



The Impact of Adaptive Behavior on Enhancing Agile Marketing

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Abstract

This study aimed to examine the impact of adaptive behavior on enhancing agile marketing in Zain Company in the Middle Euphrates Region. Three measures of adaptive behavior were used: environmental adaptability, customer response adaptability, and learning and innovation adaptability. These parameters were used to assess agile marketing: marketing speed and responsiveness, customer-centered agility, and digital marketing flexibility. A quantitative descriptive-analytical design was used in the study. The data were gathered using a structured questionnaire, which was sent to the employees who were working in marketing, sales, supervision and management posts. A total of 325 employees were in the population and 125 employees were in the valid sample. Cronbach's alpha, Kaiser – Meyer – Olkin values and Bartlett's test were used to determine the reliability and internal consistency. Descriptive statistics were used to determine respondents' level of agreement. Since the normality test indicated that the variables were not normally distributed the study was conducted with a generalized linear model to test the hypotheses. The results revealed a high level of adaptive behavior and agile marketing. The Cronbach's Alpha values were found to be above the accepted alpha level for all indicators, showing that the instrument is reliable. The generalized linear model results showed that adaptive behavior positively and significantly influenced the agile marketing. The effects of the three adaptive behavior indicators, however, were also significant and positive. The findings indicate that the Zain Company can reinforce the agile marketing concept by enhancing employees' adaptability, strengthening customer response mechanisms, and promoting learning and innovation in marketing practices.

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Keywords: Adaptive behavior, Agile marketing, Customer response adaptability, Digital marketing flexibility, Marketing agility, Zain Company

Introduction

Marketing in the modern world is characterized by rapid changes in customer expectations, digital interactions, competition, and service offerings. Such changes have led to an increased need to shift from the traditional marketing planning to adaptive and agile marketing systems for firms. However, in service-intensive industries like telecommunications, flexing quickly in response to changing environmental conditions is no longer an option, but a real necessity. Companies that are unable to sense market signals, react to customer feedback, and translate customer learning into marketing action can become unable to compete in dynamic markets. The ability of employees and organizations to alter their behavior, routines and decisions in response to changes in their internal and external environments; adaptive behavior. Adaptive behavior in the marketing context occurs when employees observe the market, adjust to customer needs, reflect on past experiences and adjust, embrace change, and apply their knowledge in real-world decisions. This type of behavior helps the firm to refocus their campaigns, enhance their customer communication and adjust to unforeseen market conditions. Agile marketing is about the ability of the company to conduct marketing activities in a speedy, flexible, experimental, customer-focused, and digital responsive manner. In recent marketing literature, the term marketing agility is considered as a dynamic capability of the company that allows it to sense market change

and reconfigure marketing decisions in short timeframes ^[1]. Agile marketing capability is also regarded as one of the key mechanisms to drive digital transformation particularly in markets where customer behaviors are constantly evolving and digital platforms are changing the service delivery ^[2]. A good example of this is the telecommunications industry. Telecommunications firms face the challenge of constantly evolving service demand, fast-changing technologies, price competition, digital channels, and service innovation. In this context, agile marketing isn't something that can be done entirely with technology and planning. It also demands flexibility on the part of workers and decision makers. Staff members who are able to adapt to changing conditions, are flexible in their approach to customers, and are willing to master new marketing techniques are likely to foster agile marketing results. The aim of this study is to investigate this problem in Zain Company located in the Middle Euphrates Region. It's based on survey responses from 125 individuals from a population of 325 employees, and it's about how adaptive behavior is affecting agile marketing. The research is a valuable addition to management and marketing literature, as it connects the concepts of adaptive behaviour with the agile marketing concept in a telecommunication company in a new market environment. It also offers real-world experience for managers who want to learn how to better speed up marketing, implement agility driven by customers, and apply digital marketing flexibility.

Literature Review

Adaptive Behavior

Adaptive behavior is the ability of a person or organisation to adapt to changes in the environment. In business organisations, adaptation involves keeping up with external changes, reacting to customers, acquiring new skills and changing working patterns. Adaptive behavior is also closely related to dynamic capabilities as it enables the organization to sense, seize and reconfigure ^[3]. In a marketing context, adaptive behaviour enables a staff member to alter communication strategies, service packages and react to customer expectations. Environmental adaptability is the first indicator of adaptive behavior in this study. It demonstrates how staff can keep track of market trends, identify customer requirements, watch competitor activity and tweak marketing strategies in response to external factors. Companies with good market-sensing capabilities are better equipped to reengineer marketing strategies to deal with turbulence ^[1]. The second indicator is the ability of the customer to respond flexibly. It is the speed at which the company and its staff can adapt to the requests, complaints, preferences and behavioral changes of its customers. Agile marketing relies on ongoing interactions with customers and delivering improvements to service based on feedback from customers, so it is highly important for customers to respond to the marketing messages ^[4]. The third indicator is learning and innovativeness adaptability. It not only embodies the ability of staff to master new marketing techniques, but also to draw on their past experience, embrace procedure change, embrace new ideas, and apply marketing knowledge to practice. Organizational learning is one of the main drivers of agility as companies can adjust their assumptions and get better at their practices in an uncertain market ^[5].

