

**THE INFLUENCE OF MARKETING TECHNOLOGY LITERACY DEGREE AND  
MARKETING TECHNOLOGY AVAILABILITY ON MARKET PENETRATION  
STRENGTH WITH MARKETING TECHNOLOGY ACCESSIBILITY AS A  
MEDIATION AND INTERNAL PERCEPTION OF MARKETING TECHNOLOGY  
BENEFITS AS A MODERATION IN THE SMALL AND MEDIUM ENTERPRISES  
SECTOR OF BANDA ACEH CITY**

\* **Shubhan, Abdul Rahman Lubis, Sorayanti Utami**  
Management Department, Universitas Syiah Kuala, Indonesia

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**ABSTRACT**

The research examines the role of marketing technology accessibility on the Influence of Marketing Technology Literacy Degree And Marketing Technology Availability on Market Penetration Strength With Internal Perception Of Marketing Technology Benefits As A Moderation. This study has a sample of 225 entrepreneurs in the small and medium business sectors in Banda Aceh City using the proportionate stratified random sampling technique. and analyzed via SEM AMOS. Research results prove that increasing market penetration strength is proven to be influenced by the degree of technological literacy, availability, and accessibility in the use of technology applied in marketing. Then, the relationship between the degree of literacy and the availability of technology in marketing is proven to be partially mediated by the accessibility in Banda Aceh City. Finally, entrepreneurs' and consumers' internal perceptions of the perceived benefits of using marketing technology significantly moderate the relationship between marketing technology accessibility and market penetration strength. These findings explain that the model of increasing market penetration strength in the small and medium enterprise sector is a function of increasing the degree of technological literacy in marketing activities, the availability of marketing technology, which can be mediated by good access to marketing technology, and is strengthened by increasing perceptions held on the benefits of marketing technology.

**Keywords:** Marketing Technology Literacy Degree, Marketing Technology Availability, Marketing Technology Accessibility, Internal Perception of Marketing Technology Benefits, Market Penetration Strength.

**1. INTRODUCTION**

The small and medium business zone is a business that absorbs a lot of workforce without having to require a large level of formal education. The absorption of labor in industrial zones, especially small and medium business zones, is quite large compared to other zones. In the current post-economic crisis and regional autonomy period, collecting statistical information on small and medium business zones has a very strategic meaning. The information produced is very useful input for various government policies towards development which are focused on empowering the people's economy, especially small and medium enterprises. Multi-channel marketing plays an important role in helping businesses reach their target consumers in each market. This especially occurs when businesses penetrate the market with the aim of not only retaining their current

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customers but also establishing relationships with new customers. Several studies and studies have been attempted to establish the relationship between multichannel marketing and market penetration. (Akter, 2016) reports that consumer attitudes in various industries around the world have changed significantly. One aspect that has changed consumer attitudes is the introduction of technology, which has changed the purchasing decisions of most consumers. In line with this, (Akter, 2016) reiterates that to reach old and new consumers with diverse consumer attitudes, companies need to implement a series of direct and indirect communication channels. Keeping this in mind, for businesses to implement successful market penetration campaigns, they need to use a variety of marketing channels to attract the attention of consumers with different consumer attitudes.

In a competitive market, the availability of supporting technology can function as a major differentiator. This is an important component of any business, and its impact on market growth and penetration can be achieved (Hamood Mohd. Al-Hattami, Hashed, & Kabra, 2021); (Chatterjee, Chaudhuri, Vrontis, & Basile, 2022). The availability of marketing technology creates a greater level of satisfaction and loyalty. Satisfied and loyal customers are more likely to make repeat purchases and refer the company to others, thereby increasing sales and possibly expansion (Zeithaml, Bitner, Wilson, & Gremler, 2016); & (Hamood Mohammed Al-Hattami, Al-Adwan, Abdullah, & Al-Hakimi, 2023). Entrepreneurs who prioritize having sufficient technology available for marketing will create a unique value proposition that differentiates them and helps them gain a competitive advantage (Zogbenuku & Keelson, 2019). Access to good marketing technology can create profitable word-of-mouth marketing, which has a huge impact on attracting new customers. A solid reputation with access to good marketing technology contributes to prolonged success (Hennig-Thurau, Gwinner, & Gremler, 2002). The strength of market penetration is influenced by the availability of sufficient access to existing marketing technology. During a pandemic, technology is gaining widespread attention, especially in the context of education and marketing (Moorthy & Sahid, 2021). Technology allows entrepreneurs to efficiently reach and engage with their target audiences through digital marketing channels, social media, and online advertising (Chaffey & Ellis-Chadwick, 2019).

