

Optimising MSMEs B2B Marketing Performance Through Marketing Automation In CRM Strategy

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Abstract: This research investigates the influence of technology readiness and ICT capabilities on marketing automation within B2B MSMEs' CRM strategies. Using quantitative methods in 105 B2B MSMEs employing marketing automation tools, the study employs Structural Equation Modeling (SEM) with Lisrel 8.8 software for analysis. Findings reveal that Technology Readiness significantly impacts ICT Capability, with innovation indicators holding a dominant 67.240 per cent effect. ICT Capability positively influences marketing automation, primarily driven by the use of ICT (84.600 per cent). Marketing automation correlates positively with B2B CRM, notably through message reach (65.610 per cent). B2B CRM, in turn, significantly affects Marketing Performance, emphasising improved customer relationship quality (77.400 per cent) and expanded market influence (42.250 per cent). Notably, technology readiness does not directly impact marketing automation, necessitating ICT capability for practical implementation in customer relationship management. In conclusion, marketing automation enhances B2B MSMEs' marketing performance, contingent on their ICT capabilities, despite the importance of technology readiness.

Keywords: CRM; Marketing Automation; Marketing Performance; MSME B2B; Technology Readiness.

Abstrak: Penelitian ini menganalisis pengaruh kesiapan teknologi dan kemampuan ICT terhadap *marketing automation* dalam strategi CRM UMKM B2B. Dengan menggunakan metode kuantitatif pada 105 UMKM B2B yang menggunakan marketing automation tools, penelitian ini menggunakan *Structural Equation Modeling* (SEM) dengan program Lisrel 8.8 untuk analisisnya. Temuan menunjukkan bahwa *technology readiness* berdampak signifikan terhadap Kapabilitas ICT, dengan indikator inovasi berpengaruh dominan sebesar 67,240 persen. Kapabilitas ICT berpengaruh positif terhadap *marketing automation* terutama didorong oleh penggunaan ICT (84,600 persen). Marketing automaation berpengaruh positif dengan B2B CRM, terutama melalui jangkauan pesan (65,610 persen). B2B CRM, pada gilirannya, secara signifikan mempengaruhi Kinerja Pemasaran, menekankan peningkatan kualitas hubungan pelanggan (77,400 persen) dan perluasan pengaruh pasar (42,250 persen). Khususnya, *technology readiness* tidak berdampak langsung pada marketing automation, sehingga memerlukan Kemampuan ICT untuk penerapannya dalam CRM. Kesimpulannya, pemanfaatan marketing automation akan meningkatkan kinerja pemasaran UMKM B2B, bergantung pada kemampuan ICT meskipun *technology readiness* teknologi sangatlah penting.

Kata Kunci: CRM; *Marketing Automation*; *Marketing Performance*; MSME B2B; *Technology Readiness*.

INTRODUCTION

Micro, Small and Medium Enterprises (MSMEs) are the lifeblood of Indonesia's regional and national economy (Caraka et al., 2021; Nursini, 2020; Rosyidiana & Narsa, 2024; Tambunan, 2019). MSMEs are essential in economic activities, employment, local economic development, and community empowerment. (Melati, 2022). In 2023, Indonesia will face the threat of an economic recession caused by global inflation, the Covid-19 pandemic, and the Russia-Ukraine war. An economic recession can cause a decrease in gross domestic product (GDP), an increase in unemployment, and negative economic



growth (Sulastris, 2022) for months and even years (Dinas Koperasi UKM Kulon Progo, 2022). Therefore, Indonesia needs a solution to survive the threat of a global economic recession. Based on Indonesia's previous experience, MSMEs were at the forefront of Indonesia's economic stability during the 1998 monetary crisis and the Covid-19 pandemic. In 2021, the number of MSMEs in Indonesia reached 64.200 million with a GDP contribution of 61.070 per cent or IDR 8,573.890 trillion. (Sulastris, 2022).

Based on the data above, MSMEs have a significant role in dealing with the global recession because they have contributed significantly to GDP, employment, export market potential, and potential markets for the financial services industry (Mukherjee, 2018). Therefore, Indonesia has a program to transform Indonesian MSMEs digitally (Gaffar et al., 2022; Wiliandri, 2020).

