study of the effect of competitive intelligence on brand equity, it can be concluded that competitive intelligence has a positive and significant effect on the brand equity of Ansar Company in Urmia city. Also, according to the analysis of variance, among the dimensions of brand equity, brand loyalty was the highest, and perceived brand quality was the lowest from the customers' perspective of Ansar Company of Urmia. In addition, Håkanson (2015), in a study on the promotion of competitive intelligence: the importance of marketing, communication, and evaluation by developing a multi-level conceptual model in the field of competitive intelligence. The model presented in this research provides a systemic and systematic view in sustainable entrepreneurship and includes different levels of analysis. The comprehensive framework for the study of sustainable entrepreneurship helps to identify the salient and influential elements from the point of view of the organization's strategic plans and goals, as well as measurable and internationally comparable results. Also, success in competitive intelligence marketing is completely dependent on the level of success in marketing and communication inside and outside the organization. On the other hand, Yateen (2016) analyzed various factors of the competitive intelligence landscape for competitive advantage over entrepreneurial

activities. This article provides a framework for the patenting landscape and competitive intelligence driven by strategic intent. This paper advocates the benefits of "quantitative" and "qualitative" statistical analysis of human intelligence for competitive intelligence. Furthermore, this paper defines four levels of analysis with bounded examples for effective competitive intelligence. In addition, Mena Voyshu (2018) investigated brand value and customer behavioral goals based on a modified model. The obtained results indicate a strong relationship between brand value and all four concepts of behavioral intention with customer satisfaction and partially support these relationships. In addition, the results changed the moderating effect of customers' age and education on the customer satisfaction relationship.

According to the theoretical foundations, the main hypothesis of the research is formulated as follows:

Main hypothesis: brand equity has a positive effect on competitive intelligence.

Sub-hypotheses:

- 1- Brand awareness has a positive effect on competitive intelligence.
- 2- Brand loyalty has a positive effect on competitive intelligence.
- 3- Brand association has a positive effect on competitive intelligence.
- 4- Perceived quality has a positive effect on competitive intelligence.

Methodology

The research method used is descriptive, survey and correlation. Also, the statistical population in the present study is all managers of knowledge-based companies of Razavi Khorasan Islamic Azad University. The sample size was determined using the Cochran formula of 82 people, and the sampling method of the present study is simple random sampling. The library and field method collected the research data, and a questionnaire was used as the tool. The reliability of the questionnaires has been confirmed using Cronbach's alpha method of 0.859 and the instrument's validity using the content method. Research information was analyzed with the help of Lisrel software and using statistical, descriptive, and inferential tests.

Results

The findings of this research are categorized into two general parts; The first group of findings is dedicated to the validity and reliability of constructs and indicators. In the partial least squares method, two tools AVE and CR are usually used to evaluate the reliability of structures. Since Cronbach's alpha provides a stricter estimate of the internal reliability of variables, composite reliability measures are used in partial least square path models. Of course, Cronbach's alpha needs to be greater than 0.7. According to Table 1, CR and Cronbach's alpha for all constructs is greater than 0.7.

Table 1: The results of checking the validity of the variables

CR	Cronbach's alpha	AVE	Variable
0.859	0.851	0.812	Brand awareness
0.860	0.849	0.612	Brand loyalty
0.947	0.902	0.773	Brand associations
0.901	0.812	0.689	perceived quality

Also, according to the numbers calculated for the indicators, it can be seen that all the CR values are greater than 0.7 and the AVE value is greater than 0.6, so we are witnessing the composite or construct reliability. Therefore, the construct validity and reliability are also confirmed according to the numbers in the table. This research's second category of findings is dedicated to the structural model test and research hypotheses. For this purpose, the path coefficient and determination coefficient have been used. The path coefficient shows each of the predictive variables' contribution in explaining the criterion variable's variance. The coefficient of determination also shows the explained variance of the criterion variable by the predictor variables. In the current research, LISREL 8.8 software was used, which is a widely used and useful software in the field of modeling structural equations based on the partial least squares method. The software's output after testing the research's conceptual model is shown in Figures 1 and 2.

Main hypothesis test:

Figure 1 shows the structural model of the main research hypothesis in standard estimation mode. Figure 3 also shows the structural model of the main hypothesis in the mode of significance coefficient.