Entrepreneurs who understand the benefits of digital growth have skills that enable them to use data and communications technology critically and creatively to manage the digital transformation of SMEs. Some research supports that what is meant by digital skills at the personal level in SMEs relates to the skills, behavior, and knowledge needed to use technology and overcome technological problems as best as possible (Scuotto, Nicotra, Giudice, Krueger, & Gregori, 2021). A product that has benefits for use in everyday life, so this product is likely to be used by people. The assumption of efficacy is the extent to which a person believes that using a particular technology will improve his work performance (Jogiyanto, 2007). The perceived usefulness of marketing technology is used as one of the criteria for identifying how far technology in terms of marketing can provide benefits. Entrepreneurs think that the technology used in marketing their various products can be useful for themselves, so they are happy to access marketing technology which will directly influence their market position and then help the market as a whole to gain a position in terms of penetration.

Responding to various developments and phenomena that occur in the world of marketing and their participation in trade flows, the involvement of advanced marketing technology, and their contribution to the growth of markets that have penetration in it, various cases are very worthy of

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further investigation. The degree of marketing technology literacy alone is not enough to encourage market transformation through digitalization; On the contrary, entrepreneurs need to use their digital skills in their activities by using digital technology to generate positive attitudes towards this technology in the small and medium business zone, which in turn will facilitate digital transformation. Actors in the small and medium business zones still often experience problems related to the literacy of entrepreneurs regarding marketing, inadequate availability of technology, access which still often encounters obstacles in the form of insufficient network support, and in conclusion, the market penetration power possessed by just some entrepreneurs. Meanwhile, digital literacy has a positive and significant influence on marketing strategies and resilience in small and medium business zones. Digital marketing also has a positive and significant impact on income.

## **2. LITERATURE**

### **Market penetration power**

Most entrepreneurs choose distribution channels that ensure their products reach their targeted customers at the right time and in a convenient position. Measures that can be a benchmark for market penetration are retaining consumers, selling to previous customers, innovation in use, increasing market share, and marketing to challenge the current (Whitwell, Lukas, & Doyle, 2003).

### **Marketing Technology Accessibility**

Technology accessibility in the world of marketing is a concept for looking at the benefits of services implemented for users through marketing channels. The realization of access in the use of technology in marketing can be reviewed in several ways, such as awareness; attraction and desire; decision making, taking action, maintaining other actions taken, and providing references to others (Lundquist & Wang, 2022).

### **Internal Perception of the Benefits of Marketing Technology**

The perceived benefits of marketing technology are the extent to which entrepreneurs believe that using a particular technology will increase their sales. This perception can be measured by process acceleration, effective and efficient level, sales productivity level, time-saving, and easy transactions (Jogiyanto, 2007).

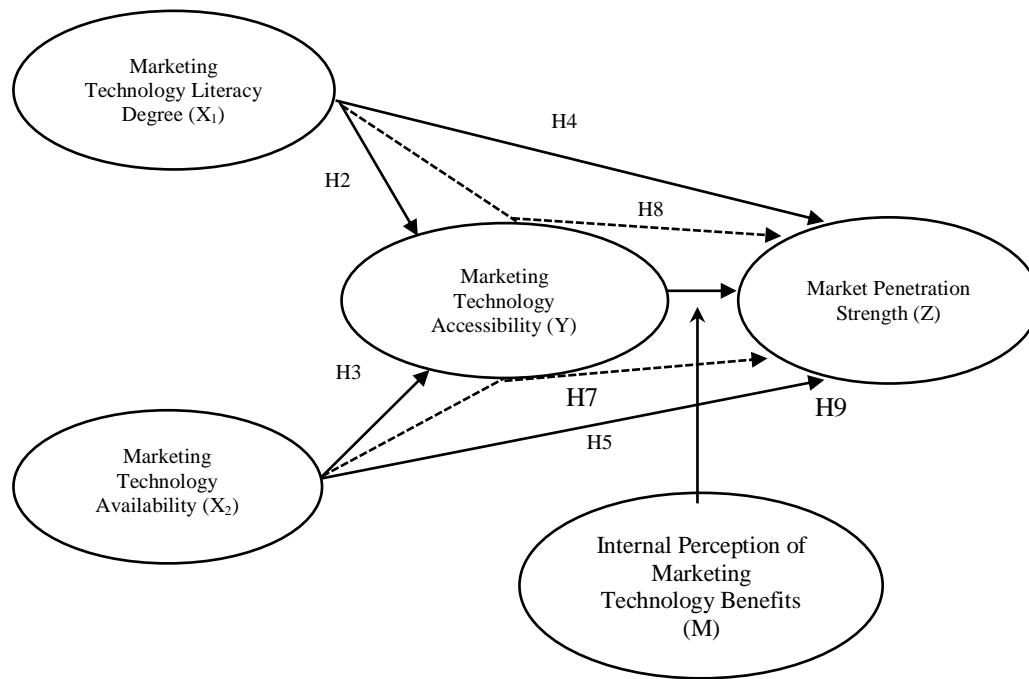
### **Degree of Technological Literacy in Marketing**

The term marketing knowledge management refers to the transfer, dissemination, and storage of marketing knowledge. (Payton & Hague, 2010) also states that there are functions of skills, creativity, collaboration, communication, ability to find and select information, critical thinking and evaluation, and electronic security.

