Research Paper

Applying the Entropy Method to Design an Agile Financial Marketing Capability Model for Developing the Health Tourism Industry after Covid-19

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ABSTRACT

Today, health tourism is a growing phenomenon, especially in developing countries, which has been greatly affected by the Covid 19 crisis. After overcoming this crisis and re-competing in this industry, our country also needs to develop capabilities. Take your marketing step and move towards being financially agile. Agility, or the ability to adapt quickly and in a timely manner to changing international markets at low cost and high added value, is therefore cost-effective. The present study was conducted with the exploratory mixed research method and the purpose of designing and validating the agile financial marketing capability model in the health tourism industry in Iran. The statistical population includes health tourism industry experts and prominent professors in the field of finance who have worked in medical centers that provide health tourism services. The research findings led to the identification of 14 main concepts that were presented in the form of a paradigm model and the central category of agile financial marketing capabilities (specialized and structural capabilities) was empirically examined with real data and confirmed.

1 Introduction

Given the importance of health tourism in developing countries, which face problems such as high unemployment, limited foreign exchange resources, and a single-product economy, most developing countries have planned and invested to earn more of this large revenue. Tourism as a mass phenomenon is the largest social mobility in the world [1]. In this regard, Coronavirus in early 2020 has changed the world in every way forever and has played a significant role in stopping this great social mobility, international travel, tourism demand, and hospitality industry [10]. The crisis caused by the Covid epidemic has been unique in many ways: first, there has been a decline in travel, hospitality, and tourism around the world; Second, the economic losses have been much more significant; Third, the current crisis has the potential to bring about fundamental changes in many areas of tourism [13].

The challenges facing marketing managers are highlighted by the Covid 19 epidemic, and some analysts are calling for a fundamental overhaul of marketing models [7]. Health tourism is no exception. Scientific research has acknowledged the need for new and flexible marketing models and recognized that marketing must be "agile" [36,37,43]. In fact, marketing agility is considered a key priority for market success [26]. In short, dynamic and ever-changing business environments require organizations to have

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higher capacities to respond to such environments [11,42]. In other words, organizations are increasingly forced to learn how to be more agile in adapting to change [8, 68]. Marketing research has clearly shown a positive and significant relationship between agility and marketing performance [2,20,46]. Agility strengthens the company's ability to create value for the customer, increase competitive advantage, and control market changes due to the increase in the speed of marketing teams, coordination, n and customer interaction [56]. Agility has become a fundamental principle of marketing because, as mentioned, a deep global event such as the Covid 19 pandemic has accelerated the need for teams, rapid movement, evaluation and adaptation in all businesses. At this time, organizations must set goals. Define realism for themselves during and after the Corona Crisis, which is why many large global companies such as Coca-Cola and Ford have changed their business models [19,25-32]. According to Visser et al. [63], there is little insight into the factors that enable companies to pursue marketing agility. For example, a survey by the Boston Consulting Group shows that even if nine out of ten marketing executives feel that agility is important for marketing performance, only one in five companies perform agility. On the other hand, marketing capabilities are created to gain a competitive advantage, their characteristic feature is the ability to develop and provide superior value to customers with available resources [11]. Quantitative studies have addressed marketing capabilities as a source of competitive advantage, especially in international business. Empirical evidence in the new international investment literature shows the strategic interaction of marketing capabilities in the development of new markets [53-58]. Therefore, agile marketing capability can be a set of factors and capabilities that create a company's competitive advantage.

Due to the fact that in few studies, marketing capability as a creator of competitive advantage has been studied and studies have not been conducted to identify agile marketing capability in the health tourism industry, so an important research gap is felt in this area that can develop organizations to create competitive advantage [60-63]. Especially in the face of such crises. In fact, this great change has created a situation in countries where most businesses are looking for survival and will be, and it can also be predicted that the end of the current crisis necessarily means a return. It is not fast before Corona and also according to the goals of the 20-year vision of the comprehensive scientific plan of the country (becoming the medical hub of the region by 1404) in the field of health, considering the benefits of health tourism and challenging competition in this field, to succeed. In this industry, it is necessary to redouble efforts to create a superior competitive advantage. As mentioned, marketing capabilities play an important role in creating a competitive advantage and superior performance in a competitive market. For this reason, managers and officials of organizations, especially to use market opportunities after the end of the Corona crisis need agility in their marketing capabilities and the present study seeks to identify the dimensions and components of agile marketing in the Iranian health tourism industry and provide a comprehensive model in this The field empirically examines the agility behaviour of marketing capability in the industry and aims to show how businesses can overcome the marketing challenges of the present century, which are characterized by turmoil and an ever-changing environment.

