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A Study On The Effect Of Agile Marketing On Firm Performance, Mediation Roles Of Innovation Capability And Marketing Mix Adaptation

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Abstract

With meta-dynamic capabilities created with responsiveness, speed, flexibility, and competence sub-components, the agile marketing structure, when applied in an enterprise, can provide the opportunity to create a strategy through which the enterprise can get ahead of its competitors in the market ranking in the face of suddenly developing situations. From this point of view, the aim of the study is to examine the roles of innovation capability and marketing mix adaptation in the industrial sector and service sector enterprises in the effect of agile marketing on firm performance. The main population of the study was selected as information techology (IT) enterprises in the service sector and pharmaceutical and chemical enterprises in the industrial sector. While collecting the research data using the telephone interview technique from marketing managers, a total of 179 enterprises from both sectors were reached, and the SPSS program was used for the data analysis. In the data obtained within the scope of the study, factor analysis, reliability analysis, and regression analysis were used. The study showed that agile marketing, innovation capability, and marketing mix adaptation have a positive effect on firm financial performance and firm marketing performance. On the other hand, in the study results, the moderating role of market turbulence was examined, and it was concluded that the moderating effect of market turbulence was insignificant.

Keywords: Agile Marketing, Innovation Capability, Marketing Mix Adaptation, Market Turbulence, Firm Performance.
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1. Introduction

Factors such as the acceleration of production cycles in business life, the continuity of improvement processes, transparency and customer engagement have determined the emergence of the concept and the structure of agile marketing while leading to the use of the concept of agility, which started in the field of software, in the field of marketing. In June 2012, John Cass and Jim Ewel organized the "Sprint Zero" meeting by bringing together 35 marketing managers and published the Agile Marketing Manifesto (Ewel, 2020:14-15). Following this manifesto, it was decided that the predictive approach, speed, transparency, and adaptation should be improved to change and enhance the existing marketing function in enterprises (Ene, 2020:96). With its structure, agile marketing provides enterprises with a possibility to foresee the necessary changes in any crisis period and offer the most appropriate methods to turn the crisis into an opportunity and explains why the existing marketing function in the enterprise should be changed and improved. The main difference of the structure from crisis management is that it foresees possible threats in advance and contains the planning of change rather than the step-by-step planning of what to do in case of a crisis (Penpece and Çelik, 2013:2). Some conceptual models developed to date in the literature concerning the effects of agile marketing are as follows: Strategies that affect agile marketing (Supreethi and Suresh, 2021), a four-stage strategy that develops the agile marketing capacity for congress tourism (Moi and Cabiddu, 2021), leadership factors that constitute the concept of agile marketing, team factors, employee factors, organizational factors (Kalaignanam et al., 2021), agile marketing effects for a product that is in the market for the first time (Hajli et al., 2020), the role of organizational characteristics and human resources capabilities in increasing the effects of agile marketing (Ravishankar and Rekha, 2019).

As a result of the literature review, no studies on agile marketing conducted by considering the industry and service sector together to date were found. Accordingly, the research question was formed in the following way:

How does agile marketing affect firm performance in information technology enterprises in the service sector and pharmaceutical and chemical enterprises in the industrial sector? Do innovation capability and marketing mix adaptation have mediation roles in this effect? The aim of the present study is to examine the relationships within the framework of these questions. Furthermore, the effect of agile marketing on firm financial performance and firm marketing performance, innovation capability and marketing mix adaptation was examined by including market turbulence in the model tested within the scope of the study.

2.Conceptual Framework

2.1.Agile Marketing

Agile marketing is the way in which an enterprise expresses changes in the market and how quickly its decisions are implemented and repeated at the stage of adapting to changes in the market (Kalaignanam et al., 2021:36). In a broader definition, agile marketing occurs from the formation of a learning mindset by understanding agile principles within the scope of a strong vision and providing the necessary behavior change in this direction, rather than waiting for a high rate of change to occur by including a few of the agile instruments in the team environment in the enterprise (Perkin, 2022:5).

Enterprises should reorganize their business processes, perceive opportunities in the market, and adjust their dynamic capabilities to maintain their competitiveness, both in order to improve their current situation and not be adversely impacted by the crisis. In studies conducted by different researchers such as Sharifi and Zhang (1999), Zhang and Sharifi (2000), Lin, Chiu, and Chu (2006), Sherehiy, Karwowski, and Layer (2007), Nejatian and Hossein Zarei (2013), and Zhou, Mavondo, and Saunders (2019), the components of agility are stated as responsiveness, competence, speed, and flexibility. Responsiveness is identifying an unsatisfied or hidden need of the customer by the enterprise, perceiving and responding to changing customer needs or different customer expectations in international markets (Hagen et al., 2019:279). In other words, responsiveness involves the process of making and implementing the necessary preparations by associating the market dynamics of the enterprise with customer needs and expectations. Competence is the ability to create, integrate, and restructure internal and external competencies in order to address the rapidly changing structure of the enterprise and advance the competitive power of the enterprise in a positive direction (Fatoki, 2021:616). Speed refers to the time spent by enterprises to analyze changes in the market, initiate the necessary actions, collect feedback, and arrange decisions regarding marketing (Kalaignanam et al., 2021:39). Flexibility is defined as “an enterprise’s ability to meet increasing customer expectations in terms of quality, cost, and time without causing organizational disruptions or performance losses” (Kornelius et al., 2020:7416).