Agile Marketing

Agile marketing is a marketing method that is customer-centric, experimental, quick, adaptable, and data-driven. It was born out of market volatility and digitalization. It is a marketing method unlike traditional marketing and is not only viable with long-term fixed plans. Rather, it enables the company to adapt activities based on real-time information and customer feedback. The initial sign of agile marketing in this study is marketing speed and responsiveness. It shows how fast the company can launch campaigns, how fast they can react to market changes, how fast it takes them to make decisions, how quickly they can change campaigns during the campaign launch, how quickly they can capitalize on marketing opportunities, and how fast they can communicate quickly among marketing and sales departments. One of the principal dimensions of agile marketing is speed—marketing responses that take too long diminish the value of market opportunities ^[1]. Customer-centered agility is the second indicator. It is about customer-centered marketing, customer participation in the development of service, understanding of customer behaviour, offering flexibility, measuring customer satisfaction, turning comments into marketing decisions and designing marketing activities based on customer needs. The latest research highlights the strong link between agile marketing and co-creating with customers and service performance ^[4]. Flexibility is the third indicator of digital marketing. It is the application of digital channels, digital content adaptation, digital data, diversified digital marketing tools, continuous tracking of campaign outcomes and digital platforms to optimize marketing “response.” The rise of digital marketing has further added the need for flexibility in digital marketing as consumers are now engaging with companies on digital platforms ^[6, 7].

Relationship between Adaptive Behavior and Agile Marketing

The adaptive aspect of the relationship with the concept of Agile Marketing. Agile marketing can be strengthened by means of adaptive behavior in several ways: First, environmental adaptability enhances the company's awareness of market changes. By keeping a close watch on the market and the actions of competitors, the company can make adjustments to their campaigns and make more offers as soon as the market changes. Secondly, customer response adaptability enhances the customer-centred agility as customer feedback is now an active input to marketing decisions. Third, learning and innovation adaptability is crucial for digital marketing flexibility as staff who learn and accept change can better use new digital tools and translate these into action. This link is supported by the dynamic capability perspective. Firms must have routines that are adaptive to sense change, learn from the environment and reconfigure resources ^[8]. Marketing agility is based on these routines and extends their concept to generate rapid, flexible and customer-centric marketing action ^[1, 2]. So, it's reasonable to expect adaptive behavior to have a positive effect on agile marketing. The agile marketing concept is now more appropriate due to the fact that in today's marketing world the concept of campaigns, long approval processes and stable customer segments do not exist. In this regard, Lewnes pointed out that the future of marketing is becoming more agile as marketing teams must use creativity, data,

experimentation and speed to deal with the changing needs of customers and markets ^[12]. The current research is in line with this view as digital tools are not the sole markers of agile marketing in the telecom sector. It demands a behavioral and organizational ability to rapidly test ideas, learn from customer interactions, revise marketing activities while they are being implemented, and act quickly to accommodate. In Zain Company, this can translate to employees' adaptive behaviors being considered a practical base for agile marketing since the employees are the ones who listen to the customers, understand customers' signals in the market, and respond flexibly. So, the present study takes an approach to adaptive behaviour not as a standalone HR problem, but rather as a direct antecedent of agile marketing. This is particularly crucial because agile marketing relies on staff transitioning from predictable execution to agile marketing. Digital marketing has also equipped them with the ability to offer a solid theoretical foundation for the relationship between adaptive behaviour and agile marketing. Herhausen *et al.* pointed out that the gap between digital tools and digital capability exists and that companies could have digital tools and not know how to use them effectively ^[13]. A distinction is crucial for the present study because not every social media account, digital platform, customer database, online advertising tool is enough to make digital marketing flexible. It demands staff with the capacity to understand digital data, modify digital elements, tweak the campaign layout and react to customer engagement. When the employees demonstrate adaptive behaviour through learning, flexibility, experimentation and responsiveness to customers, this can bridge the gap between digital tools and digital capability. The study aims to identify learning and innovation adaptability as a function of digital marketing flexibility in this respect the focus on learning and innovation adaptability is justified, as the flexibility of digital marketing is dependent upon the ability of humans to transform digital information into marketing decisions. Hence, Adaptive behavior can be considered as one of the behavior mechanisms which transform digital marketing capabilities into real agile marketing practices.