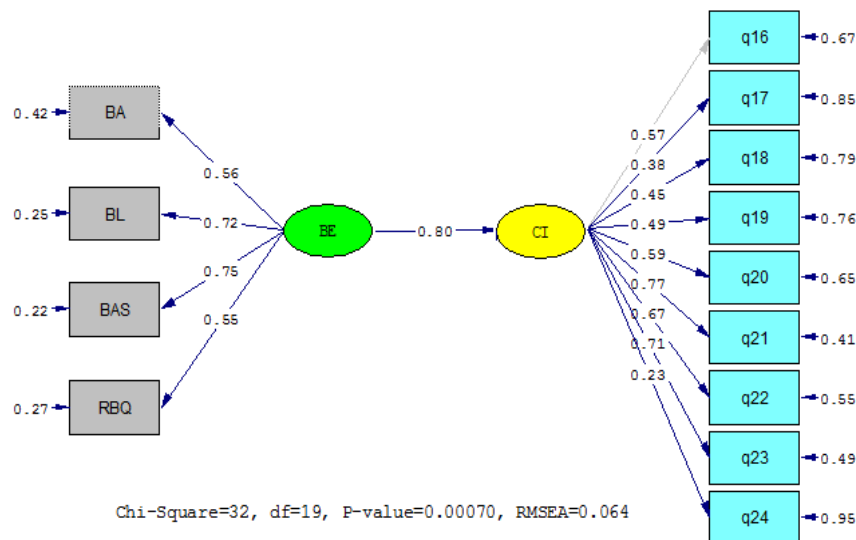


Figure 1: Structural model of the main hypothesis in standard estimation mode

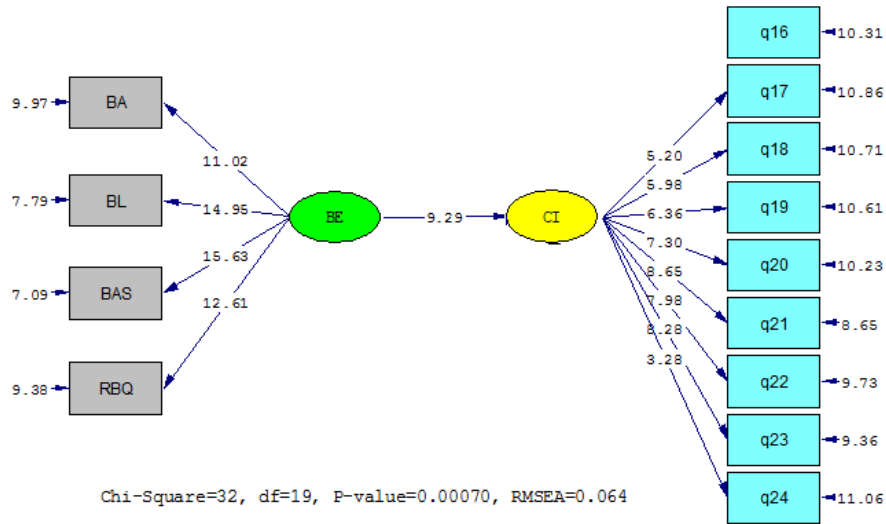


Figure 2: The structural model of the main hypothesis in the case of significant coefficients

Figure 2 shows the significance of variable relationships. If the value of the t statistic is between 1.96 and -1.96, the explained variance value is considered meaningless. According to the output of Figure 3, all the coefficients with a figure greater than 1.96 are statistically acceptable. Table 2 shows the results of the causal analysis of the structural equation model to test the main hypothesis of the research. The model results confirm the effect of brand equity (CBBE) on competitive intelligence.

Table 2: The results of the main research hypothesis test

Hypothesis	Impact coefficient	t	Result
The effect of brand equity on competitive intelligence	0/80	9/29	Confirmed

According to the main hypothesis model in the case of significant numbers, it can be seen that the t-statistic between two variables is equal to 9.29. And since this value is outside the range [1.96 & 1.96], this hypothesis is confirmed.

Test of sub-hypotheses:

Figure 3 shows the structural model of the sub-hypotheses of the research in the standard estimation mode. Figure 4 also shows the structural model of sub-hypotheses in the case of a significant coefficient.