2.2.Innovation Capability

Innovation capability represents the ability to transform information and ideas in the enterprise into new products, processes, and systems (Saunila et al., 2014; Saeed et al., 2022:252). Enterprises with high innovation capability offer a new product of high quality and low cost to the market prior to their competitors. Numerous studies have been conducted on the sub-components of innovation capability in this regard. Schumpeter (1934), who made the first definition of innovation capability, evaluated innovation in five different categories: the introduction of new products, the introduction of new production methods, the opening of new markets, the development of new sources of supply for raw materials and other inputs, and the creation of new market structures in an industry (Özgür Güler and Veysikarani, 2018:158). In his study, Johne (1999:203) showed the types of innovation contributing to the business development of enterprises and taking the first place in the market by dividing them into three sub-components: market innovation, process innovation, and product innovation. The Oslo Manual Guide (2005) evaluated the sub-components of innovation in four categories: marketing innovation, process innovation, product innovation, and organizational innovation (Yavuz, 2010:145-146). Three innovation components created by Johne (1999:203) from these studies were included in the model as the components of innovation capability in the research due to their contribution to both technological innovation and non-technological innovation for the enterprise.

Marketing innovation is implementing a marketing technique that seeks creative and new solutions to the problems and needs of the enterprise (Ungerman et al., 2018:132). Marketing innovation is based on creating innovative products by using the information from customers at the maximum level, providing an advantage in the competitive market, and determining the customer's unseen needs. Product innovation is concerned with the introduction of a new or highly enriched product or service to the market in response to its individuality or expected use (Gupta, 2021:3). In other words, it can be defined as the response of the enterprise to external actions for an existing or newly introduced product in the market. Process innovation focuses on issues related to basic business activities, structures, strategies, and administrative processes in the enterprise (Walker, 2014:35).

2.3.Marketing Mix Adaptation

In line with their study, Booms and Bitner (1981) stated that there was a need to expand marketing mix adaptation to product and service marketing and that enterprises could achieve significant advantages with this method (Rafiq and Ahmed, 1995:8). Studies in the literature and studies in business life have also revealed that service delivery activities have started to become more important issues with each passing day and service marketers have recommended adding the 3Ps (physical evidence, process management, and participants) to the original 4Ps (product, price, place (distribution), and promotion) (Kotler, 2018:120).

Product adaptation, the first element of marketing mix adaptation, enables enterprises to establish a balance against market dynamics by meeting customer needs with a wide product range and personalized product offers, adapting to physical environmental conditions, and carefully analyzing market differences such as economic development stage, cultural characteristics, product life cycle stage, competition, distribution systems, advertising media, and legal restrictions (Buzzell, 1968; Kotabe, 1998; Powers and Loyka, 2010:66). Product adaptation also strengthens the enterprise in the competitive market due to its multifaceted effect in the enterprise. Price adaptation involves the monetary costs of the enterprise and the time spent on a transaction (Loo and Leung, 2016:7). Furthermore, price adaptation is the amount customers pay to the enterprise for a product/service they want to have. Place (distribution) adaptation is making products accessible by enterprises in line with the information when and where customers want to purchase the products (Ansah, 2016:17). Promotion adaptation is personal selling, sales development, advertising, public relations, and direct marketing tools that enterprises can actively use in both national and international markets (Koçoğlu and Sarıtaş, 2016:128). On the contrary, promotion adaptation differs from other adaptation types due to its contribution to the persuasion of customers at the product purchasing stage. Physical evidence adaptation consists of factors integrated into a service to make a service tangible and measurable (Do and Vu, 2020:1343). Process adaptation covers the activities related to the delivery of the service to the end customer (Suherly, 2016:574). At the same time, it is possible to express process adaptation as all activity elements in the enterprise. Participants adaptation refers to people (employees, management, customers, etc.), who affect market dynamics in the enterprise (Lin, 2011:10635).

2.4.Firm Performance

Firm performance refers to the ability of the enterprise to reach its goals using its financial resources in the most efficient and effective way (Elmas and Topal, 2022:360). Multiple variables are effective in reaching the enterprise's goals within its activity period. Within this framework, there are two performance components, quantitative and qualitative performance, to be used according to its purpose and level (Bulut et al., 2009:3). Whereas quantitative performance focuses on achievements related to the financial and marketing practices of the enterprise, qualitative performance focuses on performance dimensions such as non-financial quality, enterprise reputation, etc.

Firm financial performance and firm marketing performance, which are in quantitative dimensions, address a more holistic measure of enterprise performance (Khan, 2020:5). Firm financial performance identifies sales growth, profitability, and the rate of growth in return on investment according to the enterprise's competitors in the market (Wang et al., 2015:1931). In other words, financial performance is a measurement tool for evaluating the enterprise's financial resources practices. Morgan and Turnell (2003:266) measured firm marketing performance with criteria such as the current market share of the enterprise, its position in the competitive market, sales growth, customer satisfaction, and customer retention.