Increasing the number of MSMEs undertaking digital marketing transformation is fundamental for Indonesia to maximise its digital economic potential. At the same time, the potential increase in the value of the digital economy in Indonesia is expected to increase significantly, eightfold in the next ten years, and reach IDR 4,531 trillion by 2030. (Melati, 2022). However, the digital transformation of Indonesian MSMEs faces difficulties (Apriani et al., 2023).

Indonesian MSMEs face challenges in digital transformation, such as low digital literacy education and human resources. MSMEs in Indonesia need to strengthen digital literacy education and human resources to implement digitalisation. In addition, the need for more knowledge about the internet, development, and technology is due to the low education of MSME players. Another challenge is the cultural challenge, which requires a change in mindset and culture regarding efficient digital utilisation in reaching a broader market. (Anatan, 2023; Hermawan, 2022a, 2022b; Kurniawati et al., 2022; Sijabat, 2022). MSMEs One type of business is business-to-business (B2B). B2B is a business interaction between companies and other companies, and it is also applied to MSMEs (Wahyuni et al., 2020). The problem MSMEs face with B2B today is maintaining and fostering customer relationships in the digital era, which can lead to a lack of trust and long-term suffering. Another problem is integrating existing technology with new digital tools in managing data due to the need for more ability to use the latest technology (Rao et al., 2023). A digital tool that can help B2B MSMEs transform digitally and foster relationships with customers is customer relationship management (CRM) (Bagale et al., 2023).

CRM can help MSMEs manage customer data, track customer interactions, and provide personalised customer service, improving customer relationships (Cheng & Shiu, 2019). In addition, CRM can help MSMEs increase sales and marketing by campaigning according to the target market. Therefore, CRM can play an essential role in the digital transformation of MSMEs. However, the low knowledge of digital owned by MSMEs requires additional tools to maximise CRM in MSMEs. (Latifah et al., 2022; Ramadhani, 2022).

Large companies commonly use CRM strategies, but only a few Indonesian MSMEs have implemented this strategy. CRM is very appropriate for improving customer relationships and increasing customer loyalty. This is because implementing CRM is costly and complicated and requires a significant investment of resources. In addition, the challenges faced by MSMEs are convincing colleagues to adopt changes and the lack of digital literacy of MSME players as challenging to implement CRM strategies (Hanaysha et al., 2022; Harini et al., 2023a). Solutions that can be used to overcome these challenges include marketing automation.



Marketing automation can help businesses deal with potential customers, resulting in faster solutions for customers (Guercini, 2023; Silva et al., 2023a). CRM and marketing automation can work together to support marketing and sales. Marketing automation can help automate repetitive marketing tasks and minimise human labour, saving operational costs in paying employees. In addition, marketing automation can get customer information based on data. (Hanaysha et al., 2022).

This research is based on the limitations of research focusing on B2B MSMEs because most studies focus more on large companies (Ika Purnama et al., 2021). There exist constraints in digital literacy and technological comprehension among Micro, Small, and Medium Enterprises (MSMEs) practitioners. This scholarly investigation will delineate these impediments and seek remedies to augment the digital proficiencies of MSMEs. Consequently, this research will also assess the influence of Technology Readiness and Information and Communication Technology (ICT) Capability on the automation of marketing processes. Moreover, MSMEs exhibit a deficient understanding of Customer Relationship Management. This study aspires to rectify the existing gap in the academic literature by scrutinising the effective assimilation of Customer Relationship Management (CRM) within Business-to-Business Micro, Small, and Medium Enterprises (MSMEs) through the synergistic application of marketing automation in the execution of CRM strategies. This inquiry will clarify the concrete impacts of implementing marketing automation within CRM frameworks on the performance indicators of MSME organisations. Furthermore, this research aims to bridge the existing knowledge shortfall concerning the role of technological innovations in enhancing operational outcomes for MSMEs and overcoming the challenges associated with digital transformation in CRM implementation, thereby facilitating a more integrated application of marketing automation to strengthen the marketing efficacy of MSMEs.

