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Investigating the relationship of marketing information system (MKIS) with total productivity of production factors (TFP) of production units of industrial towns Case study: Hormozgan province

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Abstract

The occurrence of events such as the development of global competition, the advancement of information and communication technology and access to cheap information systems during the last two decades, the efforts of economic units to achieve global ranking and enter international markets, the necessity of having attitudes such as customer satisfaction is inevitable. has done. With the increasing development of topics related to the World Trade Organization and the gradual joining of different countries to this organization, the need to pay attention to the techniques of obtaining marketing information in order to satisfy the needs of customers is felt more and more. According to the research topic, the main goal of this research is to investigate the impact of the marketing information system on the performance of production units located in the industrial towns of Hormozgan province and to provide necessary and effective suggestions. be The statistical population includes the owners and managers of small and medium-sized companies active in the industrial towns of Hormozgan province, numbering 157 people. Among them, 113 people were selected as a sample by simple random sampling using Cochran's formula. A questionnaire was used to collect the required information. The results of this research show that the capacity factors of production units. The growth of sales and productivity of all communication production factors is based on the use of the marketing information acquisition system.

Keywords

sales growth, total productivity of production factors, marketing information acquisition system, capacity factor

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1 Introduction

Due to the widening of the technological advancements and efforts of society, the creation of systems in those basic operations and the need to bring or the systems of the standards and inspection of the infrastructures in that information, it increases the conflict in the organizations. The marketing information policy provides the possibilities for the companies. It is not possible to adequately meet the needs of customers and its customers. At the same time, there is a shortage of goods and services in the company's supply chain. The market information system provides useful information to the managers, and it is possible to adjust, improve, or improve the quality of products and services. And may your happiness decrease, therefore, today the companies should be able to compete with the competition. Competitive policies and marketing information are available.

Also, about the importance of productivity, we can say the achievements of more than 50 years of experience in development planning, the current dangerous conditions of the economy, especially the worrying trend of labor supply and demand in the productive sectors of the economy, along with the huge number of resources and facilities available, but with a low level. The use of industrial production capacity at the level of the country, the strong dependence of the country's foreign exchange income on the export of crude oil and its products, and finally the distance of Iran's economy from the globalization of the economy, each in a way and with its own logic, shows the fact that the unique way To a person for an active and fruitful dream with the existing challenges, organizing the fifth development program of the country based on the principles and standards of productivity. A program in which, instead of adopting the approach of continuous and increasing injection of currency and Rial, emphasis is placed on making the way of using resources more efficient; Therefore, according to the mentioned cases, the importance of examining the marketing information system as a factor in increasing productivity and also choosing the optimal method of its implementation is clearer. Therefore, in this regard, the present research aims to is investigating the relationship between the marketing information system and the performance of industrial towns in Hormozgan province and using the AHP technique and three indicators of total productivity of production factors, sales value and capacity factor to select the most appropriate method for obtaining marketing information.

Hormozgan Province Towns Company started its activity since 1370 in order to create a suitable platform for investment in the industrial sector of the province and to coordinate and optimally use the facilities of industrial towns, and currently continues its activity under the supervision of the Organization of Small Industries and Industrial Towns of Iran. Gives. Hormozgan province has 29 industrial towns, of which 26 are approved by the government and 3 by the private sector. Some towns and industrial areas in Hormozgan are under construction and so far, 24 towns have been put into operation, and about 94% of the active companies in them are small companies. Currently, there are 342 active production units and 99 inactive units in the province. During the current year, 45 units will return to the production cycle.

2 Literature Review

We are living in the age of information and knowledge, an age where the view of "knowledge is power" has given way to "sharing knowledge is power", an age where the elders believe that the most important assets of the organization are its intelligent and knowledgeable employees, who Sharing their knowledge as knowledge assets and by creating new organizational processes, new technologies, etc. lead their organization to a competitive advantage. Nowadays, everyone believes that organizations, in order to survive in complex and dynamic environments and to be able to In order to have a stable and stable presence in the world of competition, they must have a clear vision of their knowledge capital, because every organization, whether small or large, will be alive and prosperous as long as it uses its

knowledge capital and how to use this capital to face Be able to deal with the problems of the business environment and have a good insight. In today's world, most societies are moving towards knowledge-centered. Information is very important and valuable in such societies. Although it has not been more than half a century since the computer entered the organizations, and in the 1950s, they did not envision its application in the organization, but with the development of computer systems and, as a result, information technology (IT) and its applications in organizations, this tool is one of the requirements of the society. It has become a new organization. Since the most important and greatest task of a manager is to make different decisions in different conditions, and in an era where unstable competitive conditions have placed a very variable environment in front of organizations, the only factor that can make organizations and managers succeed in facing these conditions is having Information is effective and efficient. Information that is required to make decisions in contingency and strategic situations. Information systems can provide such information to managers and users.