### **Availability of Marketing Technology**

Financial activities from a marketing perspective are a combination of technology and features of finance or can also be interpreted as innovation in the financial sector with a touch of modern technology. (Dastane, 2020) also states that the measures are coordination, commercialization, community, content, and communication.

**Model and Hypotheses**



**Figure 1.** Research Model

**A. Descriptive Hypothesis**

H<sub>1</sub>: The degree of marketing technology literacy, the availability of marketing technology, the accessibility of marketing technology, the internal perception of the benefits of marketing technology, and the strength of market penetration in the small and medium enterprise sector in the city of Banda Aceh have gone well

**B. Verification Hypothesis**

**Direct Influence Verification Hypothesis**

- H<sub>2</sub>: The degree of marketing technology literacy influences the accessibility of marketing technology in the small and medium business sector in Banda Aceh City
- H<sub>3</sub>: The availability of marketing technology influences marketing technology accessibility in the small and medium business sector in Banda Aceh City
- H<sub>4</sub>: The degree of marketing technology literacy influences the strength of market penetration in the small and medium business sectors in Banda Aceh City
- H<sub>5</sub>: The availability of marketing technology has an influence on market penetration power in the small and medium business sectors in Banda Aceh City
- H<sub>6</sub>: Accessibility of marketing technology influence on market penetration power in the small and medium business sector in Banda Aceh City

**Indirect Influence Verification Hypothesis (Mediation and Moderation)**

H<sub>7</sub>: The degree of marketing technology literacy influences the strength of market penetration through marketing technology accessibility in the small and medium

business sectors in Banda Aceh City

- H<sub>8</sub> : The availability of marketing technology influences the strength of market penetration through marketing technology accessibility in the small and medium business sectors in Banda Aceh City
- H<sub>9</sub> : Internal perception of the benefits of marketing technology moderates the influence of marketing technology accessibility on market penetration strength in the small and medium business sector in Banda Aceh City

**3. METHOD**

This research was conducted on entrepreneurs in the small and medium business sectors with the object being the degree of literacy ( $X_1$ ), and availability ( $X_2$ ), as independent variables. Accessibility as variable Y, internal perception of benefits as M, and Variable Z, namely market penetration. This research used a population of 225 entrepreneurs using a proportionate stratified random sampling technique.

**4. RESULT**

**Descriptive Hypothesis**

**Table 1. One Sample T-Test**

	Test Value = 3.41					
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Marketing Technology Literacy Degree	19,290	224	0,000	0,59659	0,5307	0,6625
Marketing Technology Availability	24,905	224	0,000	0,79444	0,7374	0,8515
Internal Perception of Marketing Technology Benefits	28,395	224	0,000	0,89000	0,8336	0,9464
Marketing Technology Accessibility	21,901	224	0,000	0,70704	0,6443	0,7697
Market Penetration Strength	29,889	224	0,000	0,82200	0,7728	0,8712

After analyzing the One Sample T-Test results presented in Table 1, it concludes that all the variables in this research have been performed successfully. This is indicated by the fact that the resulting significance values are less than 5%. Such values demonstrate that the observed differences between the sample mean and the population mean are statistically significant, and not due to chance. Overall, these findings provide strong evidence to support the research hypothesis and its associated variables.

**5. DATA ANALYSIS RESULTS**

**Immediate Effect Testing**

1. Normality test

**Table 2. Normality Test**

		<b>Marketing Technology Literacy Degree</b>	<b>Marketing Technology Availability</b>	<b>Marketing Technology Accessibility</b>	<b>Internal Perception of Marketing Technology Benefits</b>	<b>Market Penetration Strength</b>
N		225	225	225	225	225
Normal Parameters	Mean	23.98	24.67	23.49	24.91	24.78
	Std. Deviation	2.776	2.736	2.872	2.450	2.738
Most Extreme Differences	Absolute	0.101	0.104	0.085	0.162	0.186
	Positive	0.097	0.104	0.085	0.162	0.186
	Negative	-0.101	-0.083	-0.067	-0.098	-0.129
Kolmogorov-Smirnov Z		1.420	1.464	1.195	2.279	2.610
Asymp. Sig. (2-tailed)		0.175	0.287	0.115	0.210	0.130
a. Test distribution is Normal.						

Based on Table 2 above, you can see all the *Asymp values. Sig. (2-tailed) > sig.* Therefore, it can be concluded that the data meets the elements of data normality.