2 Theoretical Foundations and Research Background
2.1 Marketing Capabilities
Early research on marketing capabilities focused on a resource-based perspective, according to which companies use their internal resources and capabilities, as the main source of competitive advantage, a resource-based approach to understanding the need and service of customers were considered [5]. Over time, this initial definition of a company's marketing capabilities was challenged by the theory of dynamic capabilities, which had a more dynamic and developed perspective. It focused on developing marketing capabilities and responding to rapidly changing environments [52]. Based on this view, the

researchers conceptualized the concept of "dynamic marketing capabilities", which reflects human capital, social capital and knowledge of managers, use and integration of market knowledge with marketing resources to adapt to the market and new technology. Dynamic marketing capabilities are very important for companies operating in a very competitive environment. They gain the responsiveness and efficiency of cross-business processes in reconfiguring resources to respond to market-related changes and deliver more customer value [17,18,68]. Despite the vast amount of literature that has identified the relevance of dynamic marketing capabilities, researchers acknowledge that this is an ever-evolving issue. Businesses are always looking for new ways to increase their capacity to anticipate, respond to and adapt to market changes, especially in the face of highly competitive conditions [11,42]. For these reasons, recent studies have shifted the focus to "adaptive marketing capabilities" due to the increasing complexity of market demand and the speed of technological advancement [11,43]. Vorhies and Harker [64] have divided marketing capability into eight factors.

These factors include product development, pricing, marketing channel communication management, sales and market information management, marketing planning and marketing implementation. Morgan et al. [44] categorized marketing capabilities by expertise and structure. Specialized marketing capabilities reflect marketing activities such as marketing communications, personal selling, pricing, product development and distribution. These day-to-day activities based on the marketing mix play a central role in marketing activities. Showed that human capital, directly and indirectly through dynamic marketing capabilities, plays a key role in creating a competitive advantage. They found that marketing capabilities play an important role in market orientation and achieving sustainable competitive advantage. Riemann et al. [50], in a study on the impact of dynamic and adaptive capabilities on performance, showed that in a highly competitive environment, both dynamic marketing capabilities And adaptive marketing capabilities have positive effects on performance.

2.2 Marketing Agility

Businesses can use many methods to be able to perform well, one of which is agile marketing or marketing agility [3]. Agile marketing is a new approach to marketing that is inspired by rapid development. Agile marketing goals include improving the speed, predictability, transparency, and adaptability to change marketing performance in the business world these days. Agility means the ability to respond quickly and successfully to changes in the external environment of the organization. Like manufacturers, all organizations and businesses have to look for agility to compete in the 21st century because today's modern organization is under increasing pressure to find new ways to compete effectively in today's dynamic market [48]. In other words, organizations must change their processes, prices, and products or services faster than any of their competitors. The goals of agile marketing are to improve the speed of predictability, transparency, and adaptability to change marketing performance in today's business world [49]. Marketing agility is the degree to which an organization quickly communicates between creating market sensitivity and implementing marketing decisions to adapt to the market [31]. The goals of agile marketing are to improve the speed, predictability, transparency and adaptability to change marketing performance in today's business world [59].

Asseraf et al. [4] in a study to evaluate the incentives and the effect of international marketing agility concluded that international marketing agility enhances the performance of the international market directly and indirectly through the advantage of new export products. In a study, Zhou et al. [69] examined the relationship between marketing agility and financial performance at different levels of market turmoil and found that the impact of innovation capability on financial performance under low market turbulence is stronger and market turmoil modulates the indirect relationship between marketing agility and financial performance. Slow and the effect of indirect agility is stronger when market turmoil is

lower. Homburg et al. [26] identify marketing agility as an important dimension of marketing excellence and "it" as a strategic tool for the company to implement growth activities by the marketing organization. And its members conceptualized through simplified structures and processes, rapid decision-making, learning, trial and error, and Kalaignanam et al. [31] proposed four dimensions for marketing agility: sensing, repetition, speed, and marketing decision-making.

2.3 Health Tourism

Health tourism is any type of travel that makes you or any of your family members healthier [25]. Health care has always been evolving with its medical technologies [3,35], however, new diseases are always calling for new treatments, and these treatments are not always available in the area or place of interest. Thus, advances in technology not only increase the accuracy and quality of medicine, but also bring health care services closer and faster to patients, and transform travel needs for health care. Health tourism has gradually created a demand for complex and specialized medical treatments [6]. Health tourism is a type of tourism that aims to recover, promote and achieve mental and physical health in more than 24 hours. And less than a year [13-17]. The combination of the concept of health care, travel, tourism and health ultimately creates the concept of health tourism [64-66]. The term "health tourism" or "medical tourism" has been used since the seventeenth century [67]. In fact, health tourism, medical tourism, and health tourism are often used interchangeably, and it may be worth noting that each term is actually different [66]. Therefore, in this context, health tourist is defined as tourism that for various reasons seeks to seek other places and receive health, treatment or health services [65].