In consideration of the findings above, the principal aim of this investigation was to explore the impact of technology readiness and Information and Communication Technology (ICT) capabilities on the execution of marketing automation within customer relationship management frameworks, with the overarching objective of improving management effectiveness in the domain of Business-to-Business Micro, Small, and Medium Enterprises (MSMEs).

THEORETICAL REVIEW

Technology Readiness. Technology Readiness is the readiness of a company or organisation to implement new technology. This involves developing the ability to use new applications that require a complete understanding of the business, products, and services related to a company's processes with its partners. (Rahman et al., 2023a). According to (Harini et al., 2023), technology readiness combines IT infrastructure and human resources. Technology Readiness is part of the technological context that can influence SMEs to adopt e-commerce. Empirical findings show that technology readiness has a positive effect on e-commerce adoption. Another research that discusses technology readiness is (Saif et al., 2022), which states that B2B companies should focus more on building ICT Capability because this ability can help companies adapt to a changing business environment. In addition, ICT Capability can make employees more competitive. Technology readiness indicators pertain to the preparedness of individuals to embrace and implement novel technologies. The technology readiness index (TRI) constitutes a multi-faceted scale to



assess the propensity to leverage contemporary technology. The TRI encompasses four dimensions: Optimism, Innovation, Discomfort, and Insecurity. Optimism denotes a favourable perspective towards technology that has the potential to enhance efficiency, control, and coherence in daily activities. Innovation reflects the degree to which an individual is inclined to pioneer emergent technologies. Discomfort signifies the sense of unease that an individual may encounter while engaging with technology. Moreover, Insecurity pertains to an individual's level of apprehension regarding privacy and security implications associated with technology utilisation. (Cruz-Cárdenas et al., 2021).

ICT Capability. According to (Rahman et al., 2023), ICT Capability encompasses an organisation's proficiency in utilising novel applications. Moreover, ICT Capability necessitates investment in sophisticated ICT training and enhancing technological infrastructure to ensure the efficient application of emerging technologies. According to the definition of Information and Communication Technology (ICT), Capability pertains to the employment of digital instruments and systems to promote communication and the exchange of information within an organisational context. This encompasses the implementation of Enterprise Resource Planning (ERP) systems and various ICT tools conducive to remote communication and intelligent work practices. ERP systems facilitate the cohesive administration of an organisation's digital information systems, thereby permitting the remote operation of the enterprise.

In contrast, ICT tools for smart working facilitate remote communication between different individuals and exchanging documents and information. However, this study found that using ICT for smart working is not statistically significant in contributing to organisational resilience. This could imply that for the respondents, including small and medium enterprises (SMEs) with more than ten employees, the use of ICT for intelligent work is already mastered and, therefore, unsuitable for changing the respondents' thinking. The indicators for ICT Capability in this study are Technology Infrastructure, ICT Skills and Knowledge, ICT use, ICT integration, and ICT investment.

Marketing Automation. Marketing automation is a digital tool that automatically manages marketing. Marketing automation has a long history dating back to 1960s marketing journals on inventory control, accounts payable, budgeting, automated machine usage and data processing. In 1989, marketing automation increased sales staff productivity by automating sales administration. In the 1990s, customer relationship management (CRM) technology emerged to improve technology's ability to collect large-scale data. (Hanlon, 2022). In 2020, email marketing has become a common marketing automation feature, where customers are offered monthly subscriptions. A real example of a marketing automation company is Amazon, which utilises big data combined with artificial intelligence. (Parker, 2020). The capabilities of marketing automation in terms of data are analytics that make it possible to monitor management performance, content management strategies, and trial approaches. (Hanlon, 2022). Marketing automation makes it easier for businesses to manage using digital tools. According to the findings, enterprises that utilise marketing automation have observed a remarkable escalation in the generation of qualified leads, quantified at 451 per cent, attributable to the enhancement of lead engagement alongside the optimisation of sales and marketing coordination and efficiency through the deployment of marketing automation instruments (Ashokkumar, 2021). Implementing marketing automation software provides organisations with comprehensive support in all facets of customer experience and marketing initiatives, encompassing email marketing, content marketing, and search engine optimisation (SEO). This strategic approach facilitates



organisations in identifying and retaining ideal customers, amplifying brand recognition and loyalty, and cultivating robust customer relationships conducive to generating repeat transactions and augmenting overall business revenue. (Mero et al., 2022; Ugah et al., 2022). Marketing automation research indicators are the reach of the message, the content of the message, and the relevance of the message. (Benjamin, 2019).