In fact, marketing and sales information systems are systems that cover the management activities of development, service delivery, appropriate distribution, pricing, sales forecasting, sales promotion and effectiveness (Albérico Travassos Rosário, 2021). In the era of using advanced strategies, managers saw their organizations in front of changing and challenging environments that they can no longer ignore their role on the organization and vice versa. Environments such as economic, social, political environment, market conditions, competitors, etc. In this increasing complexity of the external environment as well as the complexity of the internal environment of the organization, the demand for information increased. Today, the importance of information is considered both as an important tactical and strategic source in the organization and as a major source for knowing about opportunities and threats in the future. It is considered a valuable resource both in making short-term and tactical decisions (day-to-day operations of the organization) and has strategic advantages in the long-term plans of the organization. Regarding the added value of information, it can be said that the meaning of added value is the value that the consumer receives by consuming the resulting goods and services. Therefore, having information about the needs and opinions of consumers and adapting your products to their needs is inevitable.

Any organization that has correct, accurate, timely and comprehensive data and can get the data it needs in the shortest time is successful. The more accurate, transparent, coherent and systematic the information space of an organization is. The organization can achieve its goals better. The existence of contradictory information space is one of the most important factors of lack of progress in the management of organizations.

The occurrence of events such as the development of global competition, the advancement of information and communication technology and access to cheap information systems during the past two decades, the efforts of economic units to achieve global ranking and enter international markets, the necessity of having attitudes such as customer satisfaction is inevitable. has done. With the increasing development of topics related to the World Trade Organization and the gradual joining of different countries to this organization, the need to pay attention to the techniques of obtaining marketing information in order to satisfy the needs of customers is felt more and more. Information that is considered strategic value for business as well as a means of participation in tactical and ordinary decision-making operations. Knowledge through how to obtain information and how to use it efficiently is one of the basic skills of strategic marketing management. In fact, obtaining information and using it efficiently gives companies the opportunity to achieve superior advantages over competitors. Benefits such as quick response to customers' needs, optimizing the decision-making process of managers in order to adjust, improve or stop the production of goods and services and ultimately the effectiveness and efficiency of the organization. Therefore, the

marketing information system is considered the core of the marketing process in a business and a criterion for measuring the strengths and weaknesses in industries (Cottler & Amstrong, 2015). However, many researchers are still debating whether these investments lead to proportional returns through organizational productivity or not, and a general agreement has not been reached. The productivity puzzle is one of the most important theories. are those that scientifically explain the contradiction of the results of various studies on the relationship between the information system and performance, in contrast to the increasing development of the information system around the world, which is even known as the great information revolution. Some experts believe that the system The new system has confused people and has never improved the productivity and performance of commercial companies, and the amount of data that this system imposes on people often reduces the productivity of the organization and the effectiveness of human resources in the work environment.

On the other hand, scholars such as Brynjolfsson and Hitt (2003) have found that investing in information systems has brought many benefits, and it would be an understatement to say that there is no relationship between information systems and profitability. Basically, there are two main approaches to increase production in an economic sector: 1: increasing the production factors including labor and capital 2: increasing the productivity of the total production factors. Therefore, due to the limitation and lack of resources, the only way to increase production and achieve the wealth and general welfare of the society is to increase productivity, and this important thing will not be achieved except by emphasizing and paying attention to the matter of research.

Previous studies that have examined the topic of the current research from different angles have reached the results that we briefly mention;

According to the studies of "Cliver" and "Pierce", the ultimate goal of the strategy is to stabilize the superior performance in the long term. Analyzing and comparing the observed performance with the past trend, competitors or the industry average, provides appropriate feedback for deciding and carrying out future activities. For this reason, one of the most important goals of all companies over time has been the continuous improvement of performance.

The studies conducted show that the industrialized countries of the world and a number of developing countries have tried to provide a greater share of their economic growth through the total productivity of production factors (TFP) during the last two decades. For example, during the past two decades, Japan's GDP has had an average annual growth of 3.5%, of which the growth share of labor force and capital stock has been 19% and 28%, respectively, and the share of productivity growth of all factors has been 53%. The growth share of total factor productivity in GDP in India, South Korea, Singapore, Taiwan, Malaysia and Thailand in the above two decades is 24.7, 44.5, 34.8, 32.7, 0.24 and 0.00 respectively. It was 21 percent. It is worth noting that based on the studies, total factor productivity has not played an important role in the growth of Iran's GDP in the past two decades.