The need for adaptation becomes more apparent during times of market crisis or market turbulence. Wang *et al.* studied marketing innovations in a global crisis, and found that companies react to uncertainty by engaging in various types of marketing innovations that depend on external environmental pressures, internal resources and dynamic capabilities ^[14]. The above argument justifies the current research, since the companies in the telecommunications sector are under a constant pressure of the markets, not only in the times of crisis. They deal with evolving behavior of customers, competitor offerings, price sensitivity, new digital channels, and technology change. In such circumstances, the marketing efforts must be adaptable, not fixed. This is hardly surprising because adaptive behaviour has impact on agile marketing, as companies must be flexible in their behaviours to translate uncertainty into marketing innovation. If employees are able to adapt to customers' needs as well as environmental change, they can assist the company to redesign offers, adjust communication channels and react to market opportunities in a better way. Hence, the adaptive behavior and agile marketing are considered as a practical application of marketing innovation in the dynamic context. Digital interaction and social media have also transformed the way in which we respond to marketing. Appel *et al.* stated

that social media provides consumers and companies with several modes of interaction, and also offers new means for marketers to interact with consumers and gain insights into them ^[15]. This reinforces digital marketing flexibility as an integral component of agile marketing in the current study. In telecommunications, customers communicate with firms via social sites, mobile apps, web and online service channels, and digital campaigns. The channels create ongoing feedback that may aid firms to know client choices and grievances. This information is only valuable when the company responds to it, however. Hence, the flexibility of customer response and digital marketing are connected. Staff who can act on customer feedback, be able to adapt communication and convert digital interaction to marketing decision making contribute to the company developing more agile marketing processes. This is why the present study takes a different approach to measuring agile marketing, focusing on customer-centered agility and flexibility of digital marketing, instead of only on the traditional promotion activities. Another key aspect of digital marketing research is that digital technologies impact on a number of touchpoints throughout the marketing process. Kannan & Li proposed a framework for digital marketing which emphasizes the role of digital technologies to transform the customer touch points, marketing communication, customer information and marketing strategy ^[16]. This model will further justify the findings of this study as the effectiveness in the management of the digital touchpoints in an organization depends on the agile marketing in a telecommunications company. Customers don't interact with the company through just one touchpoint. They communicate with customers at the point of sale, via service representatives, through mobile apps, social media, call centers, digital ads and service messaging. Data and feedback can be generated at each touch point. Adaptive behaviour allows the organisation to link these touchpoints, as it enables staff to modify their behaviour in response to the feedback they receive from customers. Therefore, adaptive behavior's impact on agile marketing can be seen in the capacity of staff to design responsive marketing activities and responses to digital touch points that are timely, agile, and customer-focused.

The current study is related to the transformation of sales activities as well, due to the close relationship between telecommunications marketing and sales performance and customer acquisition. Guenzi and Habel suggested that the digitalization of sales calls for companies to investigate sales processes, and to implement structured digital responses to make them more effective and efficient ^[17]. This underlines the importance of coordinating the marketing and sales functions in the indicator of marketing speed and responsiveness, as highlighted in the present study. Agile marketing is impossible without information flowing quickly between marketing and sales teams and marketing and sales operating as a single unit. In the Zain Company, customer feedback gathered by sales staffs can be used to rethink campaigns and offers for marketing teams. Meanwhile, marketing data can be used to better inform sales staff about customer targets. Adaptive behavior reinforces this link by fostering the employees' ability to adapt their roles, share information, and act according to customer needs without taking too long. Thus, adaptive behavior also seems to have an effect on agile marketing, as does behavioral flexibility on the integration of marketing and sales functions.

Research Problem

Telecommunications companies operate in a highly dynamic marketing environment. Customer needs change rapidly, digital channels reshape interaction, and competitors continuously introduce new offers. In this context, Zain Company needs agile marketing practices that allow it to respond quickly and flexibly. However, agile marketing may not emerge unless employees and marketing units show adaptive behavior. The research problem can therefore be stated in the following question:

To what extent does adaptive behavior contribute to enhancing agile marketing in Zain Company in the Middle Euphrates Region?

Research Questions

1. What is the level of adaptive behavior in Zain Company in the Middle Euphrates Region?
2. What is the level of agile marketing in Zain Company in the Middle Euphrates Region?
3. Does adaptive behavior have a statistically significant impact on agile marketing?
4. Which adaptive behavior indicator has the strongest impact on agile marketing?

Research Objectives

1. To identify the level of adaptive behavior among employees in Zain Company.
2. To identify the level of agile marketing in Zain Company.
3. To test the impact of adaptive behavior on agile marketing.
4. To examine the effects of environmental adaptability, customer response adaptability, and learning and innovation adaptability on agile marketing.
5. To provide practical recommendations for improving agile marketing in telecommunications companies.

Research Importance

The scientific value of this study is making an attempt to bridge adaptive behavior and agile marketing in the context of the emerging market telecommunications. The majority of recent research on agile marketing is about agile marketing as a concept, capability or mechanism of digital transformation^[1,2]. This research builds on the above by looking at adaptive behavior as an organizational and employee-level antecedent of agile marketing.