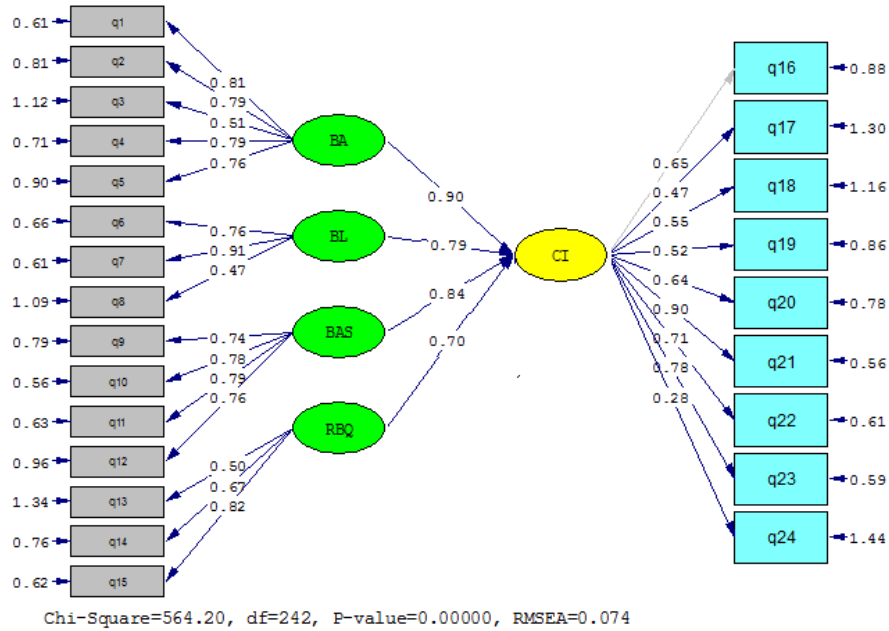


Figure 3: Structural model of sub-hypotheses in standard estimation mode

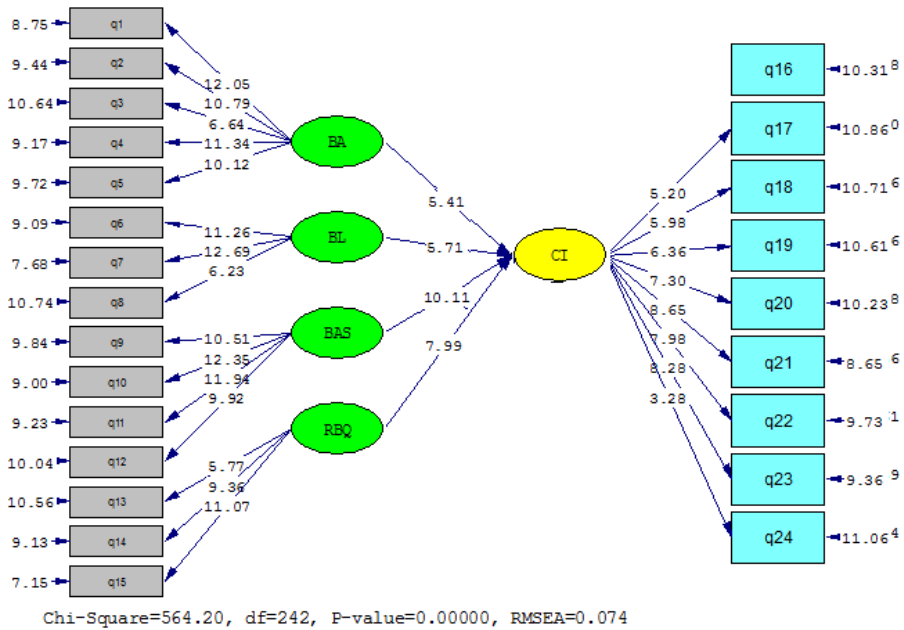


Figure 4: Structural model of sub-hypotheses in the case of significant coefficients

Based on the above figures, the first hypothesis based on the effect of brand awareness on the competitive intelligence of knowledge-based companies, according to the value of the critical coefficient or t-value (5.41), which is outside the range [1.96, -1.96], with a probability of 99% will be accepted.

The second hypothesis regarding the effect of brand loyalty on the competitive intelligence of knowledge-based companies is accepted with a probability of 99% according to the value of the critical coefficient or t-value (5.71) which is outside the range [-1.96, 1.96].

The third hypothesis regarding the effect of brand association on the competitive intelligence of knowledge-based companies is accepted with a probability of 99% according to the value of the critical coefficient or t-value (10.11) which is outside the range [1.96, -1.96].

The fourth hypothesis regarding the effect of perceived quality on the competitive intelligence of knowledge-based companies is accepted with a probability of 99%, considering the value of the critical coefficient or t-value (7.99), which is outside the range [1.96, -1.96]. Table 3 shows the results of the causal analysis of the structural equation model to test the research hypotheses.

