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### Antecedents & Outcomes of Marketing Agility: A Dynamic Capability Leading to Performance

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#### Chronicle

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#### Abstract

In this digital era, digital startups require different capabilities to enhance performance. Marketing agility can be one of these capabilities, but how it can be developed remains unexplored. Therefore, this research aimed to investigate the antecedents and outcomes of marketing agility. It has investigated the role of artificial intelligence adoption and networking capability in developing marketing agility. Further, it examined the relationship between marketing agility and market performance. The data were gathered from FinTech managers, and Smart PIs 4 was used for data analysis. The results reported that artificial intelligence adoption and networking capability influence marketing agility, ultimately leading to superior market performance. The findings can act as a guideline for managers of FinTechs aiming to develop marketing agility or enhance performance in the market.

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**Keywords:** Marketing Agility, Artificial Intelligence Adoption, Networking Capability, Market Performance, FinTech.

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## INTRODUCTION

In this digital era, the rapid advancement of technology has affected almost every industrial sector. Moreover, the technological shift has also influenced the services sector, particularly the financial sector. Now, the financial services provided by banks are being replaced by digital applications. Furthermore, the technological expansion has raised the FinTech startups/companies that are launching technology-based financial services to improve the customer experience of banking (Taherdoost, 2023). Fintech became popular in the post-industrial era, the fourth stage of the Industrial Revolution, known as the era of technological revolution. Moreover, in this era, Fintech is recognized as one of the most agile, flamboyant, and engaging segments of the financial services marketplace (Ali et al., 2018). Similarly, Nourallah (2023) claimed that Fintech solutions gained more popularity in the fourth stage of the industrial revolution and after 2008. Schueffel (2016) applied semantic analysis of 13 peer-reviewed definitions of Fintech and defined it as "a new financial industry that applies technology to improve financial activities" (p. 32).

Further, Ziegler et al. (2020) defined Fintech broadly as "FinTech encompasses advances in technology and changes in business models that have the potential to transform the provision of financial services through the development of innovative instruments, channels and systems" (p. 24). Fintech is a broad domain, and its landscape is continuously changing (Imerman, & Fabozzi, 2020). Previously the scope of Fintech activities was limited to "money transfer", "crowdfunding", "mobile payments" and "peer-to-peer loans", but now it's penetrating to the new technological world of "robo-investing", "cryptocurrencies" and "blockchain" (Goldstein et al., 2019). Imerman and Fabozzi (2020) developed the taxonomy of Fintech ecosystems; first, they highlighted different areas of financial services and

indicated them as FinTech verticals, and then they showed some functional areas and technologies leading to innovation in financial services. Fintech verticals include payment technology, digital banking, digital wealth management, capital (Algorithms, trading, HFT, etc.), Fin Tech lending, equity crowdfunding, "InsurTech", and "PropTech". The explanation of these verticals is given in Table 1.

**Table 1.**  
**Fintech Verticals**

Sr	FinTech verticals	Explanation
1	Payments Technology	"Technologies for payment and money transfer"
2	Digital Banking	"Technologies for online and mobile banking operations"
3	Digital Wealth Management	"These innovations include the rise of so-called robo-advisors who use sophisticated software to generate investment advice and portfolio allocations for their clients with little or no human intervention"
4	Capital (Algorithms, trading, HFT, etc),	"Including algorithmic trading, high-frequency traders, and market analytics"
5	FinTech Lending	"Technologies or innovations providing online mortgage or loan facilities"
6	Crowdfunding	"Technologies allowing individuals and organizations to raise money by giving the investor a stake in the project's success"
7	InsureTech	"Innovations in the insurance industry (i.e. technological innovation to the insurance industry)"
8	PropTech	"Innovations in the property and real estate industry (i.e. technological innovation to the property and real estate)"

Source: Adapted from (Imerman and Fabozzi, 2020)