The importance of the study is related to the practical relevance for telecommunications companies. The results can help the marketing managers of the Zain Company to find the behavioral abilities that are required to improve marketing agility. This research also provides a measurement model to be used to diagnose adaptive behaviour and agile marketing with clear indicators.

Research Findings

Research Hypotheses

H1: Adaptive behavior has a statistically significant positive impact on agile marketing.

H1a: Environmental adaptability has a statistically significant positive impact on agile marketing.

H1b: Customer response adaptability has a statistically significant positive impact on agile marketing.

H1c: Learning and innovation adaptability has a statistically significant positive impact on agile marketing.

Research Methodology

The research method used in this research was quantitative descriptive analytical. The method was appropriate because the goal of the study was to gather responses of employees to measure perceptions and to perform statistical testing to determine the correlation between adaptive behavior and agile marketing. The main data collection tool was a questionnaire. The study population comprised of 325 employees in Zain Company in the Middle Euphrates Region. 125 respondents were obtained as the last valid sample. The respondents held a variety of job roles, such as Marketing employees, Sales employees, Supervisors, and Managers. The number of samples was appropriate for the statistical analyses employed in the study.

There were three sections to the questionnaire. The first section included demographic data such as gender, age, education, years of experience and job position. The second part focused on adaptive behaviour using three measures: environmental adaptability, customer response adaptability and learning and innovation adaptability. There were six statements for each indicator. The third section captured agile marketing based on three criteria: agility and responsiveness in marketing, customer-oriented agility, and digital marketing agility. 6 statements were also used for each indicator. A five-point likert scale was used. The scale ranged from 1 = strongly disagree to 5 = strongly agree. Relative importance was determined by dividing the mean score by the highest possible score and multiplying by 100. The following interpretation was used: less than 60% = low, 60% to less than 70% = moderate, 70% to less than 80% = relatively high, 80% to less than 84% = high, and 84% or more = very high.

Cronbach α was used to test the reliability. The internal consistency and factor suitability were analyzed by KMO and Bartlett's test. The normality of the data was determined by Kolmogorov-Smirnov and Shapiro-Wilk tests. The generalized linear model was used to test the hypotheses because the results showed that the data were not normally distributed. This approach can be used when the conditions of the ordinary linear regression are not completely met, and the dependent variable is described by an appropriate link function^[9,10].

Table 1: Study Variables and Indicators

Variable	Type	Indicator Code	Indicator
Adaptive Behavior	Independent Variable	AB1	Environmental Adaptability
Adaptive Behavior	Independent Variable	AB2	Customer Response Adaptability
Adaptive Behavior	Independent Variable	AB3	Learning and Innovation Adaptability
Agile Marketing	Dependent Variable	AM1	Marketing Speed and Responsiveness
Agile Marketing	Dependent Variable	AM2	Customer-Centered Agility
Agile Marketing	Dependent Variable	AM3	Digital Marketing Flexibility

The psychometric properties of the questionnaire in terms of reliability and internal consistency were good. The Cronbach's alpha was 0.862-0.891 on each indicator. The alpha values for adaptive behavior and agile marketing were 0.929 and 0.921, respectively. The Cronbach's alpha for the entire questionnaire was 0.950. These values suggest a high internal reliability of the measurement tool, as well as consistency of the statements used to measure each indicator.

The KMO values further validated the appropriateness of the data to be used for factor-based interpretation. The KMO value for adaptive behavior was 0.896 and the KMO value for agile marketing was 0.889. The overall value of the KMO was 0.914. All indicators and variables met the criterion for a statistically significant Bartlett's test of 0.000. This meant that the correlation matrix was appropriate and the items shared enough variance.

Table 2: Reliability and Internal Consistency Results

Variable / Indicator	Number of Items	Cronbach's Alpha	KMO Value	Bartlett's Sig.
Environmental Adaptability	6	0.864	0.819	0.000
Customer Response Adaptability	6	0.878	0.837	0.000
Learning and Innovation Adaptability	6	0.891	0.851	0.000
Adaptive Behavior	18	0.929	0.896	0.000
Marketing Speed and Responsiveness	6	0.862	0.824	0.000
Customer-Centered Agility	6	0.884	0.846	0.000
Digital Marketing Flexibility	6	0.875	0.833	0.000
Agile Marketing	18	0.921	0.889	0.000
Full Questionnaire	36	0.950	0.914	0.000

Table 3: Demographic Characteristics of Respondents

Demographic Variable	Category	Frequency	Percentage	Result
Gender	Male	82	65.60%	Dominant
	Female	43	34.40%	Moderate
Age	Less than 30 years	24	19.20%	Moderate
	30–39 years	47	37.60%	Dominant
	40–49 years	36	28.80%	High
	50 years and above	18	14.40%	Moderate
Education Level	Diploma	19	15.20%	Moderate
	Bachelor's Degree	72	57.60%	Dominant
	Master's Degree	27	21.60%	High
	PhD	7	5.60%	Limited
Years of Experience	Less than 5 years	21	16.80%	Moderate
	5–10 years	44	35.20%	Dominant
	11–15 years	38	30.40%	High
	More than 15 years	22	17.60%	Moderate
Job Position	Marketing Employee	51	40.80%	Dominant
	Sales Employee	34	27.20%	High
	Supervisor	25	20.00%	Moderate
	Manager	15	12.00%	Moderate

In the demographic result, it was found that the male respondents were 65.60% of the samples, followed by female respondents who were 34.40% of the samples. There was a larger proportion of people aged between 30–39 (37.60%).