"Estimating the productivity of total factors of production in the construction sector of Saudi Arabia" is another study conducted by Jamal Ahmad Al-Ziyadat and his colleagues in 2021. The purpose of this study is to estimate total factor productivity in the construction sector of Saudi Arabia. Using the Cobb-Douglas production function. The results showed that there is a long-term equilibrium relationship between production value and production factors of labor and capital.

The study aims to estimate the total factor productivity in Saudi Arabia construction sector. Using Cobb Douglas production function. The results showed that that there is a long-run equilibrium relationship between the value of production and the factors of production labor and capital. The results indicates that the construction sector in Saudi Arabia during the

coming years will witness a positive growth rate with interest in strengthening the partnership between the government and the private sector in order to develop the construction sector.

In 2021, "Elvis Kirko Avenue and Trijena" conducted research entitled "The impact of production capabilities on export performance, case study: African companies"; This paper develops new indicators of manufacturing capabilities and examines their effects on the export performance of African firms. Using recent data from the World Bank Enterprise Survey in 29 African countries, this paper develops new indicators of manufacturing capabilities conceptualized as a combination of technological and manufacturing capabilities. The results of their studies showed that both technological capabilities and production capabilities are important drivers of direct export performance of companies. This suggests that superior manufacturing capabilities increase firms' efficiency and competitiveness and lead to improved export performance. The findings emphasize the importance of policies that support the strengthening of productive capabilities in African countries.

There is limited empirical evidence measuring productive capabilities and analyzing their effect on firm-level export performance in Africa. This paper constructs novel indicators of productive capabilities and examines their effects on the export performance of African firms. Using recent firm-level data from the World Bank Enterprise Survey across 29 African countries, the paper builds new indicators of productive capabilities, which are conceptualized as a combination of technological and production capabilities. This suggests that superior productive capabilities enhance the efficiency and competitiveness of firms, leading to improvements in their export performance. The findings underscore the importance of policies that support the strengthening of productive capabilities in African countries.

Over the past few years, many efforts have been made among different organizations to implement marketing information systems to improve financial performance, in general, information systems are an important element to support performance, but in order to use these systems, it is necessary to analyze and evaluate them. A study titled "The impact of marketing information systems on financial performance in the hospital industry" was conducted by Ahmed Mohammad Fahim and his colleagues in 2019. Accordingly, the purpose of this paper is to identify the impact of marketing information systems directly on financial performance. After a brief literature review, an applied study was conducted among physicians working in private hospitals in Iraq. The results showed that marketing information systems directly affect performance. They have a brilliant financial impact. This study was conducted among doctors working in private hospitals in Iraq. The results showed that marketing information systems directly affect financial performance.

During the past few years, there have been tremendous attempts among various organizations to implement the marketing information systems to improve their financial performance, in general, information systems are an important element to support the performance, however, to apply these systems it is necessary to be analyzed and evaluated. Accordingly, the aim of this paper is to identify the impact of marketing information systems directly on brilliant financial performance, after a brief literature review an applied study was conducted among physicians that work in private hospitals in Iraq. the results showed that marketing information systems directly affect the brilliant financial performance.

2.1 The Study

The purpose of this study is to investigate the impact of the marketing information system on the performance of production units located in the industrial towns of Hormozgan province and to provide necessary and effective suggestions. Therefore, this study seeks to investigate the relationship between the method of obtaining marketing information and the productivity, sales growth and capacity of production units. The industrial towns of Hormozgan province.

2.1 Method

The research method often depends on the purpose of the research, the nature of the subject, the implementation possibilities of the research and the developed hypotheses. The purpose of choosing a research method is to determine what methods and methods to use to help us get the answer or research answers as accurately, easily and cheaply as possible (Khaki, 2012: 212). In general, research methods in behavioral sciences can be divided according to the two general criteria of the research objective and the method of data collection.

The researcher should note that the credibility of the research achievements is strongly influenced by the method he has chosen for his research (Khaki, 1387: 155). Therefore, one of the most important characteristics that should be considered in scientific research is the correct implementation of that research. that can achieve real goals.

In terms of the fact that the present research seeks to collect data to test hypotheses and answer questions, and seeks to examine the relationship between the method of obtaining marketing information and the productivity, sales growth, and capacity of production units in the industrial towns of Hormozgan province, it is a research Correlation is a survey type and due to its non-experimental nature and its implementation in real conditions, it is considered a field study. Also, this research is of an applied type because it aims to solve a specific problem of the society.