Telecommunication companies and banks offering digital financial services include Bank Al-Falah (i.e. offering internet banking services), Askari Bank limited (i.e. providing service of branchless banking under Paymax), Habib Bank Limited (i.e. providing branchless banking and monetary services under Konnect), Muslim Commercial Bank (i.e. providing mobile banking service), United Bank Limited (i.e. providing branchless banking and monetary services under UBL Omni), Telenor Micro-Finance Bank (i.e. providing branchless banking, bill payment and other monetary services under Easy Paisa), Meezan Bank (i.e. offering mobile banking facility), Standard Chartered Bank (i.e. offering mobile banking facility), Jazz Cash (i.e. offering facility of branchless banking), CREDITFIX (i.e. offering facility of digital loans), Careem (i.e. providing payment solution under two apps, Cream Pay and Careem Wallet), Ufone (i.e. providing payment solution under Upaisa), KEENU (i.e. Mobile Wallet) and TPS (i.e. software house offering solution related to digital payments). These digital financial startups provide digital wallets and online/mobile financial services or offer payment gateways or microlending facilities (Saleem, 2021).

Knewton and Rosenbaum (2020) mentioned that those firms that were known as Fintech in 2020 would not be able to retain their status as Fintech until or unless they became technologically agile. Besides developing technological agility, Fintech should also be agile in managing the customers, as Raveendra and Satish (2021) highlighted that they should focus on customer satisfaction and customer experience and learn to deliver personalized services based on their needs. Marketing agility can help FinTechs adapt to the market and deliver the services required by customers. Harju (2023) argued that the digital business transformation, turbulent market competition, and dynamic customer behaviour have diverted the attention of organizations toward developing a relatively flexible and responsive approach to marketing. Therefore, marketing teams focus on marketing agility to operate in a dynamic environment. Moreover, many organizations are inclined toward the

development of marketing agility; thus, there is a need to understand how this agility can be developed. Therefore, this study aimed to highlight the factors leading to marketing agility in FinTechs. The financial industry can consider artificial intelligence as an opportunity that can transform the whole dynamic of this industry by providing more value to users and increasing revenue (Park et al., 2016). Thus, the adoption of artificial intelligence by FinTechs can help develop marketing agility. Kaplan and Haenlein (2019, p. 5) defined artificial intelligence adoption as “a system's ability to interpret external data correctly, to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptation.” Mohamed (2021, p. 8) explained that “it can undertake specific tasks by handling huge quantities of data, obtaining insights, and recognizable patterns in the data to act upon.” Artificial intelligence assimilation is an important predictor of organizational agility, customer agility, and performance (Wamba, 2022); thus, it can help FinTechs develop marketing agility to increase market performance.

In this fast-paced global world, businesses are moving very fast due to the emergence of innovation and disruption; thus, organizations should emphasize agility to retain their advantages (Waty et al., 2022), and this agility can be attained by developing networking capability (Kurniawan et al., 2021; Manurung, and Kurniawan, 2021; Kurniawan et al., 2021; Waty et al., 2022) as the organizational capability to leverage networks play an important role in the assessment of external information and generation of required market intelligence (Mu et al., 2017) relevant to market and technology (Mu and Di Benedetto, 2012). Thus, networking capability can facilitate FinTechs in developing marketing agility that can enhance market performance.

The first objective of this research is to examine the influence of artificial intelligence adoption on the marketing agility of FinTechs because artificial intelligence is playing an important role in the digitalization and transformation of modern businesses; thus, it is recognized as a step-forward game-changer (Rahman, Ming, Baigh, & Sarkar, 2021) in the financial sector because this sector has made significant investment in artificial intelligence (Liu, 2020). The second objective of this research is to highlight the impact of networking capability on marketing agility because this capability is critical in the services sector, enabling services-based organizations to create commitment and mutual trust between partners. Moreover, they help provide access to shared technologies and tangible assets of each other (Cadogan et al., 2002). The third objective of the study is to determine the influence of marketing agility on the market performance of Fintechs because it is important to understand the link between marketing agility and marketing performance metrics such as sales growth (Zhou et al., 2019), market share, or market positioning.