2.5.Market Turbulence

"Market turbulence is the intensity of change in customer preferences regarding foreign market positions" (Hamid et al., 2020:205) and reflects how variable and unpredictable the business environment is, thus potentially threatening (Sung and Choi, 2019:1994). Market turbulence is among the most important market possibilities that affect the extent to which enterprise innovation improves business performance (Tsai and Yang, 2013:1280). While contributing to the increase in the relational link between uncertainties in the business processes of enterprises, risks, and strategies and the enterprise, market turbulence is also a critical factor for the enterprise in external cooperation (Wang et al., 2015:1930). In general, enterprises attempt to simultaneously evaluate the stage of struggling with changes in customer and market dynamics and organizational new competition scenarios (Santos-Vijande and A´lvarez-Gonza´lez, 2007:519). However, in the market turbulence caused by changes in customer expectations or in the market, the enterprise's determining the change strategy to be realized according to the type of market turbulence allows the enterprise to get out of the uncertainty situation faster. Peters, Gudergan, and Booth (2019:390) divided the market turbulence caused by customers and market dynamics into three: low, moderate, and high market turbulence. Low market turbulence refers to the low risk faced by enterprises when

product/service diversity in the market increases (Sun and Govind, 2017:1329). Peter et al. (2019:390) defined moderate market turbulence as markets with medium-range unpredictability, dynamic or complex structure. High market turbulence includes the increasing variance of key market variables over time and the increasing unpredictability of changes (Grant and Cibin, 1996:169).

3.Method

The aim of the study is to investigate the effects of innovation capability and marketing mix adaptation on enterprises in the industrial and service sectors in the effect of agile marketing on firm performance. The study aimed to contribute to both the literature and the practice by researching the relationships mentioned in enterprises operating in the industry and service sectors. Moreover, the potential to create a difference in the variable relations shown in the conceptual model was also examined by addressing market turbulence as a moderating variable in the study.

The conceptual model of the study consists of four main variables and is displayed in Figure 1.

The hypotheses determined in light of the research in the literature within the framework of the variables and relations specified in the conceptual model in Figure 1 are presented below:

H_1: Innovation capability has a mediation role in the effect of agile marketing on firm performance.

H_{1a}: Innovation capability has a mediation role in the effect of agile marketing on firm financial performance.

H_{1b}: Innovation capability has a mediation role in the effect of agile marketing on firm marketing performance.

H_2: Marketing mix adaptation has a mediation role in the effect of agile marketing on firm performance.

H_{2a}: Marketing mix adaptation has a mediation role in the effect of agile marketing on firm financial performance.

H_{2b}: Marketing mix adaptation has a mediation role in the effect of agile marketing on firm marketing performance.

H_3: Market turbulence has a moderating role in the effect of agile marketing on firm performance.

H_{3a}: Market turbulence has a moderating role in the effect of agile marketing on firm financial performance.

H_{3b}: Market turbulence has a moderating role in the effect of agile marketing on firm marketing performance.

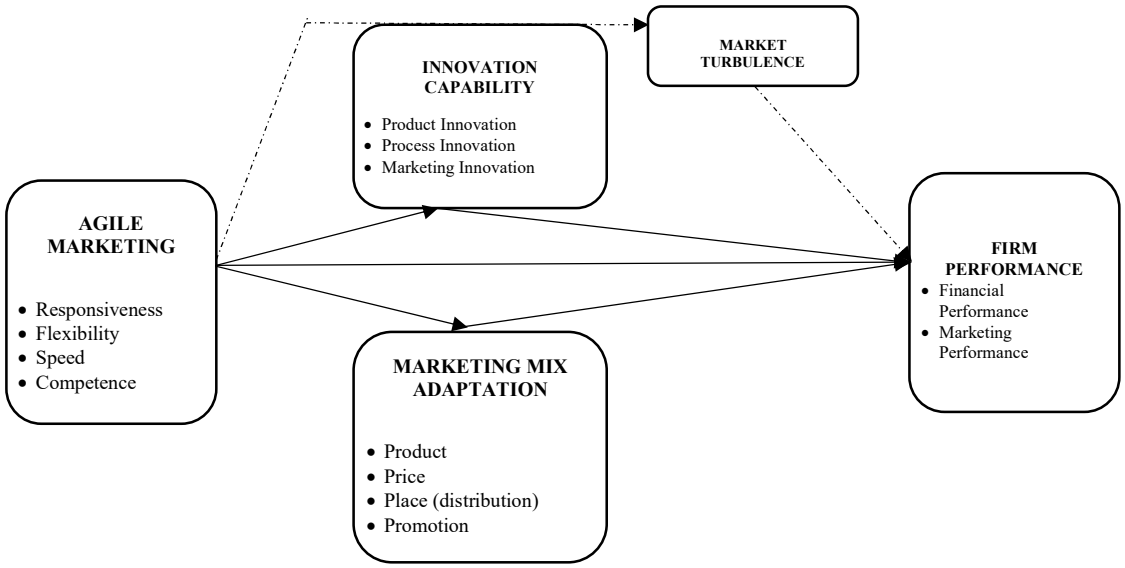

Figure 1. Conceptual Model of the Study

The main population of the study consists of information technology enterprises registered to the Istanbul Chamber of Commerce (ICOC) and pharmaceutical and chemical enterprises registered to the Istanbul Chamber of Industry (ICOI). The factor that caused information technology enterprises and pharmaceutical and chemical

enterprises to be selected as the main population is experiencing the developments, changes, and transformations with COVID-19 in both sectors in a remarkable way and observing that it has led to rapid developments.