Table 3: Results of research hypotheses

Hypotheses	β	t	Result	Relationship direction
The effect of brand awareness on competitive intelligence	0.90	5.41	Confirmed	+
The effect of brand loyalty on competitive intelligence	0.79	5.71	Confirmed	+
Brand association on competitive intelligence	0.84	10.11	Confirmed	+
The effect of perceived quality on competitive intelligence	0.70	7.99	Confirmed	+

Table 4: Fit indices of the research model

Fit index	Value	Appropriate value	Result
χ^2/df	2/33	<3/00	proper fit
GFI	0/92	> 0/90	proper fit
AGFI	0/93	> 0/7	proper fit
RMR	0/010	<0/05	proper fit
NFI	0/94	> 0/90	proper fit
IFI	0/96	> 0/90	proper fit
RMSEA	0/074	> 0/08	proper fit

Discussion and Conclusion

Based on the research findings, it is suggested that by adopting a dynamic approach, managers pay attention to the special value of the brand and the development of competitive intelligence as two strategic functional areas of the company. These two concepts should be considered systematic processes to help advance the organization's strategic goals and

improve competitive performance. By creating appropriate structures, processes and systems, and developing effective intra- and extra-organizational relationships, managers should develop the branding awareness level of employees and create a synergistic interaction between the special value of the brand and the development of competitive intelligence so that they can use them to create value. However, in order to understand the development of human resources and strengthen the growth of intellectual capital, the following suggestions can be made:

Based on the research, today's managers should have a correct understanding of competitive intelligence and the factors affecting it. This research's findings will help managers better understand the factors affecting the company's performance and help them make better and more comprehensive decisions.

Based on the research model, it is suggested that knowledge-based companies strengthen the ability to predict market opportunities and threats for competitive activities to increase competitive intelligence. This is achieved through strategic foresight in organizations. Companies can develop strategic foresight by using managers' insights and experiences and the organization's awareness of competitors' innovative and competitive actions. The use of experienced and highly intelligent managers and the design and implementation of systematic processes for collecting competitors' information are among the practical measures in this field. Knowledge-based companies must design processes to actively understand environmental opportunities to create sustainable competitive advantages for themselves in today's turbulent business environment. Also, in order to understand that every opportunity is not suitable for operationalization, it is suggested that companies be alert with a systematic insight toward opportunity options. Also, they should check the possibility of using the opportunities according to their field of activity and, based on the analysis of their resources and competencies, establish a proper connection between the company's capabilities and the key opportunities of the market.

Now, the impact of each of the special value dimensions on the company's competitive performance has been determined. Therefore, by considering their resources, managers can avoid allocating resources to improve the company's performance in advertising and branding and avoid allocating resources for indicators that do not have a positive effect or have less impact.

Managers should create a synergistic interaction between competitive intelligence and special brand value by creating appropriate structures, processes, and systems and developing effective internal and external relationships so that they can use these to create better business value.

Managers and decision-makers should pay attention to criteria such as brand awareness and service quality, which influence customer loyalty toward the brand. Also, they should focus on more than just the latest news. They should foster positive attitudes, including

satisfaction, among customers based on the support of customer awareness programs for the company's brand and work hard to strengthen them.

Managers of knowledge-based companies should strive to strengthen the service quality in their customers' sights. In other words, moving towards strengthening the brand's perceived quality should be considered in the long-term goal of this company and its branches. Because of this way, they can increase the loyalty of customers to the brand of knowledge-based companies and ultimately earn more profit. Due to the direct relationship between the perceived quality and the company's performance, the customers, under the influence of the service quality they perceive, increase their loyalty and provide word-of-mouth advertising. Through up-to-date and efficient services, the appropriate behavior of employees, performing the promised services on time, honesty, appropriate information, and responding to the requests of customers, the organization reaches its quality goals. Also, they create the appropriate attitude of satisfaction among their customers. Finally, they can attract and retain more customers in this dominant competitive environment by increasing their performance.

The limitation of this research is the specific limitations of the questionnaire in terms of the reluctance of some members to answer and the biases that some members may have in answering some questions, which is one of the major limitations of conducting scientific research. Also, the novelty of the subject and the lack of similar studies with the quantitative analysis made it difficult to compare the quantitative results with existing results. Another limitation of this research is the limitation of access to current scientific articles due to sanctions issues and the inability to buy some new articles.

Ethics

This research observed ethical standards, including obtaining informed consent and ensuring privacy and confidentiality. Also, while completing the questionnaires while emphasizing completing all the questions, the participants were free to withdraw from the research at any time and provide individual information. They were assured that the information would remain confidential, which was strictly adhered to.

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The cooperation of all participants in the research is thanked and appreciated.

Conflict of Interest

According to the authors, this article has no financial sponsor or conflict of interest.

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