## **LITERATURE REVIEW**

Marketing agility is a challenge in the service sector, where customer retention depends on organizations' agile responsiveness to customers and their ability to meet customers' expectations (Tabataba'i-Nasab & Mohammadian Yazd, 2019). Thus, these organizations can adopt new-age technologies that stimulate marketing management support systems for improving marketing agility (Foltean & Van Bruggen, 2022). Therefore, FinTechs, being technology-oriented service providers, need to adopt artificial intelligence and networking capabilities to develop marketing agility. Moreover, this agility will enable them to enhance their performance in the market.

## Artificial Intelligence and Marketing Agility

The adoption of artificial intelligence by FinTechs can enable them to track customer behavior and utilize customized algorithms to enhance customer engagement. Many studies have discussed the application of artificial intelligence adoption in FinTech. However, there is a lack of theory-based research on it, and there is a paucity of literature highlighting how AI adoption can affect the internal and external resources of FinTechs (Almansour, 2023). Fintech companies should adopt artificial intelligence and invest more in AI (Mention, 2019; Bayramoğlu, 2021) to develop marketing agility for surviving in the turbulent environment of emerging markets.

Fintech startups have a broad scope, from data analytics and artificial intelligence to innovative technology and alternative business models, and this scope enables them to identify signals earlier to proactively respond to innovation (Pollari and Raisbeck, 2017) with the help of marketing agility. Therefore, to determine the relationship between AI adoption and marketing agility, the following hypothesis is developed:

**H1.** Artificial Intelligence adoption significantly influences Marketing Agility.

## Networking Capability and Marketing Agility

Battistella et al., (2017) pointed out that the emphasis of organizations on networking capabilities in retailing or branding can help them develop durable customer relations because they inculcate trust among customers. Networking with distributors, suppliers, and customers provides organizations with valuable insights to predict the challenges and overcome uncertainties of demand and supply to develop strategic agility (Adomako et al., 2022). Therefore, networking capability can help FinTechs develop marketing agility. Thus, to determine the relationship between networking capability and marketing agility, the following hypothesis is developed:

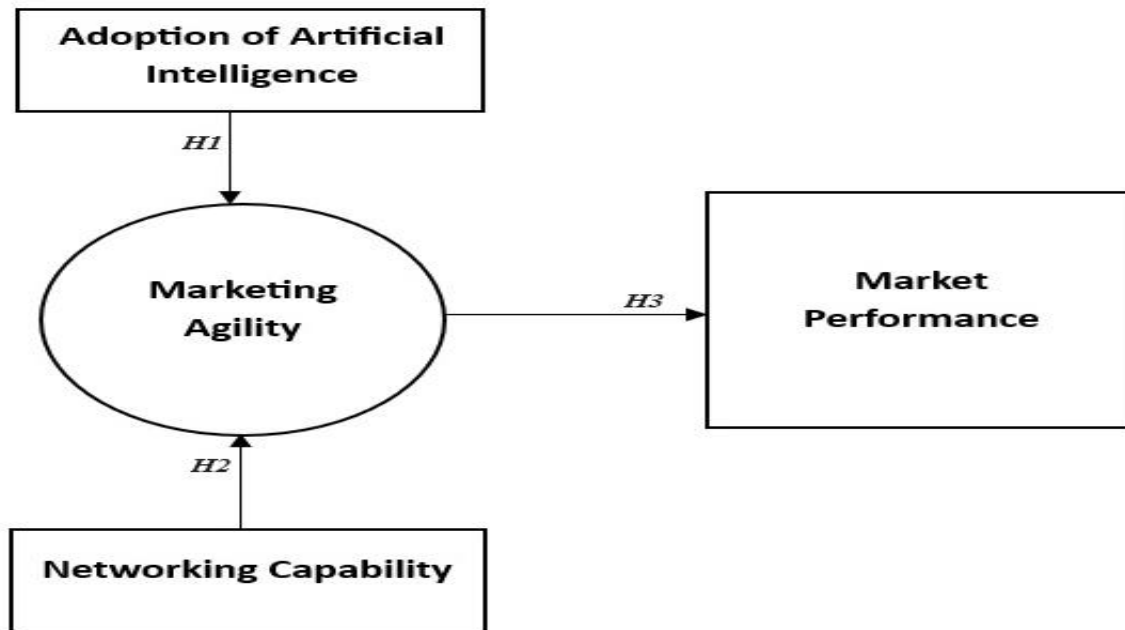
**H2.** Networking Capability significantly influences Marketing Agility.