The main stages of the research included the definition of main and secondary indicators using questionnaires and using different sources. In this research, the standard questionnaire of the Economist Intelligence Unit (EIU) of the Ministry of Industries and Mines (2020) was used to collect data. The questionnaire is a set of questions, phrases, and items that must be answered by considering them to provide the necessary answer. This answer forms the data required by the researcher (Saadati, 2016).

The present research questionnaire has used a series of closed questions with a five-point Likert scale to collect the data required for the research. In this way, the respondent must choose one of the options to answer each of the questions in the questionnaire. In terms of content, the questionnaire has three parts, which are the three dimensions of the model criteria (capacity factor, sales growth factor and total productivity of production factors) and model prediction (marketing information acquisition system). The structure of the questionnaire includes three parts. In the first part, the title, the introduction of the research and the definition of some of its operative words are stated for the respondents, for the second part, there are 3 questions related to the characteristics and demographics of the respondents, including: level of education, organizational level, work experience has been taken

2.1.1 Conceptual model of research

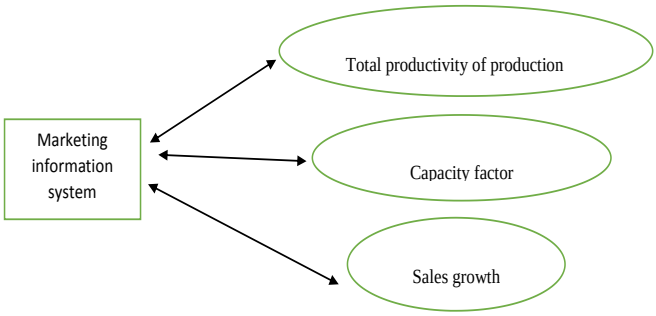

Figure 1: Conceptual model of the research inferred from the reference model of the Institute of Economist Studies

Marketing information system is a set of methods and procedures for regular and planned collection, analysis and presentation of information for use in marketing decisions (Sadeghi et al., 2014).

The total productivity of production factors is the ratio of the total productivity of a production unit, in the form of the ratio of the total value of outputs to the total value of inputs.

The sales growth factor is one of the basic performance indicators of companies. In fact, this index is the easiest way to estimate the performance of a company. which is the result of the number of sales of a product or service in a defined period. (Gallino & Moreno, 2018).

Capacity factor, sometimes called capacity factor or utilization rate, indicates the ratio of actual product to potential product. If the economy uses all its capacities completely, it is able to produce a level of product that is called potential production (Arab and Mazar, 2014).

2.1.2 Statistical Population and Sampling Method

Before performing any analysis on the collected data and statistical inference, one must first ensure the reliability and validity of the measurement tool. Deciding on what kind of performance should be evaluated and how that performance should be measured depends on four indicators: validity, trustworthiness (validity), freedom from any bias and bias, applicability. The reliability of the questionnaire was measured by Cronbach's alpha test and the test results showed that the used questionnaires have the required reliability and accuracy. There are also various methods to measure validity, which in this research considering that the variables The research consists of several dimensions (components), the confirmatory factor analysis test has been used. In conducting factor analysis, it must be ensured whether the available data can be used for the analysis or not. In other words, Is the desired amount of data suitable for factor analysis or not? For this purpose, the KMO index and Bartlett's test have been used. Based on these two tests, the data are suitable for factor analysis when the KMO index is greater than (0.6) and close to one and the sig of Bartlett's test is less than (0.05).The output of these tests in Jed The first is presented below.

Table 1. KMO and Bartlett test for questionnaire questions

۰/۸۶۲	KMO test	
۲۲۱۶/۴۶۱	$\chi 2$	Bartlett's test
۱۰۱	Degrees of freedom	
۰/۰۰۰	Sig	

According to Table 2; The value of KMO index is equal to 0.862 (more than 0.6), so the number of samples (number of respondents) is sufficient for factor analysis. Also, the sig value of Bartlett's test is smaller than 0.05; which shows that factor analysis is suitable for identifying the structure of the factor model and the assumption that the correlation matrix is known is rejected.

Due to the fact that the research about all the members of the society is time-consuming and not cost-effective, the researcher is forced to take a sample (Jalali, 2013). Determining the sample size is very important in the ability to generalize the results to the society. The statistical population includes the owners and managers of small and medium-sized companies active in the industrial towns of Hormozgan province, numbering 157 people. A stratified random sampling method has been used to select the samples; in stratified random sampling, the people of the society are divided into different categories based on their in-group characteristics and the samples from these categories are selected according to the selection ratio. (International Journal of Organizational Leadership 2020). The sample corresponding to the limited statistical population (157) was estimated to be 113 units according to Cochran's formula.