B2B CRM constitutes a strategic approach within the business domain that emphasises cultivating robust relationships with clientele. The primary objective is to enhance customer loyalty and retention by effectively addressing customer aspirations. CRM encompasses applying technological solutions in the organisation, automating and synchronising sales, marketing, customer service, and other technical support functions. In the Business-to-Business (B2B) context, CRM incorporates a company's strategic framework and technological tools to oversee interactions with customers and potential business partners. The aim is to bolster business relationships, gain insights into customer requirements and challenges, and augment revenue by optimising sales opportunities. Critical indicators of CRM include fostering dialogue with customers, consistently motivating customers to engage with products or services, prioritising customers' long-term needs to guarantee repeat business, sustaining customer loyalty, and enhancing the quality of customer relationships. (Cao & Weerawardena, 2023)

Marketing Performance. Marketing performance is the performance of a company's marketing strategy to achieve its goals successfully. (Cao & Weerawardena, 2023). Marketing performance indicators are sales growth, number of customers, product demand, and profit increase (Farida et al., 2017).

Research Framework. This research uses the Dynamic Capability View (DCV) as the main theoretical framework. DCV is a theory that emphasises an organisation's ability to respond to changes in the business environment by changing, building, and reconfiguring its capabilities. In the context of technology readiness and ICT capabilities, DCV suggests that organisations with high technology readiness tend to develop better and use new ICT applications. This is because technological readiness facilitates learning and adaptation to new technologies, enabling organisations to build and improve the ICT capabilities of an MSME. Research by (Saif et al., 2022) shows that the technological readiness of B2B companies significantly influences ICT capabilities. Companies ready to adopt and implement new technologies have better capabilities to develop and use new ICT applications. In addition, (Napitupulu et al., 2018) research shows that ICT capabilities involve developing the ability to create and use new applications. This requires complete knowledge of the business, products, and services associated with the company's processes and partners to develop ICT infrastructure to run new applications.

H1: Technology Readiness (TR) positively affects ICT Capability (IC).

Marketing automation requires a certain level of technological readiness to be used effectively. (Tahir, 2023). (Permata Sari et al., 2023) stated that technology readiness can positively impact marketing automation and is essential to customer relationship management.

H2: Technology Readiness (TR) positively affects Marketing Automation (MA).



Competitive Advantage theory states that good ICT Capability can provide a competitive advantage for companies in managing marketing campaigns that use marketing automation tools (Nur et al., 2022). Good ICT Capability can help companies operate, understand, and utilise marketing automation tools effectively, thereby increasing the efficiency and effectiveness of marketing campaigns.

H3: ICT Capability (IC) positively affects Marketing Automation (MA).

CRM theory emphasises the importance of building and maintaining solid relationships with customers. CRM theory can be applied to marketing automation by using customer data to personalise interactions and deliver relevant content to customers at the right time. Marketing automation can help manage and update customer data automatically, thus ensuring that the data in the CRM system is always accurate and up-to-date. This can help companies make better and faster decisions based on available data (Buttle & Maklan, 2019).

H4: Marketing Automation (MA) positively affects Customer Relationship Management (CRM).

The theoretical framework that undergirds the impact of CRM on marketing performance is predicated on the dynamic capabilities theory articulated by Teece. This theoretical construct posits that organisations can harness their dynamic capabilities to formulate novel knowledge configurations that facilitate pursuing their principal competitive strategies. Within the realm of CRM, these capabilities encompass an organisation's proficiency in identifying lucrative customer segments, establishing and sustaining relationships with this clientele, and capitalising on such relationships to enhance profitability at the individual customer level. Furthermore, this theoretical perspective is corroborated by antecedent empirical investigations, notably by (Cao & Weerawardena, 2023), substantiating the assertion that CRM benefits marketing performance. Other research conducted by (Anshari, 2019) States that CRM can affect marketing performance, customer satisfaction, and company profitability. This is also directly proportional to the research conducted by (Hasan et al., 2023) that shows that the use of CRM can significantly affect marketing performance.