## Marketing Agility and Market Performance

The journey from being fragile to being agile can be difficult, but once the companies develop agile marketing capabilities, they can change their risk profile, improve profitability, decrease time to market, and increase their market penetration (Hagen et al., 2019). Marketing agility is essential for business survival (Arslan et al., 2024) in the dynamic market environment. Moreover, it enhances organizational performance (Zhou et al., 2019; Khan, 2020). Therefore, it can also escalate the market performance of FinTechs. Thus, to examine the relationship between marketing agility and the market performance of FinTech, the following hypothesis is formulated:

**H3.** Marketing Agility significantly influences Market Performance.

Based on the literature discussed above, the framework (See Figure 1) was designed to present two antecedents of marketing agility, including AI adoption and networking capability. Moreover, it portrayed one outcome of marketing agility (i.e., market performance)



**Figure 1.**  
**Conceptual Model**

### **Population, Sample, Respondents**

Termezy and Rizvi (2021) highlighted that there are 40 FinTech startups in Pakistan. However, the websites of the Security and Exchange Commission of Pakistan (SECP) and the State Bank of Pakistan demonstrate the existence of 22 and 13 FinTechs only. In addition, all the mobile banking applications of all the banks also fall in the category of FinTech. The exact information about the total count of FinTech startups/companies in Pakistan is unknown, as many are non-registered.

The research has emphasized FinTech startups/companies providing direct financial services, including lending and payment transfer services. The data were collected via a close-ended questionnaire, but before the collection of data, the face and content validity of the questionnaire was ensured. The questionnaire was presented to different industrial experts, researchers, and academicians, and the changes suggested by them were incorporated into the final version. The data were gathered from 447 top and middle-level managers of FinTech startups/companies in Pakistan using a purposive sampling technique, as the required information can only be obtained from them.

### **Instrument Design**

The scale of every variable, including artificial intelligence adoption, networking capability, and marketing agility, was taken from prior valid studies. Detailed information about the sources of adoption or adaption is given below: Marketing agility comprises dynamic capabilities, including proactiveness, responsiveness, flexibility, and speed (Zhou et al., 2019). Therefore, all these facets of marketing agility were included while measuring it. The study has adapted the 15-item scale of marketing agility from the research of Zhou et al. (2019). The 3-item scale of adoption of artificial intelligence was adapted from the research of Wamba (2022). Meanwhile, networking was measured using a 6-item scale taken from the study of Al-Khatib (2022). A 5-point Likert Scale (i.e., 1= "Strongly Disagree," 2= "Agree," 3= "Neither Agree

nor Disagree," 4= "Agree," and 5= "Strongly Agree) was used to measure the items of each variable.

## RESULTS AND DATA ANALYSIS

### Preliminary Analysis and Demographics Identification

In the first stage of data analysis, the data screening was done in which seven outliers were detected and removed from the data; thus, only 440 responses were retained for final data analysis. In the second stage, SPSS was used to determine the demographic characteristics of respondents, and the results demonstrated that most respondents were males. Moreover, the results revealed that 250 (56.8 %) Fintech managers had 5 to 10 years of experience. 53 (12 %) managers had 11 to 16 years of experience. 90 (20.5 %) managers had 17 to 22 years of experience, and only a few (i.e., 47 or 10.7 %) managers were possessing experience of more than 22 years.