2. Outlier Test

**Table 3. Outlier Test Result**

Residuals Statistics					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	25.18	70.59	49.00	9.111	225
Std. Predicted Value	-2.614	2.370	0.000	1.000	225
Standard Error of Predicted Value	3.037	10.336	6.567	1.784	225
Adjusted Predicted Value	26.19	71.41	48.98	9.238	225
Residual	-49.748	50.284	0.000	26.630	225
Std. Residual	-1.819	1.838	0.000	0.974	225
Stud. Residual	-1.857	1.931	0.000	1.003	225
Deleted Residual	-51.834	55.464	0.019	28.269	225
Stud. Deleted Residual	-1.882	1.961	0.000	1.008	225
Mahal. Distance	0.194	12.720	4.948	3.059	225
Cook's Distance	0.000	0.064	0.010	0.011	225
Centered Leverage Value	0.002	0.133	0.052	0.032	225
a. Dependent Variable: Number					

Based on Table 3, it can be seen that the maximum value of *Mahalanobis Distance* ( $d^2$ ) is 16.720. This means that the maximum *Mahalanobis Distance* ( $d^2$ ) is smaller than the *chi-square* value ( $\chi^2$ ), namely  $12.720 < 43.77297$ . In this way, the data does not experience *outliers*, so it can be used for further processing.

### 3. Multicollinearity Test

**Table 4. Multicollinearity Test**

Coefficients							
Model	Unstand. Coeff.		Stand. Coeff.	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	0.432	0.673		0.642	0.522	-	-
Marketing Technology Literacy Degree	0.010	0.011	0.003	0.139	0.890	0.801	1.248
Marketing Technology Availability	-0.001	0.083	-0.309	-8.748	0.000	0.352	2.841
Marketing Technology Accessibility	-0.010	0.083	0.068	2.049	0.042	0.403	2.482
Internal Perception of Marketing Technology Benefits	1.023	0.012	1.092	39.101	0.000	0.565	1.770

a. Dependent Variable: Market Penetration Strength

Based on Table 4, because VIF <10, the data does not experience multicollinearity, so the data can be used for further testing.

4. CFA Test



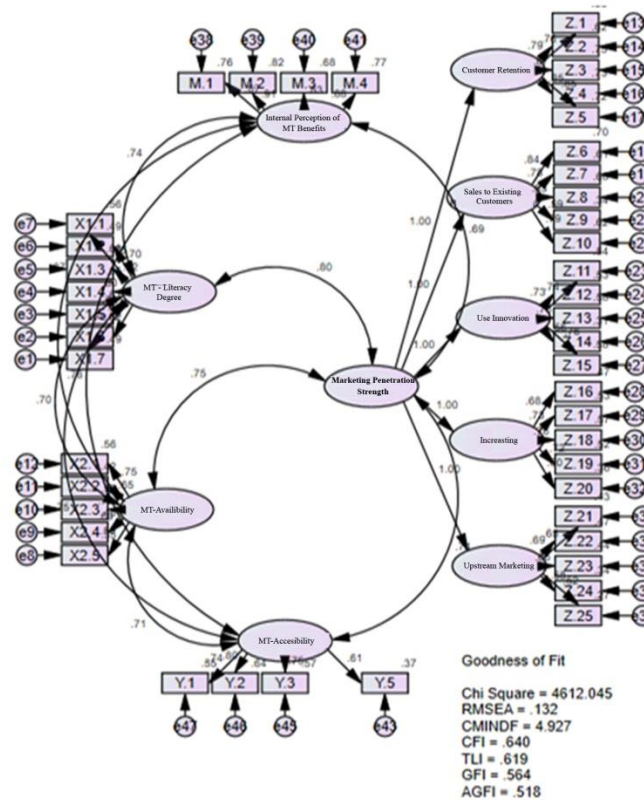


Figure 2. CFA Test Result (post respecification)

Table 5. Loading Factor

	Estimate
X1.7 <--- MT_LiteracyDegree	.701
X1.6 <--- MT_LiteracyDegree	.787
X1.5 <--- MT_LiteracyDegree	.779
X1.4 <--- MT_LiteracyDegree	.803
X1.3 <--- MT_LiteracyDegree	.822
X1.2 <--- MT_LiteracyDegree	.701
X1.1 <--- MT_LiteracyDegree	.749
X2.5 <--- MT_Availability	.596
X2.4 <--- MT_Availability	.691
X2.3 <--- MT_Availability	.757
X2.2 <--- MT_Availability	.649
X2.1 <--- MT_Availability	.747
Z.1 <--- Customer_Retention	.759
Z.2 <--- Customer_Retention	.785
Z.3 <--- Customer_Retention	.867
Z.4 <--- Customer_Retention	.853