2.4 Theory of Entropy Method

nnnnnnnns ett ryyy [54] aas a cttt ral role in infrr mtt inn tooory ddd mmmtimss rffrrs to maauure of eeeertaitt y. nnnnnnnns nntryyy is a well-known method in obtaining the weights for an MADM problem especially when obtaining a suitable weight based on the preferences and DM experiments are not ssss ooo. e oo oriaifii rm᾽ elll a af fff nnnndh hi riggg aac cc ccciii srr et t aa afffee œe dbbbaœsss

Step 1. (Normalization). Set

$$r_{ij} = \frac{x_{ij}}{\sum_{i=1}^{m} x_{ij}} \ , j = 1, \dots, n \tag{1}$$

Step 2. Compute entropy E_j as

$$E_j = -e_o \sum_{i=1}^{m} r_{ij} ln(r_{ij}) \tag{2}$$

Where e_o is the entropy constant and is considered equal to

$$e_o = \frac{1}{ln(m)} \tag{3}$$

Step 3. Set $d_j = 1 - E_j$ ss tdd dggree of ii vrrii fictt inn frr $(j, 1,)))))$
Step 4. Set

$$w_j = \frac{d_j}{\sum_{j=1}^{n} d_j} \tag{4}$$

As the degree of importance of attribute c_j.

3 Research Methodology

In this study, according to the purpose and nature of the research, the combined or mixed research method has been used through a combination of qualitative and quantitative methods. Agile marketing capabilities have been considered as fundamental research and in the second stage of the research, which has been done in a quantitative way, in order to analyse the basic components and indicators obtained in the qualitative stage, the statistical community has been tested empirically. And their importance is quantified through factor loading. Thus, in the second stage, the descriptive research method and survey type have been used. In the first part and the qualitative method in the present study, the database method has been used to identify the components of agile marketing capability in health tourism. The statistical community in the qualitative sector are experts, thinkers, professors, and elites of the scientific community and university specialists in the field of marketing, as well as experts in the field of marketing who have executive backgrounds at decision-making levels and are called knowledgeable elites. The sampling method in the qualitative part was snowball sampling and was done by introducing and referring each participant to the next person until the theoretical saturation stage was continued and with 12 theoretical saturation samples was obtained, in the qualitative part to collect data. Semi-structured interview tools have been used to identify the content and categories and components of the data theorizing process of the research foundation. Has been approved by experts. Regarding reliability in the qualitative part of the research, the coder reliability was used and in this research, the kappa coefficient was used to calculate the coefficient of agreement between the two coders. In other words, 15% of the research documents or interviews coded by the researcher were given to one of the experts for evaluation and the results of the coding of the two researchers show that the kappa coefficient calculated by SPSS software was 0.675. Considering that it is more than 0.6 and the significance level obtained for kappa index is less than 0.05, the assumption of extractive code independence and the dependence of the extracted codes on each other were confirmed. In order to analyse the data of the qualitative stage of the research, the data obtained from the interviews were analysed using the coding method and Max Kiuda software, in which the categories and components were coded as open, axial and, selective to the stage. Arrived theorizing.

In the second stage of the research, which has been done quantitatively, in order to analyze, the basic components and indicators obtained in the qualitative stage have been exposed to the judgment of the statistical community and their importance has been quantified through factor loading. Has been. Thus, in the second stage, the survey research method has been used. The statistical population of this research in a small part includes medical centres that provide health tourism services. Quantitative sampling method, purposive sampling (non-random available) and the number of sample sizes have been selected according to the adequacy of Morgan table of 384 medical centres that provide health tourism services. In the quantitative part, based on the criteria extracted from the qualitative stage, a researcher-made questionnaire of agile marketing ability to collect the required data has been designed, so the method of data collection is quantitative, field or survey. For validity or validation in the quantitative stage, the model obtained in the qualitative stage, face validity, has been used by professors and experts as well as confirmatory factor analysis. Cronbach's alpha was used to measure reliability in a quantitative step, and using Cronbach's alpha test, the reliability coefficient of each category was obtained. In order to analyze the data obtained in this research in this stage, which was collected by a questionnaire, descriptive and inferential statistical methods were used. In the descriptive statistics section, frequency distribution tables related to each of the questions are used and to show the statistical data of general questions, a bar chart is used in a coherent manner. Research has been used. Confirmatory factor analysis was also used to analyze the data in order to ensure the classification of questions into components. Structural equation modelling method has also been used to determine the effect and fit of the model in a small part. In the inferential part, the test of the central category of the research was performed using

SPSS and PLS software.