### Measurement Model Assessment (Reliability and Validity “Convergent and Discriminant”)

In the third stage of data analysis, Smart PLS-4 was used to access the measurement model and structural model. The data analysis in this stage was done in two steps; in the first step, the measurement model was evaluated to determine the reliability ( $\alpha$ ), convergent validity (CR), and discriminant validity (Fornell and Larcker's and HTMT criterion). The cut-off value for factor loadings is 0.40 (Guadagnoli & Velicer, 1988; Stevens, 2002; Hair et al., 2014), but the Average Extracted Variance is 0.5 (Darsono et al., 2019; Hair et al., 2022). In addition, the value of composite reliability between 0.7 and 1.0 highlights good reliability (Lai, 2021). The results of the measurement model reported that the loadings of all the variables (i.e., AI adoption, networking capability, marketing agility, and market performance) are over the cut-off criteria (i.e., 0.4) except for the two items of market performance (i.e., M1, Loading= 0.392 and M2, Loading= 0.356). Therefore, these two items were dropped for final analysis. Moreover, all AVE, CR, and VIF indicators exceeded the minimum thresholds (See Table 1). The measurement model results are presented in Table 1 and Figure 2.

**Table 1.**  
**Reliability and Convergent Validity**

Constructs and their Items		Loadings	VIF	CR	AVE
<b>Marketing Agility (<math>\alpha</math>: 0.951)</b>					
MAGFLX1	"We can market a wide variety of financial services within our portfolio"	0.793	2.900	0.956	0.594
MAGFLX2	"We can offer different financial services through minor modifications to existing ones"	0.751	2.481		
MAGFLX3	"We can adjust what we offer to match market needs"	0.787	2.554		
MAGPro1	"We can detect the first indication of upcoming market threats"	0.708	2.075		
MAGPro2	"We are often the first to seize new market opportunities"	0.798	2.719		
MAGPro3	"We can anticipate new opportunities for market growth"	0.732	2.212		
MAGPro4	"We create new preferences by informing customers about the new benefits of our services"	0.744	2.319		

MAGRES1	"We can respond to fluctuations in the number of users without losing existing users or account holders"	0.784	2.697		
MAGRES2	"We can respond promptly to changes recommended by vendors"	0.819	3.314		
MAGRES3	"When an unexpected threat emerges, we can adjust through resource reconfiguration"	0.806	3.249		
MAGRES4	"We can react to fundamental changes with respect to changing the competitor landscape"	0.780	2.709		
MAGSPD1	"We can meet customer's changing needs faster than our competitors"	0.813	3.093		
MAGSPD2	"We compress time from product/service concept to marketing to respond quickly to the changes in consumer needs"	0.770	2.626		
MAGSPD3	"We can quickly change our service mix in response to changing market opportunities"	0.733	2.318		
MAGSPD4	"We are fast at changing activities that do not lead to the desired effects"	0.737	2.257		
<b>Networking Capability (<math>\alpha</math>: 0.909)</b>					
NC1	"We prepare a formal list of preferred features of the partner and identify which partners are attractive"	0.764	1.992	0.928	0.684
NC2	"We evaluate the resources and capabilities of potential partners formally"	0.821	2.392		
NC3	"We discuss who is doing what in an inter-firm context collaboratively"	0.816	2.350		
NC4	"We check that promises by all parties are fulfilled"	0.822	2.357		
NC5	"We wait a considerable time in case of conflicts to allow the situation to calm down"	0.813	2.316		
NC6	"We try to establish a compromise that is acceptable to all sides when a conflict arises"	0.769	2.087		
NC7	"We facilitate mutual access to technical systems and equipment with our partners"	0.827	2.319		
<b>Artificial Intelligence Adoption (<math>\alpha</math>: 0.814)</b>					
AIA1	Our firm uses AI tools in all its segments	0.836	1.772	0.890	0.730
AIA2	Our firm uses AI tools for decision-making in all operations and across all segments	0.882	2.078		
AIA3	Our firm uses AI tools to support the development of new services	0.844	1.697		
<b>Market Performance (<math>\alpha</math>: 0.704)</b>					
MP3	"Our firm's market sales volume has improved over the past few years"	0.453	1.751	0.707	0.509
MP4	"Our firm's market sales growth has improved over the past few years"	0.519	1.750		
MP5	"Our firm's market positioning has improved over the past few years"	0.975	1.139		

The discriminant validity is ensured by following Fornell and Larcker's (1981) criterion and HTMT criterion. The results (See Tables 2 and 3) highlight that discriminant validity is established.