H5: Customer Relationship Management (CRM) positively affects Marketing performance (MP).



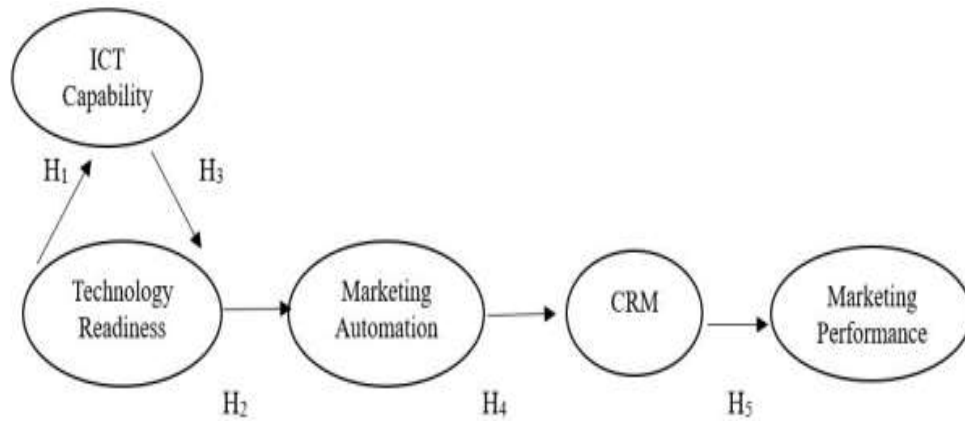


Figure 1. Research Model

METHODS

This research used a quantitative approach with a non-probability sampling method, namely purposive sampling, which means sampling uses a designated subject based on specific characteristics. Prospective respondents selected are B2B MSMEs utilising Marketing Automation at MarkasBot.id. The population selected is B2B MSMEs that utilise Marketing Automation at MarkasBot.id. The sample in this research refers to (Hair & Alamer, 2022), so the sample size is 105 respondents. The variables and indicators in this study are shown in **Table 1**.

Table 1. Operational Definition

Variable	Indicator	source
Technology Readiness (TR)	1. Optimism	(Cruz-Cárdenas et al., 2021)
	2. Innovation	
	3. Discomfort	
	4. Insecurity	
ICT Capability (IC)	1. Technology Infrastructure	(Qosasi et al., 2019)
	2. ICT Skills and Knowledge	
	3. ICT Usage	
	4. ICT Integration	
	5. ICT Investment	
	6. ICT Policy and Strategy	
Marketing Automation (MA)	1. Reach of message	(Benjamin, 2019)
	2. Content of message	
	3. Relevance of message	
Customer Relationship Management (CRM)	1. I am building a dialogue with customers, encouraging them to try products or services consistently.	(Cao & Weerawardena, 2023)
	2. We are focusing on the long-term needs of customers to ensure repeat business.	
	3. We are maintaining loyalty.	
	4. We are improving the quality of relationships with customers.	



Marketing Performance	1. Having more robust growth in sales revenue.	(Cao & Weerawardena, 2023)
	2. It is being able to acquire more new customers.	
	3. I have a larger market.	
	4. It is being able to increase sales from existing customers.	

Table 1 shows that the data collection technique in this study was a closed online survey or questionnaire using a Google form distributed via WhatsApp and Telegram. The data analysis technique used in this research was Structural Equation Modeling (SEM) analysis. SEM analysis in this study was carried out with the Lisrel 8.80 because the variables are reflective.

RESULTS

Respondent Characteristics: This section will elucidate the attributes of participants who completed the research questionnaire. The characteristics of the respondents will be analysed in terms of their gender, age, and educational background.