	Estimate
Z.5 <--- Customer_Retention	.846
Z.6 <--- Sales_toExistingCustomers	.839
Z.7 <--- Sales_toExistingCustomers	.781
Z.8 <--- Sales_toExistingCustomers	.827
Z.9 <--- Sales_toExistingCustomers	.586
Z.10 <--- Sales_toExistingCustomers	.791
Z.11 <--- Use_Innovation	.735
Z.12 <--- Use_Innovation	.729
Z.13 <--- Use_Innovation	.760
Z.14 <--- Use_Innovation	.557
Z.15 <--- Use_Innovation	.759
Z.16 <--- Increasing_TheExistingMarket	.684
Z.17 <--- Increasing_TheExistingMarket	.728
Z.18 <--- Increasing_TheExistingMarket	.756
Z.19 <--- Increasing_TheExistingMarket	.719
Z.20 <--- Increasing_TheExistingMarket	.598
Z.21 <--- Upstream_Marketing	.653
Z.22 <--- Upstream_Marketing	.687
Z.23 <--- Upstream_Marketing	.661
Z.24 <--- Upstream_Marketing	.583
Z.25 <--- Upstream_Marketing	.517
M.1 <--- InternalPerception_MTBenefits	.866
M.2 <--- InternalPerception_MTBenefits	.905
M.3 <--- InternalPerception_MTBenefits	.826
M.4 <--- InternalPerception_MTBenefits	.883
M.5 <--- InternalPerception_MTBenefits	.410
Y.5 <--- MT_Accessibility	.642
Y.4 <--- MT_Accessibility	.460
Y.3 <--- MT_Accessibility	.757
Y.2 <--- MT_Accessibility	.769
Y.1 <--- MT_Accessibility	.709

5. GOF Test Result

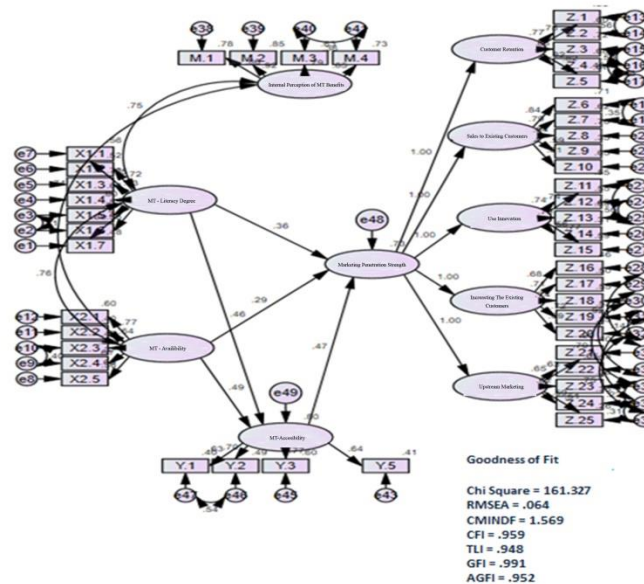


Figure 3. GOF After Modification Indices

Table 6. Loading Factor After Modification Indices

	Estimate
X1.7 <--- MT_LiteracyDegree	.701
X1.6 <--- MT_LiteracyDegree	.787
X1.5 <--- MT_LiteracyDegree	.778
X1.4 <--- MT_LiteracyDegree	.804
X1.3 <--- MT_LiteracyDegree	.822
X1.2 <--- MT_LiteracyDegree	.702
X1.1 <--- MT_LiteracyDegree	.748
X2.5 <--- MT_Availability	.595
X2.4 <--- MT_Availability	.692
X2.3 <--- MT_Availability	.757
X2.2 <--- MT_Availability	.649
X2.1 <--- MT_Availability	.747
Z.1 <--- Customer_Retention	.759
Z.2 <--- Customer_Retention	.786
Z.3 <--- Customer_Retention	.867
Z.4 <--- Customer_Retention	.853
Z.5 <--- Customer_Retention	.846
Z.6 <--- Sales_toExistingCustomers	.839
Z.7 <--- Sales_toExistingCustomers	.781
Z.8 <--- Sales_toExistingCustomers	.827
Z.9 <--- Sales_toExistingCustomers	.585
Z.10 <--- Sales_toExistingCustomers	.790

	Estimate
Z.11 <--- Use_Innovation	.735
Z.12 <--- Use_Innovation	.730
Z.13 <--- Use_Innovation	.760
Z.14 <--- Use_Innovation	.556
Z.15 <--- Use_Innovation	.759
Z.16 <--- Increasing_TheExistingMarket	.684
Z.17 <--- Increasing_TheExistingMarket	.728
Z.18 <--- Increasing_TheExistingMarket	.756
Z.19 <--- Increasing_TheExistingMarket	.719
Z.20 <--- Increasing_TheExistingMarket	.598
Z.21 <--- Upstream_Marketing	.653
Z.22 <--- Upstream_Marketing	.687
Z.23 <--- Upstream_Marketing	.661
Z.24 <--- Upstream_Marketing	.583
Z.25 <--- Upstream_Marketing	.516
M.1 <--- InternalPerception_MTBenefits	.873
M.2 <--- InternalPerception_MTBenefits	.907
M.3 <--- InternalPerception_MTBenefits	.825
Y.5 <--- MT_Accessibility	.611
Y.3 <--- MT_Accessibility	.755
Y.2 <--- MT_Accessibility	.800
Y.1 <--- MT_Accessibility	.744
M.4 <--- InternalPerception_MTBenefits	.877