The number of pharmaceutical and chemical enterprises registered to the ICOI was determined as 392, and the number of information technology enterprises registered to the ICOC was determined as 14,026. In line with the available data, the formula below was used to determine the research sample size (Yükselen, 2017:69):

$Z = \pm 1.96$ (95%); $p=0.50$; $e= \pm 0.10$

$n = [N*Z^2*(p*q)] / [N*e^2+Z^2*(p*q)]$

Information Technology Sector:

$n = [14{,}026*1.96^2*(0.50*0.50)] / [14{,}026 *0.10^2+ 1.96^2*(0.50*0.50)] = 96$ enterprises

Pharmaceutical and Chemical Sector:

$n = 377.43 /(3.93+0.9604) = 78$ enterprises

The convenience sampling method, one of the non-random sampling methods, was employed in the sample selection.

The survey method was used as the data collection method in the study. Sections concerning the "Four Components of Agile Marketing; Responsiveness, Competence, Speed, and Flexibility Scale" and the "The Four Components of Marketing Mix Adaptation: Product, Price, Promotion, and Place Scale" created by Khan (2020), the "Participants, Physical Evidence, and Process Management Scale Related to the Service Sector" created by Booms and Bitner (1981), the "Product Innovation, Process Innovation, and Marketing Innovation Scale" created by Zhou et al. (2019), the "Firm Financial Performance and Firm Marketing Performance Scale" created by Khan (2020), and the "Market Turbulence Scale" created by Zhou et al. (2019) were used in creating the research questionnaire form. The scale questions prepared within the scope of the study were transformed into a dimensional and 7-point Likert scale, and a total of 179 enterprises from both sectors were reached by interviewing marketing managers on the phone.

4.Results And Discussion

Table 1 contains the distribution of the IT enterprises in the service sector and the pharmaceutical and chemical enterprises in the industry sector where surveys were conducted according to the legal structure, number of employees, and activity period, as a result of the analysis performed in the study. The KOSGEB employee number range was used for distribution by the number of employees. Nevertheless, the financial criteria taken into consideration together with the number of employees in KOSGEB were not considered in the study. As seen in Table 1, the legal structure of the enterprises in both sectors mostly consisted of a joint stock company structure, with 1-49 employees and the activity period between 1-30 years.

Table 1. Enterprises' Legal Structure, Number of Employees, and Duration of Activity

Legal Structure of the Enterprise	IT Enterprises		Pharmaceutical and Chemical Enterprises	
	n	Percentage (%)	n	Percentage (%)
Sole Proprietorship	12	12.0	2	2.5
Limited Liability Company	43	43.0	32	40.5
Joint Stock Company	45	45.0	44	55.7
Limited Partnership			1	1.3
Total	100	100.0	79	100.0
Number of Employees in the Enterprise	IT Enterprises		Pharmaceutical and Chemical Enterprises	
	n	Percentage (%)	n	Percentage (%)
1 – 49 employees	80	80.0	30	38.0
50 – 249 employees	12	12.0	23	29.1
250- + employees	8	8.0	26	32.9
Total	100	100.0	79	100.0
Activity Period of the Enterprise	IT Enterprises		Pharmaceutical and Chemical Enterprises	
	n	Percentage (%)	n	Percentage (%)
1 – 30 years	97	97.0	50	63.3
31- 60 years	2	2.0	18	22.8
61- + years and more	1	1.0	11	13.9
Total	100	100.0	79	100.0

Exploratory factor analysis was conducted on the variables within the scope of the study. In this regard, Table 2 contains the exploratory factor analysis results obtained concerning the agile marketing variable used in the study. According to the factor analysis results regarding the agile marketing variable, the KMO value was 0.735, and Bartlett's test of sphericity result was χ^2= 416.191 and accepted as significant at the p<0.01 level. The total variance explained for the agile marketing variable used in IT enterprises was 64%. According to this structure, the components were named in the following way:

- Factor 1: Proactive Market Sensing
- Factor 2: Flexibility
- Factor 3: Sensitivity
- Factor 4: Speed
- Factor 5: Predictability

In the results acquired from the exploratory factor analysis of the agile marketing variable used in the study conducted on pharmaceutical and chemical enterprises, it was seen that the KMO value was 0.703, and the result of Bartlett's test of sphericity was χ^2=429.301 and significant at the p<0.01 level. The explained variance value for the agile marketing variable was found to be 64%, and as a result of factor analysis, the items whose factor loading was below 0.50 were excluded from the structure, and the components were renamed:

- Factor 1: Competence
- Factor 2: Marketing orientation
- Factor 3: Predictability
- Factor 4: Speed and flexibility
- Factor 5: Sensitivity
- Factor 6: Responsiveness

Table 2. Factor Analysis for the Agile Marketing Scale

IT Enterprises Factors						Pharmaceutical and Chemical Enterprises Factors						
	1	2	3	4	5		1	2	3	4	5	6
PCPRPAL1	.823					PCPRPAL1						.799
PCPRPAL2	.839					PCPRPAL2						.759
PCPRPAL3			.691			PCPRPAL3		.730				
PCPRPAL4					.716	PCPRPAL4			.741			
PCPRPAL5	.513					PCPRPAL5			.525			
PCHIZ1	-	-	-	-	-	PCHIZ1	.658					
PCHIZ2	-	-	-	-	-	PCHIZ2		.729				
PCHIZ3				.807		PCHIZ3	.753					
PCHIZ4				.807		PCHIZ4				.515		
PCESN1					.635	PCESN1				.524		
PCESN2		.525				PCESN2				.744		
PCESN3		.588				PCESN3				.538		
PCDUY1	-	-	-	-	-	PCDUY1			.640			
PCDUY2		.812				PCDUY2	.765					
PCDUY3		.645				PCDUY3	.552					
PCDUY4	.511					PCDUY4			.549			
PCDUY5			.768			PCDUY5					.755	
PCDUY6			.645			PCDUY6					.637	