4 Analysis of Data and Findings

Due to the fact that this research is mixed, in the first and qualitative part of the research, the analysis of the data obtained from the interviews using the coding method and Max Kyoda software has been used, then the central category of the model obtained in The quantitative part is analyzed by distributing the questionnaire. In this study, with an inductive approach, interviews were conducted with experts and coded that coding in the foundation data method is in three stages of open, axial, and selective coding. Related to the specified topic and then the concepts were extracted from several codes by continuous comparison. In the axial coding stage, the categories and concepts obtained from the previous stage (open coding) were compared, combined, and merged.

Table 1: Pivot Coding

Category	Concept	Second Codes
Actual conditions	Competitive causes	Domestic competitive advantage
		External competitive advantage
	Technological	Hardware technology
		Software technology
	Consumer needs	nature therapy
		medical tourism
	Structure	Dynamic structure of the organization
		change management
	Human Capital	human resources
		Team building
		knowledge management
Pivot category of marketing agility behavior	Structural capability	responsiveness
		Quality
		Adaptability and flexibility
		Reconfigure
	Specialized capability	Functional mutual cooperation
		Reaction speed
		Feel and understand
		Integrity
Strategy	Differentiation strategy	Distinctive product or service
		Distinctive supply chain
		Distinctive technology
		Distinctive innovation
	Cost leadership strategy	Capacity optimization
		Input costs
Consequences	Improve marketing performance	Continuous improvement
		Currency
		Improving demand
		International branding
	Sustainable Development	Creating value
		Recreate resources
Substrate	Communication channels	Effective communication
		Cyberspace
	Advertising	Environmental advertising
		Virtual advertising

Finally, a qualitative analysis of this study was performed on selective coding, which, of course, is not a mechanical and separate step in the end. And categories that need further improvement and development are completed. Based on the analysis performed during these three stages, from 12 interviews,

primary codes were extracted and code analysis led to the identification of 38 secondary codes, from which 14 concepts were finally extracted. The extracted categories were structured according to the Strauss and Corbin paradigm model in the form of six dimensions of causal conditions, central category, strategy, consequences, and contexts, and intervenors, and the results of axial coding are given in Table 1. According to the categories extracted from the interviews, finally the paradigm model of agile marketing capability in the health tourism industry was presented. After preparing a paradigm model to increase credibility, the model was made available to experts in the field of health tourism to provide their opinions, most of which approved the model and their corrective opinions were used, and finally the final model of agile marketing capability. In the Iranian health tourism industry, it was presented as Fig. 1.
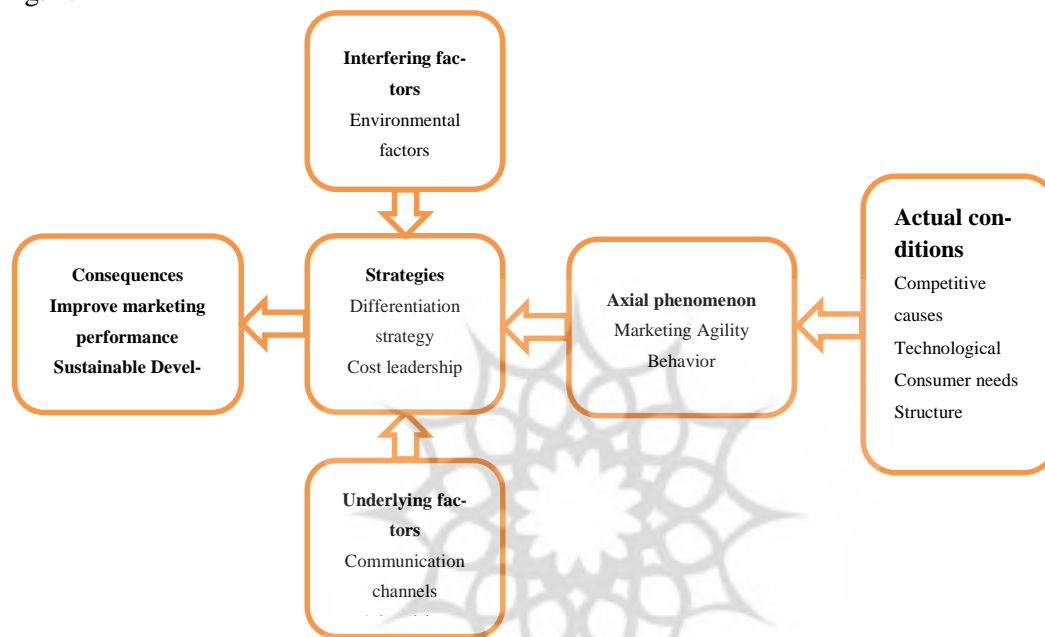
Fig. 1: Research Paradigm Model (Source: Researcher Findings)

In the quantitative part of the research, the validity behavior of marketing agility in the health tourism industry has been investigated and in order to analyze the research data, a two-step method for modeling using the partial least squares method has been used. The first stage involves determining the measurement model through reliability and validity, and the second stage involves determining the structural model through the analysis of fitness indicators, the coefficient of determination. In the first stage, validity and reliability estimation are used to evaluate the measurement model, which examines the confirmatory methods of data coordination with a given factor structure.