**Table 7. Regression Weight**

Influence Between Variables	Estimate		S.E	CR	P
	Std.	Unstd			
The degree of marketing technology literacy on the accessibility of marketing technology	.460	.424	.103	4.110	***
Availability of marketing technology on accessibility of marketing technology	.491	.503	.104	4.056	***
The degree of marketing technology literacy on market penetration strength	.360	.323	.105	4.181	***
Availability of marketing technology on market penetration strength	.289	.365	.104	2.369	.018
Accessibility of marketing technology to market penetration power	.466	.404	.108	4.084	***

### **H2: Relationship of literacy Degree and Accessibility**

The degree of understanding (literacy) that occurs in society regarding technology applied in marketing has been proven to increase access to SMEs in Banda Aceh. AMOS SEM results show that CR (4.110>1.96) and p value (0.000<5%). Entrepreneurs who are confident in their digital literacy skills are more equipped to use digital technology to carry out complex work activities (Neumeyer & Liu, 2021). This is because they can use interaction and collaboration skills to engage in market activities through digital technologies, and their problem-solving skills can enable them to communicate with colleagues and customers or resolve problems more efficiently. Therefore, it is essential to develop digitally enhanced skills that encourage a digital mindset and help entrepreneurs use digital technologies in their daily work routines (Cetindamar, Abedin, & Shirahada, 2021). Additionally, entrepreneurs' digital literacy facilitates their absorptive capacity to adapt to new digital technologies, assimilate and recombine new digital skills, and effectively use digital technologies (Neumeyer, Santos, & Morris, 2021).

### **H3: Relationship of Availability and Accessibility**

With the availability of current technology that is translated into the world of marketing, dynamic access will increase. In this study, it was shown that the critical ratio exceeded 1.96 (4.056) and was significant at 5% (0.000). Marketing capabilities are essential for any organization and require the use of digital technology (Teece, Pisano, & Shuen, 1997), as it helps in researching customers, competitors, and the wider market environment (Day, 1994). To implement marketing capabilities, companies need to maintain relationships with customers and suppliers, participate in professional associations, and use best practices. These processes require a high level of utilization of the tangible and intangible assets of a company. Assets of a company play a significant role in its production process. According to (Grant, 1991), they are the basic unit of analysis. Capabilities, on the other hand, are identified as the capacity of a team of resources to perform some task or activity (Hafeez, Keoy, & Hanneman, 2006). The marketing capability process generates input for reconfigured operational capability requirements (Eisenhardt & Martin, 2000).

### **H4: Relationship of Literacy Degree and Market Penetration Strength**

Increased literacy related to the increasingly *massive use of technology* in the world of marketing also influences market penetration. This is demonstrated by the results of this research which state that the CR and p values are above standardization, namely (4.181>1.96 and 0.018<0.05). To carry out successful market penetration campaigns, businesses need to have a deep understanding of their customers' behavior (Szolnoki & Hoffmann, 2014). This is essential to deploy specific marketing campaigns that appeal to different consumer groups. Due to increasing market competition, businesses must target consumers with varying behaviors to not only maintain their current market share but also achieve customer growth. While most research focuses on consumer behavior when examining multichannel marketing, it's worth noting that this form of marketing can also help overcome the challenges of increasing competition in the market. However, it's important to note that multichannel marketplaces come with their own set of challenges that marketers need to overcome to achieve better results. As (Rangaswamy & Bruggen, 2005) point out, although marketers can use different multichannel marketing techniques to execute their market penetration campaigns, the success of such campaigns depends entirely on

their ability to identify a seamless multichannel approach that serves their target customers.

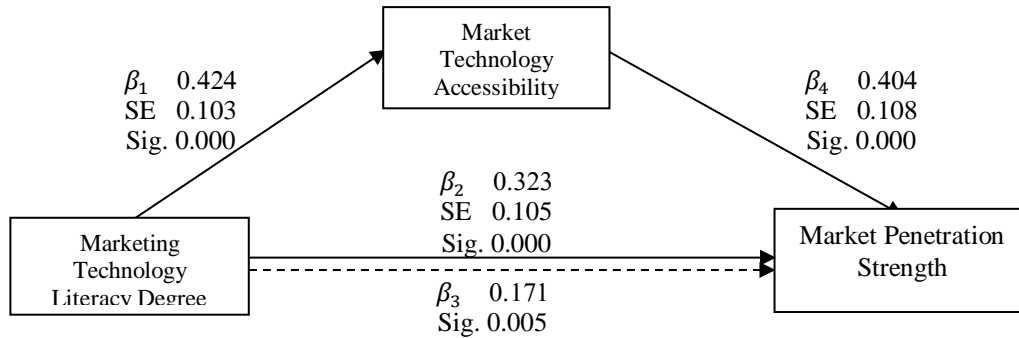
#### **H5: Relationship of Availability to Market Penetration Strength**