In the exploratory factor analysis results acquired for the marketing mix adaptation variable in Table 3, the KMO value was determined to be 0.729. On the other hand, it was seen that the result of Bartlett's test of sphericity was χ^2=1555.524 and significant at the 0.01 level. The explained variance value, consisting of a total of five components, was 56.208%. According to this structure, the components are as follows:

- Factor 1: Participants
- Factor 2: Service
- Factor 3: Distribution
- Factor 4: Promotion
- Factor 5: Physical evidence

The KMO value, obtained as a result of the factor analysis for the marketing mix adaptation variable of pharmaceutical and chemical enterprises, was 0.679. As a result of Bartlett's test of sphericity, the value of χ^2=967.941 was obtained and was found to be significant at the 0.01 level. The total explained variance value in the pharmaceutical and chemical enterprises section of the marketing mix adaptation variable was 56.438%. The components named within the scope of this structure are presented below:

- Factor 1: Product
- Factor 2: Place (distribution)
- Factor 3: Promotion
- Factor 4: Price

Table 3. Factor Analysis for the Marketing Mix Adaptation Scale

IT Enterprises Factors						Pharmaceutical and Chemical Enterprises Factors				
	1	2	3	4	5		1	2	3	4
PKAH1		.738				PKAU1	.742			
PKAH2	-	-	-	-	-	PKAU2	.763			
PKAH3		.741				PKAU3	.663			
PKAH4						PKAU4	.623			
PKAC1	-	-	-	-	-	PKAU5	.671			
PKAC2	.714					PKAU6	.743			
PKAC3	.760					PKAU7	.652			
PKAC4	.727					PKAU8	.598			
PKAT1				.740		PKAT1			.549	
PKAT2	-	-	-	-	-	PKAT2			.766	
PKAT3				.705		PKAT3			.571	
PKAT4				.745		PKAT4			.540	
PKAT5	-	-	-	-	-	PKAT5			.582	
PKAD1	-	-	-	-	-	PKAD1		.846		
PKAD2			.933			PKAD2		.926		
PKAD3			.954			PKAD3		.943		
PKAD4			.927			PKAD4		.927		
PKAD5	-	-	-	-	-	PKAD5	-	-	-	-
PKAF1	-	-	-	-	-	PKAF1				.746
PKAF2					.733	PKAF2	-	-	-	-
PKAF3					.743	PKAF3				.671
PKAF4	-	-	-	-	-	PKAF4				.595
PKAF5	-	-	-	-	-	PKAF5	-	-	-	-

Table 4 contains the factor analysis results obtained for the innovation capability variable. According to the exploratory factor analysis results, the KMO value was 0.872, and the result of Bartlett's test of sphericity was χ^2= 728.390 and accepted as significant at the p<0.01 level. The total explained variance value for the innovation capability variable used in IT enterprises was found to be 62.814%, and the components were named as follows according to this structure:

- Factor 1: Marketing innovation
- Factor 2: Product innovation

The KMO value was determined to be 0.849 as a result of the exploratory factor analysis conducted for the innovation capability variable in pharmaceutical and chemical enterprises. On the other hand, it was seen that the result of Bartlett's test of sphericity was χ^2=504.094 and significant at the 0.01 level. The explained variance value, consisting of a total of three components, was 69.165%. According to this structure, the components are as follows:

- Factor 1: Marketing innovation
- Factor 2: Product innovation
- Factor 3: Process innovation

Table 4. Factor Analysis for the Innovation Capability Scale

IT Enterprises Factors			Pharmaceutical and Chemical Enterprises Factors			
	1	2		1	2	3
YKU1	-	-	YKU1		.740	
YKU2		.837	YKU2		.875	
YKU3		.853	YKU3		.755	
YKU4		.836	YKU4		.629	
YKP1	.779		YKP1	.807		
YKP2	.863		YKP2	.784		
YKP3	.829		YKP3	.667		
YKP4	.744		YKP4	.827		
YKS1	-	-	YKS1			.577
YKS2	-	-	YKS2			.772
YKS3	-	-	YKS3			.800
YKS4	-	-	YKS4			.727

Table 5 presents the scale reliability analysis results of the variable constructs that emerged according to the factor analysis results. In line with the results in Table 5, it was revealed that the reliability of the scale constructs was at an acceptable level.

Table 5. Reliability Analysis of the Scales Related to the Model Variables

Variables	IT Enterprises		Pharmaceutical and Chemical Enterprises	
	Number of Questions	Cronbach's Alpha	Number of Questions	Cronbach's Alpha
Agile Marketing	14	.811	18	.827
** Competence	-	-	4	.754
** Marketing orientation	-	-	2	.604
** Predictability	2	.444	4	.654
** Speed and flexibility	-	-	4	.599
** Sensitivity	3	.613	2	.511
** Responsiveness	-	-	2	.474
** Speed	2	.667	-	-
** Flexivbility	3	.682	-	-
** Proactive Market Sensing	4	.718	-	-
Marketing Mix Adaptation	13	.766	20	.757
** Product	-	-	8	.841
** Place (distribution)	3	.972	4	.944
** Promotion	3	.728	5	.671
** Price	-	-	3	.729
** Service	2	.708	-	-
** Participants	3	.736	-	-
** Physical evidence	2	.651	-	-
Innovation Capability	7	.898	12	.898
** Product innovation	3	.887	4	.842
** Marketing innovation	4	.902	4	.869
** Process innovation	-	-	4	.782
Market Turbulence	3	.862	3	.622
Firm Financial Performance	4	.817	4	.732
Firm Marketing Performance	5	.859	5	.892

In the analyses conducted for IT and pharmaceutical and chemical enterprises regarding the mediation role of innovation capability in the effect of agile marketing on firm financial performance, it was determined that the conditions required by the Baron and Kenny model were met (Table 6).