The majority of respondents (57.60%) had a bachelor's degree. The most common experience group was 5-10 years with 35.20%. The total of marketing employees represented the highest percentage (40.80%) in the job position category.

Table 4: Descriptive Statistics for Adaptive Behavior

Indicator	Mean	Standard Deviation	Relative Importance	Likert Result
Environmental Adaptability	4.09	0.53	81.80%	High
Customer Response Adaptability	4.13	0.50	82.60%	High
Learning and Innovation Adaptability	4.13	0.49	82.60%	High
Overall Adaptive Behavior	4.12	0.46	82.33%	High

Table 5: Descriptive Statistics for Agile Marketing

Indicator	Mean	Standard Deviation	Relative Importance	Likert Result
Marketing Speed and Responsiveness	4.07	0.52	81.40%	High
Customer-Centered Agility	4.16	0.48	83.20%	High
Digital Marketing Flexibility	4.17	0.47	83.40%	High
Overall Agile Marketing	4.13	0.44	82.67%	High

The Descriptive statistics indicated that the overall level of adaptive behavior is high with an average of 4.12 and the relative importance of 82.33%. Among the indicators of customer response adaptability and learning and innovation adaptability both had the highest mean with 4.13. The mean for environmental adaptability was 4.09. The findings suggest that the respondents had a positive perception of the level of adaptability of Zain Company both in terms of employees and the organization. The descriptive statistics

also indicated that agile marketing was high overall as the mean was 4.13 and relative importance was 82.67%. The flexibleness of digital marketing had the highest mean of 4.17, followed by customer-centred agility with a mean of 4.16. The mean for marketing speed and responsiveness was 4.07. The results show that the Zain Company has a high degree of agile marketing particularly in digital marketing practices and customer-oriented activities in the marketing.

Table 6: Normality Test Results

Variable / Indicator	Kolmogorov-Smirnov Statistic	Sig.	Shapiro-Wilk Statistic	Sig.
Environmental Adaptability	0.124	0.000	0.931	0.000
Customer Response Adaptability	0.137	0.000	0.918	0.000
Learning and Innovation Adaptability	0.119	0.001	0.936	0.000
Adaptive Behavior	0.128	0.000	0.925	0.000
Marketing Speed and Responsiveness	0.121	0.001	0.934	0.000
Customer-Centered Agility	0.133	0.000	0.921	0.000
Digital Marketing Flexibility	0.126	0.000	0.928	0.000
Agile Marketing	0.131	0.000	0.923	0.000

Table 7: Generalized Linear Model Results

Hypothesis	Relationship	B	Standard Error	Wald Chi-Square	Sig.	Exp(B)
H1	Adaptive Behavior → Agile Marketing	0.684	0.071	92.806	0.000	1.982
H1a	Environmental Adaptability → Agile Marketing	0.251	0.064	15.385	0.000	1.285
H1b	Customer Response Adaptability → Agile Marketing	0.318	0.069	21.244	0.000	1.374
H1c	Learning and Innovation Adaptability → Agile Marketing	0.276	0.066	17.471	0.000	1.318

Table 8: Generalized Linear Model Goodness-of-Fit

Model	Dependent Variable	Link Function	Pearson Chi-Square / df	Deviance / df	AIC	BIC
Main Model	Agile Marketing	Logit	1.083	1.041	286.417	301.286
Indicator Model 1	Marketing Speed and Responsiveness	Logit	1.096	1.058	291.632	306.501
Indicator Model 2	Customer-Centered Agility	Logit	1.071	1.033	279.845	294.714
Indicator Model 3	Digital Marketing Flexibility	Logit	1.089	1.047	284.206	299.075

The normality test results indicated that all the variables and indicators were not normally distributed. The Kolmogorov-Smirnov and Shapiro-Wilk significance values were < 0.05. Hence, the hypotheses were tested by the generalized linear model. The main hypothesis was confirmed by the generalized linear model results. The agile marketing positively and significantly affected adaptive behavior, $B = 0.684$, Wald Chi-Square = 92.806, Sig. = 0.000. Increasing adaptive behavior raises the chances of reaching higher agile marketing levels. The Exp(B) value is 1.982, meaning that adaptive behavior increases the chance of being stronger in agile marketing by almost 2X when adaptive behavior increases. Also, the sub-hypotheses were confirmed. The relationship of agile marketing to environmental adaptability was positive and significant with $B = 0.251$ and Sig. = 0.000. The three indicators had the largest effects—with customer response adaptability ($B = 0.318$) being the strongest. Learning and innovation adaptability also positively and significantly impacted with $B = 0.276$ and Sig. = 0.000. The findings do support the notion that all of the adaptive behavior indicators are important in improving agile marketing. The goodness-of-fit results indicated that there was an acceptable fit for the generalized linear model. The main model Pearson Chi-Square / df was 1.083 and the Deviance / df was 1.041. The model fit was acceptable with values of around 1. The AIC and BIC values also confirmed the suitability of the model.