The availability of technology that supports marketing shows an increase in market penetration. This statement is supported by a CR value of 2.369 and a p-value of 0.018. Market penetration can be both a measure and a strategy. Most businesses use market penetration strategy when entering a new market. The goal is to quickly enter with a product or service and capture a large market share (Chukwuka, 2023). Market penetration is also a measure of the percentage of the market that a product or service can capture (Demirci & Erkip, 2024). This strategy involves focusing on selling existing products or services to existing markets to gain a higher market share. It's a low-risk strategy that many companies adopt. Globalization has brought multinational companies, their products, and brands to remote corners of the world. The large population of potential customers in developing countries has raised expectations of unprecedented demand for consumer goods, provided the right products can be delivered to the right place (Talim, 2023). The main attraction of developing countries is high economic growth and corresponding expectations of rapidly increasing demand for consumer goods.

#### **H6: Relationship of Accessibility to Market Penetration Strength**

Better access will increase the ability of entrepreneurs to penetrate the market in the target segment. Statistically, this research has been proven by the critical ratio and p-value (4.084 and 0.000). In today's digital age, technology plays a crucial role in facilitating data collection, analysis, and interpretation in various business domains. For entrepreneurs, this means that they can gather valuable insights about market trends, customer preferences, and competitor behavior, which can be utilized to make informed decisions and ultimately gain a competitive advantage over their peers (Shafique, Kalyar, & Mehwish, 2020). However, despite the numerous benefits that technology offers, there are also several challenges that come with its implementation. One of the most significant challenges is the need for ongoing skills development and the ability to adapt to the constantly evolving technological landscape. This implies that entrepreneurs need to constantly upgrade their knowledge and skills to keep up with the latest trends and stay ahead of the competition (Dana, Tajpour, Salamzadeh, Hosseini, & Zolfaghari, 2021). Therefore, entrepreneurship education can play a crucial role in enhancing an entrepreneur's ability to leverage technology successfully. By providing the necessary skills and knowledge, entrepreneurship education can contribute to the success of an agenda that relies on technology in marketing. This will help entrepreneurs to maximize the benefits of technology while mitigating the challenges that come with its implementation

**H7: Accessibility in Mediating Literacy Degree Influence on Market Penetration Strength**



**Figure 4. Testing Accessibility Mediation Model on Literacy Degree Influencing Market Penetration Strength**

Figure 4 is a model formed from the first and second regressions to form a path analysis model *with* the marketing technology accessibility as the mediator. The Sobel test is displayed according to the indirect effect test as follows.

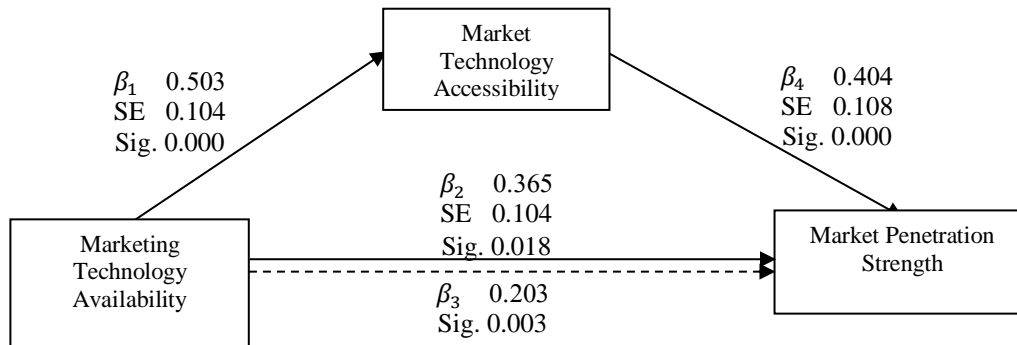
Input:	Test statistic:	Std. Error:	p-value:
a 0.424	Sobel test: 2.76843821	0.0618746	0.00563257
b 0.404	Aroian test: 2.72475376	0.0628666	0.00643495
s <sub>a</sub> 0.103	Goodman test: 2.81429348	0.06086643	0.00488846
s <sub>b</sub> 0.108	Reset all	Calculate	

**Figure 5. Sobel Calculation for H7**

These results indicate that there is a direct influence between the degree of marketing technology literacy on the strength of market penetration which is mediated by partial mediation.



**H8: Accessibility in Mediating Availability Influence on Market Penetration Strength**



**Figure 6. Testing Accessibility Mediation Model on Availability Influencing Market Penetration Strength**

Figure 6 above is a model formed from the first and second regressions to form a path analysis model with the marketing technology accessibility as the mediator. The Sobel test is displayed according to the indirect effect as follows.

Input:	Test statistic:	Std. Error:	p-value:
a 0.503	Sobel test: 2.95898073	0.06867635	0.00308658
b 0.404	Aroian test: 2.92018317	0.06958879	0.00349826
s <sub>a</sub> 0.104	Goodman test: 2.99936694	0.06775163	0.00270541
s <sub>b</sub> 0.108	Reset all	Calculate	

**Figure 7. Sobel Calculation for H8**

These results indicate that there is a direct influence between the availability of marketing technology on market penetration strength which is partially mediated by the accessibility of marketing technology (*partial mediation*).