The regression coefficient value was 0.615 in the direct effect of agile marketing in IT enterprises on firm financial performance, and when innovation capability was included in the model, the regression coefficient value decreased to 0.316 and the significance level became higher than 5%. According to this result, it was determined that innovation capability had a full mediation role in the effect of agile marketing on firm financial performance. In light of the said results, hypothesis H_{1a} for IT enterprises was supported.

The value of the regression coefficient in the direct effect of agile marketing in pharmaceutical and chemical enterprises on firm financial performance was 0.350, and when innovation capability was included in the model, the regression coefficient value decreased to 0.039, and the significance level was also above 5%. According to this result, hypothesis H_{1a} was supported.

Table 6. Model Statistics for the Mediation Role of Innovation Capability in the Effect of Agile Marketing on Firm Financial Performance

IT ENTERPRISES				
Regression Models			Agile Marketing Regression Coefficient	
	F	p	B	p
Agile Marketing --> Financial Performance	15.844	0.000	0.615	0.000
Agile Marketing --> Innovation Capability	85.144	0.000		
Innovation Capability --> Financial Performance	18.301	0.000		
Agile Marketing + Innovation Capability --> Financial Performance	10.433	0.000	0.316	0.131
PHARMACEUTICAL AND CHEMICAL ENTERPRISES				
Regression Models			Agile Marketing Regression Coefficient	
	F	p	B	p
Agile Marketing --> Financial Performance	6.524	0.013	0.350	0.013
Agile Marketing --> Innovation Capability	65.388	0.000		
Innovation Capability --> Financial Performance	13.587	0.000		
Agile Marketing + Innovation Capability --> Financial Performance	6.734	0.002	0.039	0.827

In the analysis of the mediation role of innovation capability in the effect of agile marketing on firm marketing performance, it was revealed that the conditions required by the Baron and Kenny model were met (Table 7).

In the analysis of IT enterprises, the regression coefficient value in the direct effect of agile marketing on firm marketing performance was 0.837, and when innovation capability was included in the model, the regression coefficient value decreased to 0.243 and was insignificant at the significance level of 5%. According to the results acquired in line with the analysis, it was found that innovation capability has a full mediation role in the effect of agile marketing on firm marketing performance. In light of all these results, hypothesis H_{1b} for IT enterprises was supported.

In the analysis for pharmaceutical and chemical enterprises, the regression coefficient value in the direct effect of agile marketing on firm marketing performance was 0.833, and when innovation capability was included in the model, the regression coefficient value decreased to 0.651. According to the said result, hypothesis H_{1b} stating that innovation capability has a partial mediation role in the effect of agile marketing on firm marketing performance, was supported.

According to these results, hypothesis H_1 was supported for both sectors.

Table 7. Model Statistics for the Mediation Role of Innovation Capability in the Effect of Agile Marketing on Firm Marketing Performance

IT ENTERPRISES				
Regression Models			Agile Marketing Regression Coefficient	
	F	p	B	p
Agile Marketing --> Marketing Performance	28.814	0.000	0.837	0.000
Agile Marketing --> Innovation Capability	85.144	0.000		
Innovation Capability --> Marketing Performance	52.450	0.000		
Agile Marketing + Innovation Capability --> Marketing Performance	27.149	0.000	0.243	0.216
PHARMACEUTICAL AND CHEMICAL ENTERPRISES				
Regression Models			Agile Marketing Regression Coefficient	
	F	p	B	p
Agile Marketing --> Marketing Performance	28.421	0.000	0.833	0.000
Agile Marketing --> Innovation Capability	65.388	0.000		
Innovation Capability --> Marketing Performance	18.767	0.000		
Agile Marketing + Innovation Capability --> Marketing Performance	15.136	0.000	0.651	0.003

In the analyses carried out in the enterprises of both sectors for the mediation role of marketing mix adaptation in the effect of agile marketing on firm financial performance, it was determined that the conditions required by the Baron and Kenny model were met (Table 8).

The regression coefficient value in the direct effect of agile marketing in IT enterprises on firm financial performance was 0.615, and when marketing mix adaptation was included in the model, the regression coefficient value decreased to 0.533. In accordance with the results acquired in line with the analysis, it was found that the coefficient was statistically significant and marketing mix adaptation had a partial mediation role in the effect of agile marketing on firm financial performance. Accordingly, hypothesis H_{2a} was supported.

The regression coefficient value in the direct effect of agile marketing in pharmaceutical and chemical enterprises on firm financial performance was 0.350, and when marketing mix adaptation was included in the model, the regression coefficient value decreased to 0.144. According to the results obtained in line with the analysis, it was revealed that the coefficient was statistically insignificant, and it was observed that marketing mix adaptation had a full mediation role in the effect of agile marketing on firm financial performance. According to this result, hypothesis H_{2a} was supported.