Discussion

This study has revealed that adaptive behavior is a key factor in improving agile marketing. This result agrees with the dynamic capability view, which states that companies in turbulent environments should possess the capacity to sense change, quickly react to it, and reconfigure their resources^[8]. In marketing, they should not just follow a set of rules, they should be flexible and be able to adjust their marketing practice based on the signals from the market, responses from customers, and digital information. The importance of environmental adaptability suggests that the first step to agile marketing is to be able to understand the external environment. When employees are aware of the market and what customers want and what the competitors are doing, the company is better able to make decisions about its marketing. This result strengthens the proposition of proactively sensing the market and responding quickly as a prerequisite of marketing agility^[1]. It also establishes that telecommunications firms must conduct continual environmental scanning as their customer preferences and competitor plans are continually changing. The most significant impact on agile marketing was the adaptability of customers. The finding makes perfect sense in the telecom business where customers are not only interactive, but also constantly in contact. Consumers rate businesses based on service quality, quickness of service, complaint handling, offers, digital services, and channels of communication.

If employees respond promptly and flexibly to customer's needs, the company becomes more capable of planning marketing activities that are focused on the needs of customers. This finding aligns with the recent work that found a relationship between marketing agility and customer service quality, customer satisfaction and customer co-creation ^[4]. Agile marketing was also influenced by the learning and innovation adaptability. Agile marketing is much more than a technical process, it's also a learning process. Staff must be trained in new marketing techniques, apply previous experience and embrace change and support new ideas. Continuous learning marketing teams are better equipped to leverage digital tools, better understand customer behavior and adapt their campaign message. This is aligned with the research of various factors that link the organizational learning, Digital transformation and agility ^[5, 7]. This study suggests that digital marketing is becoming a key platform in the telecommunications marketing, which is evident in the high level of flexibility that digital marketing offers. Consumers engage with brands more and more via mobile applications, web pages, social media and digital campaigns. As a result, agile marketing needs the capacity to constantly track digital outcomes and adjust digital content based on customer engagement. This aligns with recent literature stating that information flow, data use and quick decision making are enhanced by digital transformation which in turn boosts the agility of the organizations ^[6, 11]. In addition, the study reveals that both adaptive behavior and agile marketing are also high in the Zain Company. This could be in part due to the nature of the telecommunications industry as businesses need to adapt rapidly to technology, customer needs, and competitive offers. The results also indicate, however, that the adaptability of customer response should be specifically taken into account by the management, since it showed the greatest effect on agile marketing.

Theoretical Implications

This study has three additions to the literature. First, it connects adaptive behavior to agile marketing in an empirical model. While agile marketing has been explored in the context of a dynamic capability or as part of a digital transformation ^[1, 2] few studies have examined adaptive behavior as a direct causal indicator of agile marketing. Secondly, the study offers a simplified measurement structure. The following three clear indicators were used to measure adaptive behavior: environmental adaptability, customer response adaptability, and learning and innovation adaptability. Marketing speed and responsiveness, customer-centered agility and digital marketing flexibility were assessed to gauge agile marketing. It can be applied in future in service firms and telecommunications companies. Thirdly, the study explores agile marketing research in an emerging market context. The majority of agile marketing theory is from developed markets and digital companies. In this study, the Middle Euphrates Region is used as a case study to show how the market dynamics, adoption of digital and customer expectations leads to the need for agile marketing practices to be implemented in Zain Company. This study contributes to the literature by bringing together the concepts of behavioral adaptation and agile marketing and digital transformation. There has been previous research that focuses on marketing agility, digital marketing skills, digital transformation and agility based on VUCA ^[12, 13, 20, 22, 26, 27]. But there is more work to be done in terms of the behavioural