In fact, confirmatory factor analysis examines the competence of the items selected to introduce the variables. In the second stage, model fit indices and coefficient of determination are used to examine the structural model. In fact, confirmatory factor analysis examines the competence of the items selected to introduce the variables. In the second stage, path analysis of model fit indices and coefficient of determination is used to examine the structural model.

4.1 Main Findings

Because the research measurement model is of a reflective type, tests for reflective research are selected.

Table 2: Results of Confirmatory Factor Analysis (CFA) for Questionnaire Items

	Category	Component	Criteria	Estimate	Statistics	kurtosis	skewness
Marketing agility	Structural capability	Responsiveness	P01	0.786	32.727	1.524	-1.000
			P02	0.802	14.759	1.042	-0.844
			P03	0.718	10.559	0.990	-0.829
			P04	0.710	9.177	2.860	-1.077
			P05	0.805	20.250	-0.040	-0.331
			P06	0.706	11.699	1.199	-0.793
			P07	0.393	2.922	-0.497	-0.075
			P08	0.742	10.926	1.277	-0.842
		Quality	P09	0.816	10.245	1.848	-0.710
			P10	0.865	17.602	2.097	-0.909
			P11	0.755	6.038	2.922	-1.271
		Adaptability and flexibility	P12	0.724	9.562	1.035	-0.813
			P13	0.626	5.020	2.746	-1.038
			P14	0.760	10.308	0.571	-0.491
			P15	0.664	5.494	1.177	-0.644
			P16	0.784	19.823	0.389	-0.812
		Reconfigure	P17	0.741	9.070	0.221	-0.460
			P18	0.757	12.449	0.921	-0.684
			P19	0.773	14.984	0.917	-0.793
			P20	0.742	13.636	1.103	-0.840
			P21	0.741	13.268	1.400	-0.877
			P22	0.691	8.115	1.311	-0.845
			P23	0.646	6.366	0.841	-0.654
			P24	0.733	8.425	0.568	-0.697
			P25	0.682	8.054	1.470	-0.963

According to Hair [24], before performing any test on reflective measurement models, a homogeneity test should be performed to homosexualize or unidimensional the questions of a variable. Test Before structuring the structural equation, it is necessary to verify the validity of the research measurement tool through the confirmatory factor analysis (CFA) technique. In the fitted factor analysis model, the factor load of all variables in predicting the relevant items except question 7 at the confidence level of 0.95 had a significant difference with zero and the amount of factor load is more than 0.5 and their test statistic is more than 1.96 Therefore, at this stage, the question or item is removed and left out of the process. Cronbach's alpha test and combined test were used to test the reliability of the measurement model, the results of which can be seen in Table 3, and Cronbach's alpha should be above 0.7. That is, the correlation of the questions of each variable outside the model should be above 0.7. The combined reliability test also shows the internal correlation of the questions of a variable within the model. The combined reliability coefficient should also be greater than 0.7.

Table 2: Continue

	Category	Component	Criteria	Estimate	Statistics	kurtosis	skewness
		Functional mutual cooperation	P26	0.873	81.710	0.636	-0.609
			P27	0.712	6.355	0.725	-0.755
			P28	0.771	10.485	1.141	-0.873
			P29	0.754	10.841	1.219	-0.797
	Specialized capability	Reaction speed	P30	0.744	9.001	-0.245	-0.269
			P31	0.731	10.518	1.557	-1.081
			P32	0.755	12.539	1.520	-0.962
			P33	0.796	15.215	0.413	-0.448
			P34	0.765	14.593	2.517	-1.002
			P35	0.841	27.760	0.666	-0.580
		Feel and understand	P36	0.767	14.475	1.544	-0.892
			P37	0.757	15.665	1.058	-0.769
			P38	0.769	14.168	0.519	-0.681
			P39	0.827	23.876	1.166	-0.755
			P40	0.704	6.368	1.042	-0.676
			P41	0.782	16.046	1.361	-0.819
		Integrity	P42	0.884	25.508	1.379	-0.586
			P43	0.850	16.791	1.218	-0.812

The results of Table 3 show that Cronbach's alpha and combined reliability coefficients of all research variables are greater than 0.7. In order to fit and validate the agile marketing capability model of the health tourism industry, it is necessary to ensure the convergent and divergent validity or the same aspects of their differential validity that the correlation between the two of them in pairs, less than the number 9 / 0, and based on that, the non-overlap between the dimensions of the research variables in the form of differential validity is also confirmed, as a result of which the structural validity of the model is confirmed. For the convergent validity test, the extractive mean-variance test was used, which should be greater than 0.5 in each AVE variable.