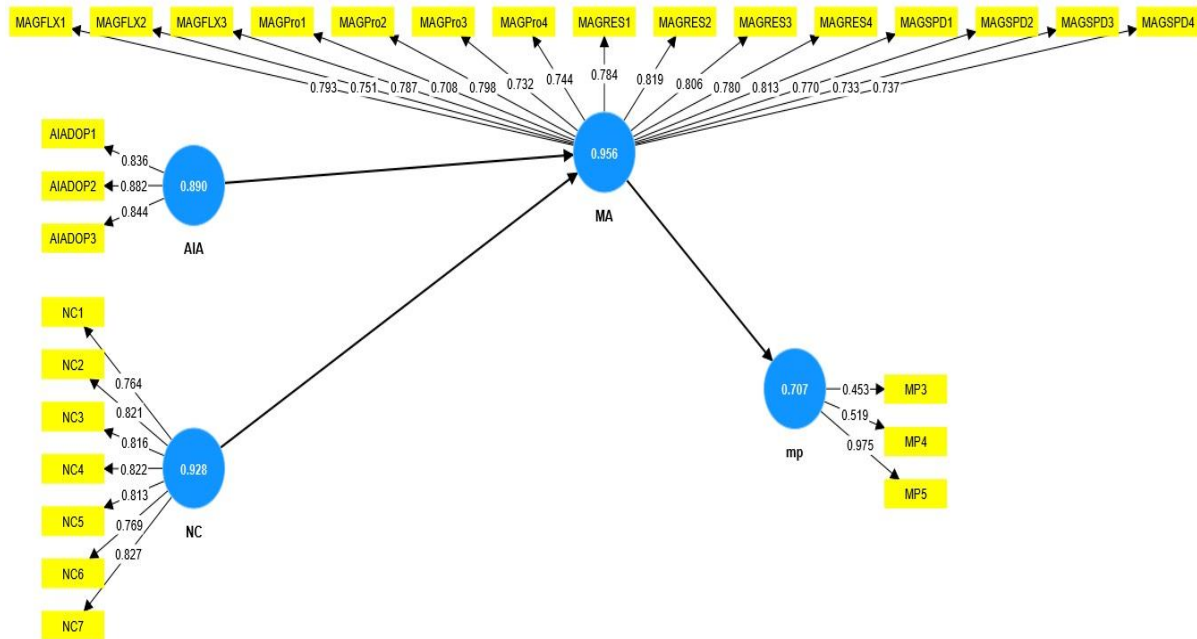


Figure 2. Measurement Model

Table 2. Fornell-Larcker Criterion

	AIA	MA	NC	MP
AIA	0.854			
MA	0.720	0.771		
NC	0.706	0.853	0.805	
MP	0.173	0.250	0.197	0.579

\*Note: AIA= Artificial Intelligence Adoption, MA= Marketing Agility, NC= Networking Capability, MP= Market Performance

Table 3. HTMT criterion

	AIA	MA	NC	MP
AIA				
MA	0.816			
NC	0.818	0.899		
MP	0.107	0.122	0.118	

\*Note: AIA= Artificial Intelligence Adoption, MA= Marketing Agility, NC= Networking Capability, MP= Market Performance

### Structural Model Evaluation (Hypotheses Testing)

In the second step of data analysis, the structural model was evaluated to test the hypothetical statements. Therefore, bootstrapping with 5000 iterations was done in Smart-PLS4 to evaluate paths. The results of paths shown by the structural model are given in Table 4 and Figure 3.