basis for agile marketing. The findings of this study indicate that agile marketing is not only a marketing capability but also a behavioural outcome that is facilitated by the adaptability of employees, which demonstrates that having an agile mindset has a significant impact on agile marketing. The contribution is important as it connects individual and organizational behavior to marketing agility in a measurable model. The study also extends the research on digital marketing capability as it reveals that digital flexibility requires adaptive behavior. Homburg and Wielgos confirmed that a digital marketing capability positively affect performance ^[20] and Herhausen *et al.* revealed that there is a digital marketing capability gap ^[13]. The present study contributes to these efforts by proposing the notion that adaptive behavior can help fill the gap. That is, without behaviour capabilities, there are no digital capabilities. This is particularly important in a service-based company where customer engagement with the employees is a key area even with extensive use of digital tools. Another theoretical contribution is on customer experience and customer centred agility. Research on customer experience emphasizes the need to focus on the customer experience through the customer journey ^[19]. The present study relates this perspective to agile marketing, as it reveals that customer response adaptability has the greatest impact on agile marketing. It shows that agility is not just a process or a technology-based capability, it's a customer-based agility. It also relies on the employees being able to comprehend the customers and reply to customer complaints and turn feedback into marketing choices. Hence, this research extends the customer experience theory by linking customer journey responsiveness to agile marketing outcomes. The study is also a contribution to the dynamic capability theory. Ferreira, *et al.* highlighted the role of dynamic capabilities, creativity and innovation capability in competitive advantage and performance ^[21, 28, 29, 30]. In the present research, this logic is used to market, and it is demonstrated that adaptive behavior helps agile marketing. Environmental adaptability, customer response adaptability and learning and innovation adaptability are understood as lower-level behavioral routines that facilitate higher level marketing agility. This gives a more specific description of the possible functioning of dynamic capabilities in the context of the telecommunications sector's marketing.

Practical Implications

The results have numerous implications for the Zain Company and other telecom companies. Managers need to enhance environmental adaptability, establishing regular channels for monitoring market changes, competitor offers, customer needs, and digital trends. The information derived from the markets should not only be turned into reports but also into practical marketing decisions. Second, customer response adaptability is a key marketing competence that should be viewed as such. The company needs to give employees autonomy to manage customer complaints, to tweak offers based on customer segments and to incorporate customer feedback for service improvements. This indicator was the biggest influence in agile marketing, and is thus the most significant indicator in the behavioral drivers model. Third, the ability to adapt to learning and innovation should be nurtured through training, internal know-how sharing and promotion of new marketing concepts. The marketing staff should be equipped with digital campaign management skills,

customer analytics, content adaptation and service innovation skills. Fourth, agile marketing practices should be connected with digital platforms. The company should track digital campaigns on an ongoing basis, evaluate the interactions with customers and adapt their content to suit realtime feedback. This can enhance the speed of marketing, agility, and flexibility in digital marketing by focusing on the customer.

Research Limitations

There are some limitations in this study. First of all, it adopted a cross-sectional survey design. So, the results indicate statistical associations but not long-term causalities. Longitudinal designs could be used in future studies to measure the impact of agile marketing on the adaptive behavior over a period of time. Secondly, the study was conducted in Zain Company in the Middle Euphrates Region. The results may not be applicable to other areas or firms. Comparisons can be made between multiple telecommunications companies, or other service sectors can be added. Third, the study was based on information obtained from questionnaires completed by participants. While reliability and validity were good, self-reported information could have response bias. In the future, the data from the questionnaire can be integrated with objective marketing data such as response rate from a campaign, retention, digital engagement, or sales growth.

Conclusion

The current study aimed to investigate the effect of adaptive behavior on improving agile marketing in Zain Company in the Middle Euphrates Region. The adaptability was assessed as environmental adaptability, customer response adaptability, and learning and innovation adaptability.

Agile marketing was assessed in terms of the speed and responsiveness of marketing, agility in the service of customers and digital marketing flexibility. The findings revealed both adaptive behavior and agile marketing were at a high level. The reliability and internal consistency results proved that the questionnaire was appropriate. The variables were checked for normality using normality tests, and it was determined that they were not normally distributed, thus the use of the generalized linear model.

Hypothesis testing revealed that adaptive behavior was positively and statistically significant to agile marketing. Adaptive behavior was also found to significantly influence the three indicators, with the strongest influence found for the customer response adaptability.

The study concludes that agile marketing in telecommunications companies is not only related to digital tools or marketing plans, but also to the adaptation of the employees' behavior. Businesses aiming to improve agile marketing need to be more environment conscious, be able to respond to customers and learn marketing.

In general, the results of this study showed that adaptive behavior is an empirical basis to support the argument that adaptive behavior is a strategic behavioral basis in strengthening agile marketing in telecom companies. The results of the Zain Company in the Middle Euphrates Region indicate that agile marketing cannot be perceived as a group of digital tools, campaign techniques or operating procedures. Instead, it is strongly connected with the capacity of the employees and organizational units to perceive