Table 8. Model Statistics for the Mediation Role of Marketing Mix Adaptation in the Effect of Agile Marketing on Firm Financial Performance

IT ENTERPRISES				
Regression Models			Agile Marketing Regression Coefficient	
	F	p	B	p
Agile Marketing --> Financial Performance	15.844	0.000	0.615	0.000
Agile Marketing --> Marketing Mix Adaptation	31.463	0.000		
Marketing Mix Adaptation --> Financial Performance	7.111	0.009		
Agile Marketing + Marketing Mix Adaptation --> Financial Performance	8.348	0.000	0.533	0.003
PHARMACEUTICAL AND CHEMICAL ENTERPRISES				
Regression Models			Agile Marketing Regression Coefficient	
	F	p	B	p
Agile Marketing --> Financial Performance	6.524	0.013	0.350	0.013
Agile Marketing --> Marketing Mix Adaptation	21.108	0.000		
Marketing Mix Adaptation --> Financial Performance	15.312	0.000		
Agile Marketing + Marketing Mix Adaptation --> Financial Performance	8.135	0.001	0.144	0.329

In the analyses performed in IT and pharmaceutical and chemical enterprises for the mediation role of marketing mix adaptation in the effect of agile marketing on firm marketing performance, it was found that the conditions required by the Baron and Kenny model were provided (Table 9).

The regression coefficient value in the direct effect of agile marketing in IT enterprises on firm marketing performance was 0.837, and when marketing mix adaptation was included in the model, the regression coefficient value decreased to 0.660. Accordingly, it was revealed that marketing mix adaptation had a partial mediation role in the effect of agile marketing on firm marketing performance. Therefore, hypothesis H_{2b} was supported.

The regression coefficient value in the direct effect of agile marketing in pharmaceutical and chemical enterprises on firm marketing performance was 0.833, and the regression coefficient value decreased to 0.748 when marketing mix adaptation was included in the model. According to the above-mentioned result, hypothesis H_{2b} stating that marketing mix adaptation has a partial mediation role in the effect of agile marketing on firm marketing performance was supported.

It is seen that hypothesis H_2 was supported in line with the analysis results in Tables 8 and 9 concerning both enterprise groups.

Table 9. Model Statistics for the Mediation Role of Marketing Mix Adaptation in the Effect of Agile Marketing on Firm Marketing Performance

IT ENTERPRISES				
Regression Models			Agile Marketing Regression Coefficient	
	F	p	B	p
Agile Marketing → Marketing Performance	28.814	0.000	0.837	0.000
Agile Marketing → Marketing Mix Adaptation	31.463	0.000		
Marketing Mix Adaptation → Marketing Performance	17.592	0.000		
Agile Marketing + Marketing Mix Adaptation → Marketing Performance	16.953	0.000	0.660	0.000
PHARMACEUTICAL AND CHEMICAL ENTERPRISES				
Regression Models			Agile Marketing Regression Coefficient	
	F	p	B	p
Agile Marketing → Marketing Performance	28.421	0.000	0.833	0.000
Agile Marketing → Marketing Mix Adaptation	21.108	0.000		
Marketing Mix Adaptation → Marketing Performance	15.312	0.000		
Agile Marketing + Marketing Mix Adaptation → Marketing Performance	14.760	0.000	0.748	0.003

The moderating role of market turbulence in the effect of agile marketing on firm financial performance in both IT and pharmaceutical and chemical enterprises was tested through multiple regression analysis, and the analysis results are shown in Table 10. The moderating role of market turbulence in the relationships was not significant at the 5% significance level in the analyses conducted. According to this result, hypothesis H_{3a} was not supported.

Table 10: Analysis Results on the Moderating Role of Market Turbulence in the Effect of Agile Marketing on Firm Financial Performance

IT ENTERPRISES								
Model	R	R^2	Adjusted R^2	Standard Error				
1	0.374	0.140	0.122	0.85829				
Model		Sum of Squares	sd	Mean of Squares	F	p		
1	Regression	11.646	2	5.823	7.905	0.001		
	Residual	71.456	97	0.737				
	Total	83.103	99					
Model		Non-Standardized Coefficients		Standardized Coefficients	t	p	Equivalent Statistics	
		B	Standard Error	Beta			Tolerance	VIF
1	Fixed	1.703	0.903		1.885	0.062		
	AM	0.601	0.161	0.364	3.727	0.000	0.928	1.078
	AMMT	0.003	0.010	0.032	0.331	0.741	0.928	1.078
PHARMACEUTICAL AND CHEMICAL ENTERPRISES								
Model	R	R^2	Adjusted R^2	Standard Error				
1	0.280	0.079	0.054	0.78598				
Model		Sum of Squares	sd	Mean of Squares	F	p		
1	Regression	4.005	2	2.002	3.241	0.045		
	Residual	46.950	76	0.618				
	Total	50.955	78					
Model		Non-Standardized Coefficients		Standardized Coefficients	t	p	Equivalent Statistics	
		B	Standard Error	Beta			Tolerance	VIF
1	Fixed	3.125	0.801		3.902	0.000		
	AM	0.342	0.143	0.273	2.394	0.019	0.930	1.076
	AMMT	0.002	0.010	0.023	0.200	0.842	0.930	1.076

AM: Agile Marketing AMMT: Agile Marketing and Market Turbulence Moderator Variable.