Hypothesis 1 (i.e., H1) predicted an effect of artificial intelligence adoption on marketing agility. Results (Table 4, Figure 2) demonstrated the significant effect of artificial intelligence adoption on marketing agility ( $\beta = 0.235$ ,  $t = 5.125$ , P-Value= 0.000); thus, H1 was supported. Hypothesis 2 (i.e., H2) predicted the effect of networking capability on marketing agility. Results (Table 4, Figure 2) demonstrated the significant effect of networking capability on marketing agility ( $\beta = 0.688$ ,  $t =$



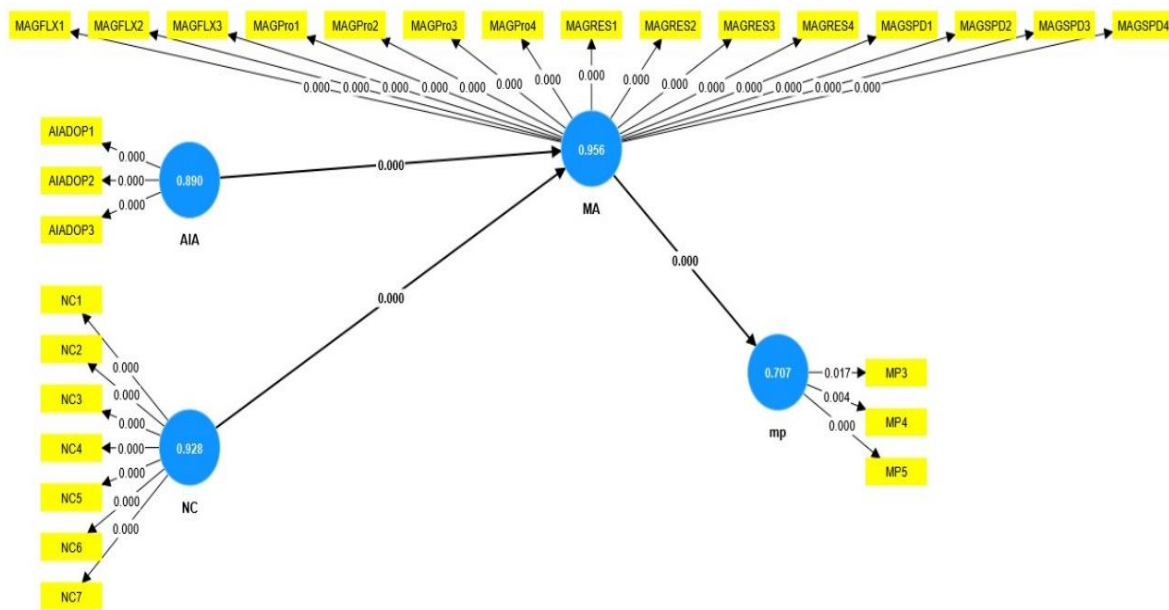
16.024, P-Value= 0.000); thus, H2 was supported. Hypothesis 3 (i.e., H3) predicted the effect of marketing agility on market performance.

**Table 4.**  
**Direct Paths**

Direct Path					
Path	T-Value	Beta	P Value	Results	
AIA→Marketing Agility	5.126	0.235	0.000	Supported	
NC→Marketing Agility	16.024	0.688	0.000	Supported	
Marketing Agility→Market Performance	4.875	0.245	0.000	Supported	

\*Note: AIA= Artificial Intelligence Adoption, NC= Networking Capability

Results (Table 4, Figure 2) demonstrated the significant effect of marketing agility on market performance ( $\beta = 0.245, t = 4.875, P\text{-Value} = 0.000$ ); thus, H3 was also supported. Therefore, the results indicated networking capability and AI adoption as antecedents of marketing agility and market performance as its outcome.



**Figure 2.**  
**Structural Model**

## DISCUSSION

Financial technology (Fintech) is a new concept that can improve financial activities through the involvement of technology. Moreover, it delivers financial services with technological advancement and innovation to compete with traditional financial approaches. The new technologies that help make financial services available to the public include cryptocurrency, cellular phones for mobile banking services, and investing services. Thus, fintech companies are not limited to small startups; they can be established technology companies (E Rehman et al., 2022). FinTech startups/companies must develop agility to promptly respond to market needs by understanding customer needs. Therefore, agile FinTech startups can be successful in fragile environments (Ranveendra and Satish, 2021). Similarly, the research has highlighted that the market performance of FinTech startups/companies in Pakistan depends upon marketing agility. Moreover, this agility can be developed by adopting AI and emphasizing networking capabilities.