In this research, parametric statistical techniques have been used. Parametric statistical techniques are tests that depend on the normal distribution of traits in the relevant statistical population and are used for samples whose volume is more than 30 cases. Also, in this research, descriptive statistics (frequency tables) have been used to display demographic

information, and inferential statistics (Pearson's correlation, regression and AHP test) have been used to analyze the data obtained from the sample.

After determining the measurement models in order to evaluate the conceptual model of the research, as well as ascertaining the existence or non-existence of a causal relationship between the research variables and checking the fit of the observed data with the conceptual model of the research, the research hypotheses using the structural equation model are also tested. became The results of the hypothesis test are reflected in the graph.

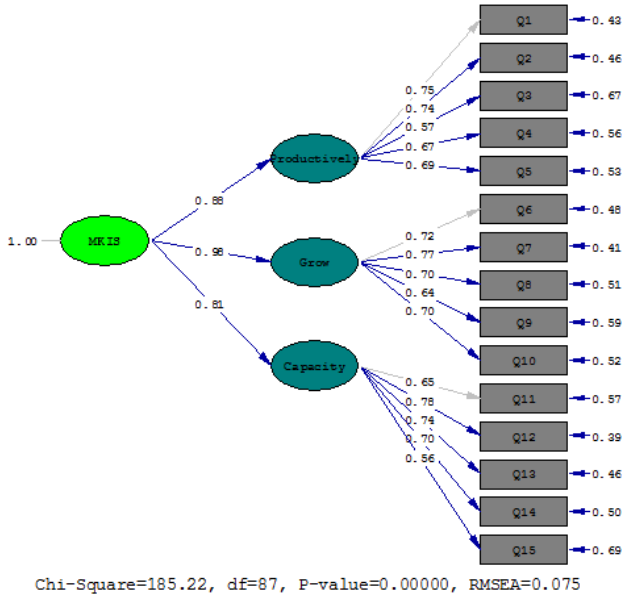

Figure 2. Measurement of the general model and the results of the hypotheses in the standard mode

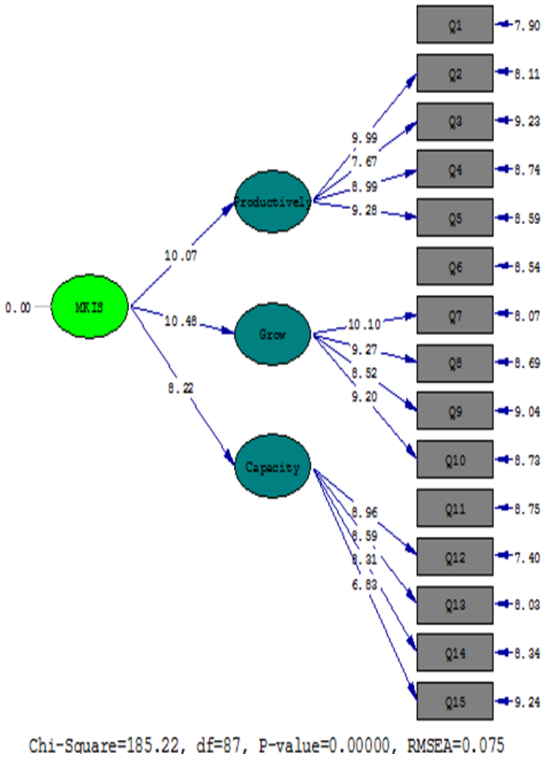

Figure 3: measurement of the general model and the results of the hypotheses in the significant state

As we proved in the previous part, since our distribution was found to be normal (Kolmogrov-Smirnov test results), the correlation of the variables was tested using Lisrel software. Path analysis method has been used to investigate the causal relationship between independent and dependent variables and confirm the entire model. Path analysis in this research was done using LISREL8.5 software.

According to Table 5, where the model fit indices are presented, the values of all the fit indices show the acceptable and suitable state of the model and data and they have an acceptable fit.

In this regard, Lisrel 8.5 software was used to evaluate the designed model, based on X2 indices as degrees of freedom, goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), root mean square residuals (RMR). , Softened Fit Index (NFI), Non-softened Fit Index (NNFI), Incremental Fit Index (IFI), Comparative Fit Index (CFI) and the very important root mean square error of approximation (RMSEA) index have been used.