Table 3: Reliability Results Obtained for the Research Model

No.	**Research components**	**Cronbach's alpha**	**Combined reliability**
1	Feel and understand	0.861	0.868
2	Adaptability and flexibility	0.764	0.800
3	Reaction speed	0.866	0.877
4	Functional mutual cooperation	0.796	0.922
5	responsiveness	0.870	0.971
6	Reconfigure	0.887	0.897
7	Quality	0.752	0.790
8	Integrity	0.671	0.778

Table 4 shows the test results of the extractive mean-variance and all AVE coefficients for the variables are above 0.5. For the divergent validity test, Fornell and Larker tests were used, which correlated the latent variables with the square root of the AVE instead of the prime numbers. The square root of each variable must be greater than the correlation of that variable with other variables and can be seen in Table 5. The lower the value, the better the result and can be seen in Table 5. All ratios for (HTMT) are less than one, so divergent validity is also confirmed by this test. The sum of two divergent validity tests shows that the research model has divergent validity and the results of convergent validity and divergent validity tests confirm the total validity.

Table 4: Results of Extractive Mean Variance Test

No.	Research components	Extraction variance mean test
1	Feel and understand	0.590
2	Adaptability and flexibility	0.510
3	Reaction speed	0.597
4	Functional mutual cooperation	0.608
5	responsiveness	0.516
6	Reconfigure	0.524
7	Quality	0.662
8	Integrity	0.752

Table 5: Fornell and Larker Test

	Feel and understand	Adaptability and	Reaction speed	Functional mutual co-	respon-siveness	Reconfig-ure	Quality	Integrity	Feel and understand	Adaptability and	Reaction speed
Feel and understand	0.768										
Adaptability and flexi-	0.751	0.71									
Reaction speed	0.801	0.72	0.77								
Functional mutual cooperation	0.597	0.60	0.57	1.000							
responsiveness	0.515	0.56	0.50	0.35	1.00						
Reconfigure	0.636	0.65	0.56	0.44	0.33	1.00					
Quality	0.777	0.70	0.71	0.87	0.46	0.61	0.78				
Integrity	0.769	0.81	0.77	0.55	0.78	0.56	0.69	0.71			
Feel and understand	0.817	0.83	0.82	0.59	0.53	0.69	0.73	0.81	0.72		
Adaptability and flexibility	0.704	0.70	0.73	0.62	0.45	0.51	0.65	0.67	0.78	0.8	
Reaction speed	0.61	0.62	0.63	0.52	0.36	0.53	0.67	0.56	0.56	0.5	0.86

After measuring the validity and reliability of the measurement model, the structural model was evaluated through the relationships between latent variables. To evaluate the quality or validity of the model, the credit review, which includes the shared credit review index and the redundancy credit review index, is used, which is shown in Table 7.

For the dependent variable, the independent variables together predicted the behavior of the dependent variable relatively strongly and the reported CV Red is almost strong.

Table 6: Multi-Feature Test and Multi-Method

	Feel and understand	Adaptability and flexibil-	Reaction speed	Functional mutual co-	responsiveness	Reconfigure	Quality	Integrity	Feel and understand	Adaptability and flexibil-	Reaction
Feel and understand											
Adaptability and flexibility	0.9										
Reaction speed	0.9	0.8									
Functional mutual coopera-	0.6	0.6	0.5								
responsiveness	0.5	0.6	0.5	0.3							
Reconfigure	0.6	0.7	0.6	0.4	0.33						
Quality	0.9	0.8	0.8	0.8	0.53	0.70					
Integrity	0.9	0.8	0.9	0.6	0.70	0.63	0.85				
Feel and understand	0.9	0.7	0.9	0.6	0.55	0.74	0.88	0.9			
Adaptability and flexibility	0.8	0.9	0.8	0.7	0.49	0.57	0.80	0.8	0.9		
Reaction speed	0.8	0.8	0.8	0.6	0.44	0.65	0.93	0.7	0.7	0.7	

Table 7: Cross-Validation Test of Common Index and Redundancy Index

Criteria	Cv com	Cv Red
Feel and understand	0.405	0.183
Adaptability and flexibility	0.262	0.12
Reaction speed	0.411	0.157
Functional mutual cooperation	0.345	0.181
responsiveness	0.363	0.069
Reconfigure	0.355	0.375
Quality	0.301	0.228
Integrity	0.259	0.116

Finally, the estimated values for the model fit indices given in Table 8 show that the data of the research model have a good fit with the factor structure and theoretical foundation of the research, and this indicates the alignment of the questions with the theoretical structures. It can be said that the research model is approved. The results of the coefficient of determination test are given in Table 9, which shows how much the independent variables together (all together) predict the behavior of the dependent (endogenous) variables. The results show that the independent variables together predicted the behavior of the dependent variable relatively strongly.