Many prior studies have highlighted the influence of marketing agility on the financial or operational performance of organizations. However, the market performance of FinTech startups/companies remained unexplored. Furthermore, there is a paucity of literature highlighting the antecedents of marketing agility. Therefore, this research has explained the two antecedents of marketing agility including AI adoption and networking capability. The first hypothesis (i.e., H1) aimed to highlight the influence of AI adoption on marketing agility. The results demonstrated that adopting artificial intelligence is essential to develop marketing agility. The adoption of artificial intelligence by FinTechs can enable them to handle external data correctly and obtain valuable insights from it (Kaplan and Haenlein, 2019; Mohamed, 2021) to sense the market and seize upcoming opportunities (Hossain et al., 2022). The results supported the hypothesis and indicated AI adoption as an antecedent of marketing agility. The findings align with the study of Wamba (2022), who also highlighted AI assimilation as an antecedent of organizational and customer agility. Therefore, FinTechs can proactively sense and seize marketing opportunities by adopting artificial intelligence. They can use AI tools to transcribe the data into useful information to help market sensing and forecast upcoming challenges.

The second hypothesis (i.e., H2) was developed to investigate the impact of networking capability on marketing agility. The results supported the hypothesis that networking capability significantly influences the marketing agility of Fintech startups/companies. FinTechs with networking capabilities possess a strong relationship with partners, and this capability can help them determine the first indication of upcoming market threats, seize new market opportunities, anticipate new opportunities for market growth, and adjust offerings according to the market needs. Moreover, the survival of FinTechs depends upon networking capabilities, as the partners are able to design business strategies, develop acceptable service modes, and design interfaces that are currently needed by customers. Jiang (2014) also mentioned that organizations can enhance their marketing capabilities through strong networking skills. Therefore, strong networking capabilities can improve the agile marketing capability of a FinTech company/startup. The third hypothesis was formulated to determine the impact of marketing agility on market performance. The results supported the hypothesis and demonstrated that the market performance of FinTechs is associated with marketing agility. The findings highlighted that FinTechs offering financial services based on the market need or customers' demand, meeting the changing customers' needs before competitors, and replacing the deteriorating activities can improve their market share and market positioning.

## **Implications**

Many studies have reported that organizations operating in dynamic markets require dynamic capabilities, but there is a paucity of literature on specific dynamic capabilities or sets of dynamic capabilities leading to superior market performance. Moreover, there is a dearth of studies highlighting the factors affecting those dynamic capabilities. Therefore, this research has indicated that marketing agility is the specific set of dynamic capabilities that enhances market performance. Further, it has highlighted the factors affecting marketing agility. Therefore, this research has developed a comprehensive framework explaining the antecedents and outcomes of marketing agility. The research has provided different theoretical and practical implications. Theoretically, this study significantly differs from prior studies on marketing agility (MA) as they only focused on highlighting its outcomes, but it has also explained the antecedents of MA. Moreover, it has extended the literature on AI adoption,

networking capability, marketing agility, and market performance. In terms of practical implications, the research has diverted the attention of FinTech managers to adopt artificial intelligence and develop networking capabilities to establish marketing agility that ultimately escalates the market performance. Furthermore, the findings of this research can act as a guide for managers of FinTechs or entrepreneurs aiming to launch FinTech startups.

## Limitations and Recommendations

The study has developed a comprehensive framework highlighting the antecedents and outcomes of marketing agility. However, it still has some limitations that further studies could address. First, it emphasizes only FinTech startups and companies, and further research can be conducted on FinTechs backed by banks or newly launched FinTech startups. Secondly, the study has highlighted only two antecedents of marketing agility, but further studies can highlight the influence of big data analytical capability on marketing agility. Thirdly, the research model could be extended by identifying the mediations or moderation mechanisms facilitating the relationship between marketing agility and market performance.

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**Consent to Participate:** Yes

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