Table 2 :values of model fit indices and fitting result

Fit index	The desired amount	Pattern value
χ^2/df	<3/00	2.12
GFI(Goodness of Fit Index)	>0/90	0/99
AGFI(Adjusted Goodness of Fit Index)	>0/90	0/97
RMR(Root Mean square Residual)	<0/05	0/011
NFI (Normed Fit Index)	>0/90	0/92
NNFI (Non-Normed Fit Index)	>0/90	0/99
IFI(Incremental Fit Index)	>0/90	0/95
CFI (Comparative Fit Index)	>0/90	0/97
RMSEA(Root Mean Square Error of Approximation)	<0/08	0/075

The ratio of X2 square to the degree of freedom is highly dependent on the sample size, and a large sample will increase the quantity of chi-square more than it can be attributed to the wrongness of the model. Ideally, the value of the ratio of chi-square to the degree of freedom is less than 3, according to the value reported for this value in Table 7-4, the results of this part can be considered valid and statistically analyzable. Because the ratio of chi-square to the degree of freedom for this model is reported as 12.2.

The GFI and AGFI index, which is proposed , indicates a measure of the relative amount of variance and covariances that is explained by the model. This criterion is a variable between zero and one, the closer it is to one, the better the fit of the model with the observed data. The value of GFI and AGFI reported for this model is higher than 9/. are, which confirm the results of chi-square test.

The index of the square root of the mean squared residuals (RMR), i.e. the difference between the matrix elements observed in the sample group and the matrix elements estimated or predicted assuming that the desired model is correct, the closer this index is to zero for the desired model. The mentioned model has a better fit. The value of RMR in this research (0.011) indicates the proper explanation of covariances.

To check how well a model works in terms of explaining a set of observed data, especially compared to other possible models, from the values of Softened Fit Index (NFI), Non-softened Fit Index (NNFI) , Incremental Fit Index (IFI), Comparative Fit Index (CFI) were used, which according to Brown and Mossad (1992), values above 0.9 of these indexes indicate a very good fit of the designed model compared to other possible models. .

Finally, to check how to combine the appropriateness and economy of the relevant model, the very powerful index of the square root of the approximation error variance estimate (RMSEA) has been used. The value of this index for good models is less than 0.08. A model in which this index is 0.10 or more has a poor fit (Homan, 2014).

The value of this index in this model is (0.075), which shows the appropriate fit of the collected data and their excellent fit for the model designed in this research.

3. Research hypothesis test

As we proved in the previous part, since our distribution was found to be normal (Kolmogrov-Smirnov test results), the correlation of the variables was tested using Lisrel software. Path analysis method has been used to investigate the causal relationship between independent and dependent variables and confirm the entire model. Path analysis in this research was done using LISREL8.5 software. The results obtained from the Lisrel outputs show that the chi-square ratio to the degree of freedom is less than three, and other goodness-of-fit indices confirm the fit of the model. The following table briefly shows the significance coefficient and the results of the proposed hypotheses.

Table 3. The results of the hypotheses

Result	meaningful	Standard	theories
confirmation	10.07	0.88	Marketing Information System (MKIS) has a positive and significant relationship with total factor productivity (TFP) of production units in industrial towns of Hormozgan province.
confirmation	10.48	0.98	Marketing Information System (MKIS) has a positive and significant relationship with the sales growth of production units in industrial towns of Hormozgan province
confirmation	8.22	0.81	Marketing Information System (MKIS) has a positive and significant relationship with the capacity of production units of industrial towns in Hormozgan province.

1. In the first hypothesis of the research, it was claimed that the marketing information system (MKIS) has a positive and significant relationship with the total productivity of the production factors (TFP) of the production units of the industrial towns of Hormozgan province, which the statistical analysis shows between the two according to the table (4-5); The significant number of the path between two variables is equal to (10.07) and because this value is greater than 1.96, therefore this hypothesis is confirmed. On the other hand, since the obtained significant number is positive, this effect is direct.

2. In the second hypothesis of the research, it was claimed that the marketing information system (MKIS) has a positive and significant relationship with the growth of sales of production units in the industrial towns of Hormozgan province, which the statistical analysis between the two shows according to table (4-5); The significant number of the path between two variables is equal to (10.48) and because this value is greater than 1.96, hence this hypothesis is confirmed. On the other hand, since the obtained significant number is positive, this effect is direct.

3. In the third hypothesis of the research, it was claimed that the marketing information system (MKIS) has a positive and significant relationship with the capacity of the production units of the industrial towns of Hormozgan province, which the statistical analysis between the two shows according to table (4-5); The significant number of the path between two variables is equal to (8.22) and because this value is greater than 1.96, hence this hypothesis is confirmed. On the other hand, since the obtained significant number is positive, this effect is direct

3.1 Identifying Indicators

In this research, 3 main factors and for each of the main factors a number of sub-indices have been identified in order to prioritize the factors and indicators related to the factors affecting the way of obtaining marketing information based on the hierarchical analysis process method, which is the matrix of paired comparisons integrated from 18 decision-makers are shown in Table 7.