4.2 Results of the Entropy Method

Using the entropy method on problem indicators, it is possible to calculate the impact of each of them on the central category of marketing agility behavior. The result of implementing the entropy method in the Table 10 is summarized. The values of concentration, dispersion and weight of the indicators are specified in the last three columns. With the help of the weights obtained from the indicators, the weights and values of each category, which show the extent of their impact on the central category of agility behavior of marketing capability, are obtained.

Table 8: Model Fit Indices

Attribute Name	Results
Root factor of the mean squared standardized residuals	0.071
Fit goodness index	0.489

Table 9: Coefficient of Analysis Results

Research components	The coefficient of determination	Compatible determination coefficient
Feel and understand	0.357	0.351
Adaptability and flexibility	0.315	0.309
Reaction speed	0.326	0.32
Functional mutual coopera-tion	0.2	0.193
responsiveness	0.109	0.101
Reconfigure	0.763	0.761
Quality	0.617	0.614
Integrity	0.291	0.285
Feel and understand	0.203	0.196
Adaptability and flexibility	0.279	0.273

Table 10: The Obtained Weights From the Entropy Method

	Category		Component		Criteria			
	Name	Weight	Name	Weight	Name	D_j	E_j	Weight
Marketing agility	Structural capability	0.5789	Responsiveness	0.1817	P01	0.99334	0.00666	0.02820
					P02	0.99338	0.00662	0.02810
					P03	0.99402	0.00598	0.02530
					P04	0.99563	0.00437	0.01850
					P05	0.99427	0.00573	0.02430
					P06	0.99446	0.00554	0.02350
					P07	0.99670	0.00330	0.01400
					P08	0.99534	0.00466	0.01970
			Quality	0.0571	P09	0.99640	0.00360	0.01530
					P10	0.99543	0.00457	0.01940
					P11	0.99471	0.00529	0.02240
			Adaptability and flexibility	0.1193	P12	0.99344	0.00656	0.02780
					P13	0.99561	0.00439	0.01860
					P14	0.99426	0.00574	0.02430
					P15	0.99572	0.00428	0.01820
					P16	0.99283	0.00717	0.03040
			Reconfigure	0.2209	P17	0.99442	0.00558	0.02370
					P18	0.99437	0.00563	0.02390
					P19	0.99405	0.00595	0.02520

Table 10: The Obtained Weights From the Entropy Method

Category		Component		Criteria			
Name	**Weight**	**Name**	**Weight**	**Name**	D_j	E_j	**Weight**
				P20	0.99416	0.00584	0.02470
				P21	0.99388	0.00612	0.02590
				P22	0.99383	0.00617	0.02620
				P23	0.99432	0.00568	0.02410
				P24	0.99443	0.00557	0.02360
				P25	0.99441	0.00559	0.02370
Specialized capability	0.4211	Functional mutual cooperation	0.094	P26	0.99530	0.00470	0.01990
				P27	0.99459	0.00541	0.02290
				P28	0.99414	0.00586	0.02480
				P29	0.99379	0.00621	0.02630
		Reaction speed	0.1454	P30	0.99385	0.00615	0.02610
				P31	0.99252	0.00748	0.03170
				P32	0.99453	0.00547	0.02320
				P33	0.99519	0.00481	0.02040
				P34	0.99551	0.00449	0.01900
				P35	0.99410	0.00590	0.02500
		Feel and understand	0.1415	P36	0.99403	0.00597	0.02530
				P37	0.99433	0.00567	0.02400
				P38	0.99361	0.00639	0.02710
				P39	0.99454	0.00546	0.02310
				P40	0.99545	0.00455	0.01930
				P41	0.99466	0.00534	0.02260
		Integrity	0.0403	P42	0.99605	0.00395	0.01670
				P43	0.99445	0.00555	0.02350

The results of evaluation by entropy method show that the "reconfiguration" component has the greatest impact on the central category of agility behavior and the least impact is related to the "integration" component. On the other hand, by aggregating the components, it can be seen that more structural capability than marketing capability in the central category of agility behavior has marketing capability. Fig. 2 shows the weight and effectiveness of each component.