environmental changes, react flexibly to the demands of customers and convert knowledge and innovation into real marketing. Both adaptive behavior and agile marketing scores are high, highlighting the company's significant internal ability to handle market dynamics, customer expectations, and digital interaction. The generalized linear model results further validate that adaptive behavior positively and significantly impacts agile marketing which implies that better adaptive behavior of employees is linked to higher agility in marketing speed, customer focused agility, and digital marketing flexibility. With regard to the dimensions of adaptive behavior, customer response adaptability emerged as the most influential, indicating that the company's adaptability is very much dependent on its capacity to listen to customers, process feedback, deal with complaints, adjust offers and convert customer preferences into marketing choices. This is particularly pertinent in the telecom industry where customers engage with the service centres, sales staffs, mobile apps, social media and digital campaigns on a regular basis. The research findings, therefore, indicate that customer responsiveness is a key managerial concern and not an ancillary service activity. Environmental adaptability and learning and innovation adaptability also demonstrated significant impacts, reflecting the need to constantly watch the market, share knowledge, train employees and be open to new marketing approaches in agile marketing. The findings add to the existing literature by making adaptive behavior the first direct antecedent of agile marketing, in the context of a nascent market that is characterized by strong competition and a fast pace of change in technology. In practical terms, the study recommends that managers start creating agile marketing systems by recruiting rather than by the technology. Digital platforms, analytics and campaign tools can help with agility, but will only work when employees can be flexible in using them and turn data to actionable decision making at the right time. Based on this, it is concluded that adaptive behavior is a measurable managerial capacity that can help telecommunications companies to become faster, more responsive, more customer-oriented and more flexible in their marketing activities; or, it is an organizational characteristic.

Recommendations

Zain Company should establish a systematic monitoring system in the market, so that it makes it easier for marketing personnel to monitor customer needs, actions of competitors, and the trend of the digital world. The business should focus on enhancing the adaptability of its customer response, and give employees the autonomy to handle customer issues promptly and efficiently, while also drawing on customer feedback for marketing strategies. Regular marketing training should be provided in digital marketing tools, customer analytics, agile campaign, and service innovation. A flexible marketing planning that lets the campaigns be adjusted through the implementation according to the real-time interaction of the customers. To create successful marketing experiences that can be turned into repeatable activities, managers should reinforce the sharing of knowledge within the organization. Going forward, further research is needed to measure the effect of adaptive behavior on agile marketing within various telecommunications organizations and locations.

Appendix A. Questionnaire

Title: The Impact of Adaptive Behavior on Enhancing Agile Marketing

Dear respondent,

This questionnaire is designed for academic research purposes. It aims to examine the impact of adaptive behavior on enhancing agile marketing in Zain Company in the Middle Euphrates Region. Please read each statement and choose the answer that best reflects your opinion.

Scale:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

Section One: Demographic Information

Gender

Male

Female

Age

Less than 30 years

30–39 years

40–49 years

50 years and above

Education Level

Diploma

Bachelor's Degree

Master's Degree

PhD

Years of Experience

Less than 5 years

5–10 years

11–15 years

More than 15 years

Job Position

Marketing Employee

Sales Employee

Supervisor

Manager

Section Two: Adaptive Behavior

Environmental Adaptability

AB1. Employees quickly adapt to changes in the marketing environment.

AB2. The company adjusts its marketing practices when market conditions change.

AB3. Employees monitor changes in customer needs on a continuous basis.

AB4. The company responds effectively to competitors' actions.

AB5. Marketing decisions are revised according to external market changes.

AB6. The company has the ability to deal with unexpected marketing challenges.

Customer Response Adaptability

AB7. Employees respond quickly to customer requests.

AB8. The company modifies its services according to customer preferences.

AB9. Customer feedback is used to improve marketing activities.

AB10. Employees show flexibility when dealing with

customer complaints.

AB11. The company provides suitable solutions for different customer segments.

AB12. The company updates its offers according to changes in customer behavior.

Learning and Innovation Adaptability

AB13. Employees are encouraged to learn new marketing methods.

AB14. The company benefits from previous marketing experiences.

AB15. New marketing ideas are supported by management.

AB16. Employees develop their skills to meet market changes.

AB17. The company accepts change in marketing procedures.

AB18. Marketing knowledge is transformed into practical actions.

Section Three: Agile Marketing

Marketing Speed and Responsiveness

AM1. The company implements marketing campaigns quickly.

AM2. The company responds rapidly to market changes.

AM3. Marketing decisions are made within a short time.

AM4. Marketing campaigns are modified during implementation when needed.

AM5. The company uses marketing opportunities immediately.

AM6. Coordination between marketing and sales teams is fast.

Customer-Centered Agility

AM7. Marketing activities are designed according to customer needs.

AM8. Customers are involved in improving services.

AM9. Customer behavior is analyzed before designing offers.

AM10. The company provides flexible offers according to customer demand.

AM11. Customer satisfaction is measured continuously.

AM12. Customer comments are transformed into marketing decisions.

Digital Marketing Flexibility

AM13. The company uses digital channels to reach customers.

AM14. Digital content is modified according to customer interaction.

AM15. Digital data are used in designing marketing campaigns.

AM16. Digital marketing tools are diversified according to campaign type.

AM17. Digital campaign results are monitored continuously.

AM18. Digital platforms are used to improve marketing response.

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