Table 4. The matrix of pairwise comparisons of the main indicators of the research

Indicators	Production efficiency	Sales growth	Production unit capacity
Production efficiency	1		
Sales growth		1	
Production unit capacity			1

After building the model in the Expert Choice program and entering the matrix of paired comparisons, the weight of criteria and sub-criteria was obtained as shown below. Figure (8) shows the prioritization of the main factors affecting the way of obtaining marketing information based on the combination of decision-making methods using the AHP hierarchical analysis process with the help of Expert Choice software. As can be seen in Figure 7, the production efficiency factor with a relative weight of 740. It is the most important and it became the selling factor with a relative weight of 146/. In the second priority and the production unit capacity factor with a relative weight of 114/. It is in the third priority. Inconsistency rate of pairwise comparisons. 05/. It has been found that because less than 10/. These comparisons are acceptable.

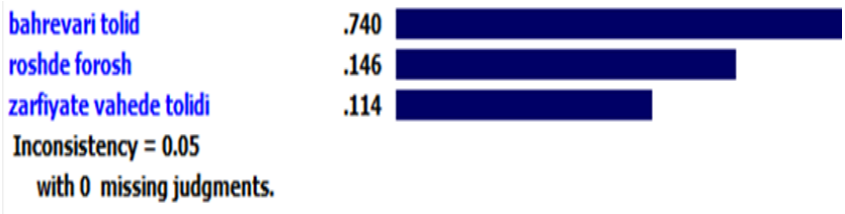

Figure 4:Prioritization of main factors using Expert Choice software

Table 5. Prioritizing the main factors affecting the way of obtaining marketing information

priority	Weight	standard	row
1	./740	Production efficiency	1
2	./146	Sales growth	2
3	./114	Production unit capacity	3

Calculating the relative weight of production efficiency indicators In this research, using the subject literature and relevant experts, a total of 5 main indicators and a number of sub-indices have been identified in order to prioritize production efficiency factors affecting the way of obtaining marketing information based on the combination of decision-making methods using the hierarchical analysis process of AHP. The matrix of integrated pairwise comparisons of decision makers is in the form of the following tables. Pairwise comparisons

of each index according to the economic factor are presented in Figure 5 and Table 10. According to the table and the figure, it is clear that the relationship between all sub-indices is two-way.

Indicators	Using appropriate and up-to-date information sources	Timely distribution of market information	Better identification of the company's competitors through	Increasing the speed of decision making	Identifying the needs and wants of customers
Using appropriate and up-to-date information sources	1				
Timely distribution of market information		1			
Better identification of the company's competitors through information acquisition			1		
Increasing the speed of decision making				1	
Identifying the needs and wants of customers					1

Figure 5. Prioritization of the main indicators according to the production efficiency factor

Table 6. Prioritization of the main indicators according to the production efficiency index

priority	Weight	standard	Row
1	./596	Using appropriate and up-to-date information sources	1
2	./227	Timely distribution of market information	2
3	./086	Better identification of the company's competitors through information acquisition	3
5	./045	Increasing the speed of decision making	4
4	./046	Identifying the needs and wants of customers	5

According to the above table, it can be seen that according to the main weight obtained in the order of the components of using appropriate and up-to-date information sources, timely and timely distribution of market information, better identification of the company's competitors through obtaining information, identifying the needs and demands of customers and

increasing Speed in decision-making has the most and least importance in the group. On the other hand, considering that the inconsistency rate obtained is 0.09, which is smaller than the standard limit of 0.1, hence the above questionnaire was completed with high accuracy by the respondents.

Calculation of the relative weight of production unit capacity indicators

In this research, using the subject literature and relevant experts, a total of 5 main indicators and a number of sub-indices have been identified in order to prioritize the factors of production unit capacity influencing the way of obtaining marketing information based on the combination of decision-making methods using the hierarchical analysis process of AHP. The matrix of integrated pairwise comparisons of decision makers is in the form of the following tables. Pairwise comparisons of each of the indicators according to the economic factor are presented in Figure 11 and Table 12. According to the figure and the table, it is clear that the relationship between all sub-indices is two-way.