5 Conclusions and Suggestions

The present study, using the data strategy of the Innovative Concept Model Foundation, has provided agile marketing capabilities in the Iranian health tourism industry, so that it has comprehensively, comprehensively covered and explained the relevant categories, dimensions and basic components. In this research, an attempt has been made to use people for interviews who have sufficient experience and knowledge in the field of tourism, especially health tourism. The final model is presented as the first model of agile marketing capability in the field of health tourism in Iran, which is tested through field data and structural equation modeling method, agility behavior of marketing capability and validity of

research tools through confirmatory factor analysis (CFA) technique. Approved. As observed in the findings section, the root mean coefficient of the squares of the standardized residuals was 0.071, which is the fit of the approved model, and the final index, which measures all the predictions of the model and the structural model, is a good fit index. Is that it is 0.489 and the value of Gof is also strong and the research goal has been achieved.
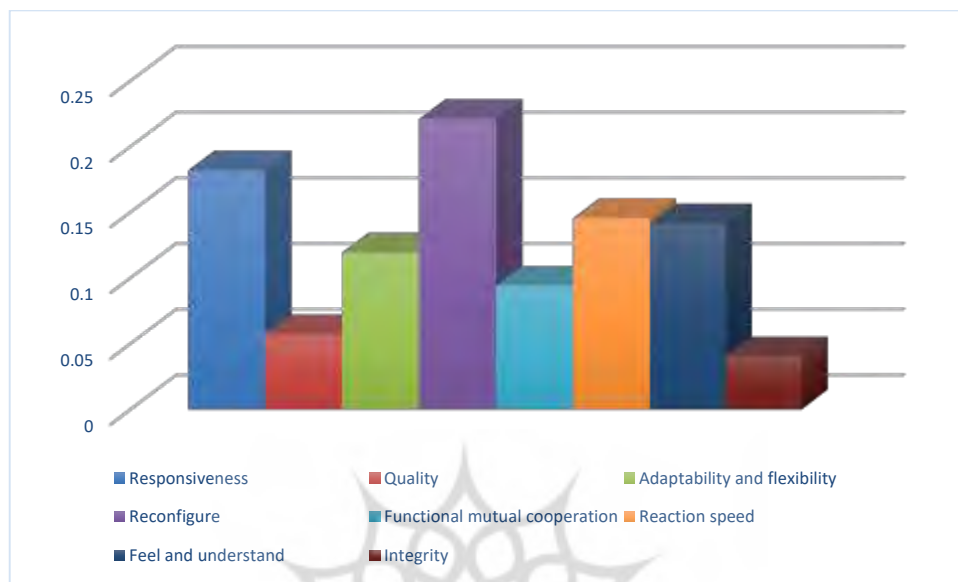

Fig. 2: Weight and Impact Components

According to the obtained model, the components of the central category include structural and specialized capabilities. Structural capability means responsiveness, quality, adaptability, flexibility and reconfiguration, and specialized capability refers to functional cooperation, speed of reaction, feeling and understanding and integration, and managers of health centers providing health tourism services call These capabilities should pay special attention because from a managerial point of view, agility behavior in marketing capabilities has many benefits and managers in order to achieve the necessary skills to achieve competitive advantage and quickly adapt to constant changes in the market and customer needs, strongly need to develop marketing capabilities [2]. Such conditions today have challenged the relevant officials to have a market-oriented perspective, and for this market-oriented use of agile strategies in marketing tourism services, especially in the field of health tourism as a way to achieve flexibility. Acceptance of competitive advantage after Quid 19 has been suggested among other competing countries and that by using this feature, they can strengthen their marketing power in accordance with changes and environmental opportunities.

Despite the attention that the issue of agility has gained in the management and marketing literature, especially international marketing [4,21,23,38], but researchers have understood the concept of agility in terms of capability. Have not been analyzed and conceptualized by an organization's marketing capabilities and ability to adapt to today's changing environment [22,62]. Also, due to the current situation and a deep global event such as the Covid 19 epidemic, the need for rapid movement, evaluation, and adaptation in all businesses has accelerated, so in the present study, the researcher's causes, underlying factors, strategy, and consequences of agile marketing capability Has been able to enrich the literature and knowledge in the field of successful implementation of agile marketing capabilities in the health tourism industry. The results of this study can be very important for health tourism managers and decision-makers because they will be able to enjoy the benefits of creating agile marketing capabilities in current markets, especially after the end of the corona. Each research will definitely face limitations

due to its specific nature, the present study is no exception to this rule. The present study was conducted in the field of health tourism and was related to the time period of the research and due to rapid changes in markets, care must be taken in generalizing the results. Relying on the data method, the present research has provided the foundation of marketing agility in the health tourism industry. This model can be used in other service industries in Iran and future researchers can pay attention to this and compare the results of their research with the present research.

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