**H9: Internal Perceptions of Benefits Moderates Accessibility influence on Market Penetration Strength**



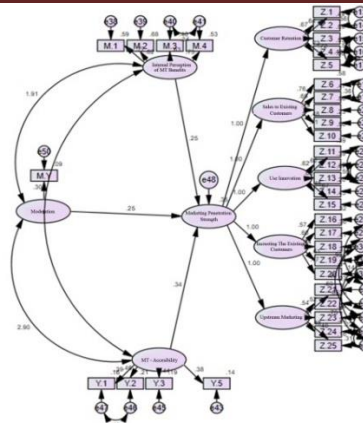


Figure 8. Moderation Effect Test

Table 8. Moderation Test Result

			Estimate	S.E	CR	P
Market_PenetrationStrength	<--	MT_Accessibility_	.439	.14	3,45	***
Market_PenetrationStrength	<--	Moderation	.248	,027	2,358	,015
Market_PenetrationStrength	<--	InternalPerception_MTBenefits	.247	.125	2,383	.012

Testing the moderating effect on the moderating role of internal perception of the benefits of marketing technology on the influence of marketing technology accessibility on market penetration strength, it was found that the coefficient  $\beta_2 = 0.247$  with a significance of 0.015. Meanwhile  $\beta_3 = 0.248$  with a significance of 0.012. This shows that internal perception of the benefits of marketing technology purely *moderates* the influence of marketing technology accessibility on market penetration strength.

## 6. CONCLUSION

Following the details of the discussion, it reveals that the descriptive hypothesis proposed states that it has worked well for all of the research variables. As for the relationships that are formed, both the degree of literacy and the availability of technology in marketing have a significant positive effect on current access and penetration power in the market. Accessibility also says the same thing. The mediating role of technology access is partial and the moderation form of internal perceptions of benefits takes the form of a pure moderator. These findings provide a clear picture of capital, and can be used for future theory development through further research. The limitations of this research are the number of variables and its subject. Several recommendations for practitioners, especially for research subjects, emerged from the survey results, namely as follows.

1. Technology users in marketing activities should avoid the following things to ensure security when using them, such as not sharing personal information, deactivating *Bluetooth* if not

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needed, avoiding suspicious links, not connecting to open WiFi, only going to sites that start with HTTPS, downloading antivirus and *anti-malware software*, and *back up* device data regularly.

2. Utilizing technology in marketing so that it is easily accessible to anyone and anywhere has several advantages in developing a business. Because of this, currently, many entrepreneurs are exploring new trends so the number of competitors is also increasing. Therefore, a strategy to face competition is an important thing that must be created by business actors. Active social media users are increasing day by day, such as Instagram, Twitter, and Facebook. Sellers see it as a marketing opportunity. There are many positive impacts of the use of digital *marketing*, such as easy and broad customer targets. Then customer information is detailed, efficient, and effective, *the brand* quickly goes viral, and the business becomes focused and dynamic.
3. It would be better for entrepreneurs in their business activities to use technology more often for marketing activities because of the various benefits obtained, such as fast service to consumers, easier transaction processes, various promotions, analyzing markets faster, making market identification easier, providing more income, building customer trust, helps in building business reputation, reduces capital and operational costs, and does business online.
4. For consumers to suggest to other people to purchase products marketed by entrepreneurs in the small and medium business sector in the city of Banda Aceh, entrepreneurs should increase satisfaction with their customers, increase sales with the expected volume, product availability and quality, and prices set to be competitive. even more affordable than manufacturers such as.
5. It would be better for entrepreneurs to start looking at providing *rewards* with more frequent intensity because it is enough to help increase sales, including by providing discount *vouchers*, *free products*, limited *merchandise*, and *rewards* from third parties. Some steps can be taken to determine *rewards* for customers, such as utilizing best-selling products, remaining profit-oriented, and choosing *rewards* based on accurate data.
6. Market segmentation divides a market into small groups and different needs, characteristics, or behaviors that may require separate products or marketing mixes. In this case, consumers need products and services that satisfy their needs at competitive prices. By forming market segmentation, companies form their product characteristics by first analyzing and identifying consumers with the same response characteristics. So that entrepreneurs can identify target customers, it is best to start by making assumptions by analyzing current consumers by creating a potential target market for the product, paying attention to market competition, communicating with customers, and explaining the advantages of the product.
7. Product modification has positive value so that the product has high competitiveness in the market. Some of these benefits include adding aesthetic value, increasing performance, adapting to needs, increasing security, and increasing sales value.
8. The urgency of collaboration in the business community has a very good impact on business development, including being able to expand and build networks, increase knowledge, have the opportunity to introduce products or services, carry out business cooperation or collaboration, and have the opportunity to obtain funding or capital.

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