Indicators	Better identification of raw material suppliers	Better pricing of products	Accurate and timely retrieval of stored market information	Identify strengths and weaknesses	Correct and appropriate evaluation of the company's
Better identification of raw material suppliers	1				
Better pricing of products		1			
Accurate and timely retrieval of stored market information			1		
Identify strengths and weaknesses				1	
Correct and appropriate evaluation of the company's performance					1

Figure 6. Prioritization of the main indicators according to the capacity factor of the production unit

Table 7: Prioritization of the main indicators according to the production unit capacity index

priority	Weight	standard	Row
1	./522	Better identification of raw material suppliers	1
2	./219	Better pricing of products	2
3	./129	Accurate and timely retrieval of stored market information	3
5	./065	Identify strengths and weaknesses	4
4	./066	Correct and appropriate evaluation of the company's performance	5

According to the above table, it is observed that according to the main weight obtained in the order of the components of better identification of suppliers of raw materials, better pricing of products, accurate and timely recovery of stored market information, correct and appropriate evaluation of the company's performance and identification of strengths and weakness are the most and least important in the group. On the other hand, considering that the inconsistency rate obtained is 0.07, which is smaller than the standard limit of 0.1, hence the above questionnaire was completed with high accuracy by the respondents.

Research findings based on the ranking of influencing factors on the marketing information acquisition system:

The prioritization of the main factors affecting the way of obtaining marketing information based on the combination of decision-making methods has been shown using the AHP hierarchical analysis process with the help of Expert Choice software. As can be seen in Figure 1-5, the production efficiency factor with a relative weight of 740. It is the most important and it became the selling factor with a relative weight of 146/. In the second priority and the production unit capacity factor with a relative weight of 114/. It is in the third priority. Inconsistency rate of pairwise comparisons. 05/. It has been found that because less than 10/. These comparisons are acceptable.

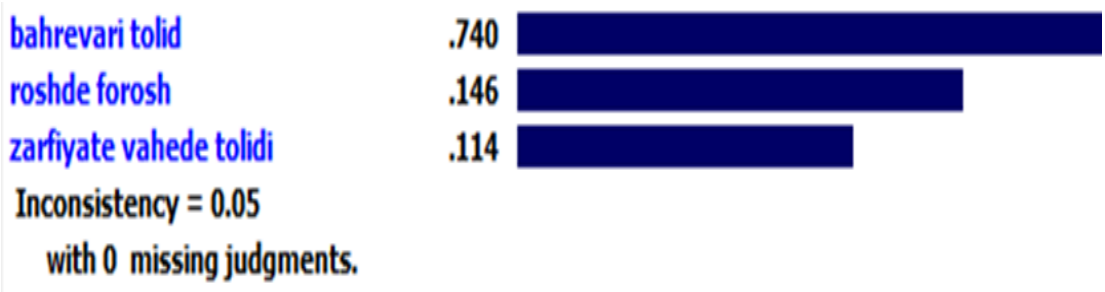

Figure 7- Prioritizing the main factors using Expert Choice software

4 Discussion and conclusion

According to the findings of the present research and considering the research hypotheses, using LISREL 8.5 software through the method of structural equation modeling, the findings of theoretical studies were analyzed in the form of a compiled model. Before each hypothetical test in structural modeling, each hidden variable (research factor or component) was measured through visible variables (items and questions of the questionnaire) through the measurement model, and the relevant measurement model tries to determine the validity of

the variables. It has been visible (questionnaire questions). Finally, the mentioned results indicate that all the assumptions of the research are approved.

The main goal of this research, as stated, is to provide a model for improving the export performance of small and medium-sized companies located in the industrial towns of Hormozgan province with the approach of government assistance. For this purpose, the hypotheses were examined and the results obtained were in accordance with the presented model and other researches in this field. The results of the research show that the marketing information system (MKIS) is effective in the total productivity of the production factors (TFP) of the production units of the towns. The industry of Hormozgan province has a positive and significant relationship. From the other results obtained in Table 8, it can be pointed out that: 1. Marketing Information System (MKIS) has a positive and significant relationship with the growth of sales of production units in industrial towns of Hormozgan province. Production of industrial towns in Hormozgan province has a positive and significant relationship.

As can be seen from the results of Table 13, the research findings based on the ranking of the factors affecting the marketing information acquisition system show that the productivity factor is the most important and the sales factor is the second priority and the production unit capacity factor is the least important. Inconsistency rate of pairwise comparisons. 05/. It has been found that because less than 10/. These comparisons are acceptable.

It is suggested that the units located in industrial towns should invest properly in their marketing information system, because according to the results, there is a strong relationship between having marketing information and performance indicators. Also, industrial units should use the method of obtaining marketing information through final sellers or marketers and by training marketers and creating awareness and strong communication with final sellers, they should try to obtain more accurate and higher quality information. And at the end of the proposal It is possible that the units do not fully trust the information of the organizations and official institutions in the current situation and make their decisions based on the information obtained through marketers and final sellers.

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