Likewise, the moderating role of market turbulence in the effect of agile marketing on firm marketing performance was tested in both enterprise groups, and the results are presented in Table 11. According to the

analysis results, it was revealed that market turbulence did not have a moderating role in the effect of agile marketing on firm marketing performance. Hence, hypothesis H_{3b} was not supported.

As a result, it was found that market turbulence did not have a moderating role in the effect of agile marketing on firm financial and marketing performances in both sectors, and hypothesis H_3 was not supported.

Table 11. Analysis Results on the Moderating Role of Market Turbulence in the Effect of Agile Marketing on Firm Marketing Performance

IT ENTERPRISES								
Model	R	R^2	Adjusted R^2	Standard Error				
1	0.480	0.230	0.215	0.86521				
Model		Sum of Squares	sd	Mean of Squares			F	p
1	Regression	21.747	2	10.873			14.525	0.000
	Residual	72.613	97	0.749				
	Total	94.360	99					
Model		Non-Standardized Coefficients		Standardized Coefficients			Equivalent Statistics	
		B	Standard Error	Beta	t	p	Tolerance	VIF
1	Fixed	0.410	0.910		0.450	0.653		
	AM	0.865	0.162	0.493	5.326	0.000	0.928	1.078
	AMMT	0.006	0.010	-0.059	0.640	0.524	0.928	1.078
PHARMACEUTICAL AND CHEMICAL ENTERPRISES								
Model	R	R^2	Adjusted R^2	Standard Error				
1	0.535	0.286	0.268	0.88761				
Model		Sum of Squares	sd	Mean of Squares			F	p
1	Regression	24.026	2	12.013			15.248	0.000
	Residual	59.876	76	0.788				
	Total	83.902	78					
Model		Non-Standardized Coefficients		Standardized Coefficients			Equivalent Statistics	
		B	Standard Error	Beta	t	p	Tolerance	VIF
1	Fixed	0.596	0.904		0.659	0.512		
	AM	0.890	0.161	0.555	5.521	0.000	0.930	1.076
	AMMT	0.015	0.011	-0.134	1.336	0.186	0.930	1.076

AM: Agile Marketing AMMT: Agile Marketing and Market Turbulence Moderator Variable.

5.Conclusion And Recommendations

According to the results for the mediation roles of innovation capability and marketing mix adaptation in the effect of the agile marketing construct on firm performance in information technology enterprises representing the service sector and pharmaceutical and chemical enterprises representing the industry sector, agile marketing positively and significantly affects both firm financial performance and marketing performance, innovation capability and marketing mix adaptation. It is seen that the research results are similar to the studies conducted on agile marketing until the present day. Some studies concluding that agile marketing positively affects firm performance are presented below: the studies by Khan (2020), Ramamurti and Williamson (2019), and Battistella, De Toni De Zan, and Pessot (2017). On the other hand, it was revealed that the effects of innovation capability and marketing mix adaptation addressed in the study on firm financial performance and marketing performance were also significant and positive. With the result acquired, it can be stated that in line with the strategic implementation of innovation capability in enterprises, it affects both the financial performance and marketing performance of the enterprise positively. The results obtained within the scope of the study are parallel with the studies in the literature. Some studies displaying similar results with innovation capability are as follows: the studies by Adamu, Hussin, and Ismail (2020), Ahmed, Najmi, and Ikram (2020), and Yavuz (2010).

Innovation capability and marketing mix adaptation have a moderating role in the effect of agile marketing examined in the study on firm financial and marketing performance. The obtained results showed that the effect was positive. In light of all these results, it was proven that enterprises implementing the agile marketing construct increased their marketing and financial performance and the effect of agile marketing on firm performance was positive. In other words, it is observed that agile marketing increases firm performance to the extent at which it focuses on the innovative capability of the enterprise in its effect on firm performance, and in the same way, it can reach the firm performance targets to the extent at which it can adapt the marketing mix to the enterprise.

According to the results obtained upon examining the moderating role of market turbulence in the effect of agile marketing on firm financial and marketing performance in the study, it was concluded that there was no significant effect. Due to this effect, it is seen that agile marketing positively affects firm performance and innovation capability even if there is no turbulence in the market. In light of the findings acquired in the study, the absence of the moderating role of market turbulence indicates that pharmaceutical and chemical enterprises in the industry sector and the IT enterprises in the service sector have adapted to agile marketing, innovation capability, and marketing mix adaptation and put them into practice within the enterprise.

In the study results, it was concluded that agile marketing provides the opportunity to predict rapid changes due to environmental factors, exhibit a proactive behavior, and gain competitive advantage in enterprises included in the study in both the IT sector and the pharmaceutical and chemical sector. In this regard, managers also stated that the results of firm performance that can be measured with financial and marketing indicators were positive. Within the scope of realizing the effect of agile marketing as a lifestyle in the enterprise on the marketing mix adaptation elements, it can be stated that it contributes to determining the performance of enterprises in this direction, and on the other hand, innovation capability has an important effect on all these changes.

It can be said that all this information acquired within the scope of the study sheds light on its use by managers in both business strategies and business practices. Furthermore, it can be indicated that agile marketing is an important concept for enterprises, it contributes positively to achieving enterprise goals, and it will be beneficial for enterprises to implement the agile marketing construct both within the scope of innovation capability and marketing mix adaptation.

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