Table 2. Respondent Characteristics (N of 105)

Characteristics		Percentage
Gender		
Men	74	70.400 per cent
Women	31	29.600 per cent
Age		
Less than 25 years old	81	77.140 per cent
25 to 34 years old	14	13.330 per cent
35 to 44 years old	7	6.670 per cent
45 to 54 years old	2	1.900 per cent
More than 55 years old	1	0.960 per cent
Education		
Elementary School	1	0.960 per cent
Junior High School	1	0.960 per cent
Senior High School	88	83.800 per cent
Bachelor Degree	12	11.430 per cent
Master Degree	2	1.900 per cent
Doctoral Degree	1	0.960 per cent

Source: SPSS 26, 2023

Table 2 shows 74 male respondents (70.400 per cent) and 31 female respondents (29.600 per cent). This indicates that the proportion of male respondents is higher than that of female respondents. Most respondents, 81 individuals (77.140 per cent), are under 25. The next age group is between 25 and 34, with 14 respondents (13.330 per cent). There are only seven respondents (6.670 per cent) between the ages of 35 and 44 and only two respondents (1.900 per cent) between the ages of 45 and 54. One respondent (0.960 per cent) is over 55 years old.

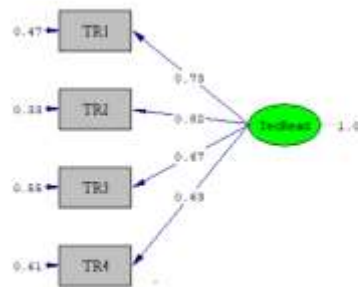
In terms of education, one respondent (0.960 per cent) has elementary school education, one respondent (0.960 per cent) has junior high school education, and 88 respondents (83.800 per cent) have high school education. A total of 12 respondents (11.430 per cent) have a bachelor's degree, two respondents (1.900 per cent) have a master's degree, and one respondent (0.960 per cent) has a doctoral degree. This survey shows that the



research respondents are predominantly male (70.400 per cent) under the age of 25 (77.140 per cent) with a high school education (83.800 per cent).

Confirmatory Factor Analysis (CFA), Confirmatory Factor Analysis (CFA) is conducted to evaluate a construct prior to subsequent testing. CFA is a preliminary measurement model employed to assess the validity and reliability of all indicators constituting latent constructs (Gunarto, 2018). This research executed the CFA model assessment in a single stage (first order).

CFA Model on Variables Technology Readiness (TR): The first variable tested with the CFA model is Technology Readiness. The following are the results of the Standardised Solution analysis obtained with the Lisrel 8.80 program.



Chi-Square=7.20, df=2, P-value=0.02730, RMSEA=0.156

Figure 2. CFA Model of Variable Technology Readiness

Source: Lisrel 8.80, 2023

Table 3 shows will describe the yield of the validation and reliability test of the CFA TR model in **Figure 2**.

Table 3. Validation and Reliability Test of Technology Readiness Variable

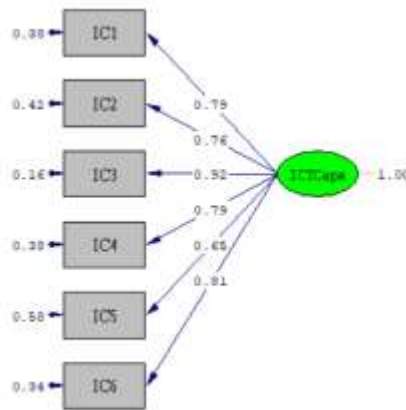
Indicator	λ	λ^2	e	CR	AVE	Description
TR1	0.730	0.533	0.530			
TR2	0.820	0.672	0.450			
TR3	0.670	0.449	0.450	0.775	0.536	Valid and Reliable
TR4	0.630	0.397	0.530			
Total	2.220	1.654	1.430			

Source: Lisrel 8.80, 2023

Table 3 shows that The CFA model of the TR variable with four indicators is declared valid because the factor loading (λ) is more than 0.500. In addition, the reliability test shows that the TR variable is reliable. This is because the CR value is more than 0.700, namely 0.767, and the AVE value is more than 0.500, namely 0.524, which means that the four indicators in the TR variable on the CFA model are valid and reliable. The standardised loading factor and R, value², shows that the innovation indicator that forms the technology readiness variable is 67.240 per cent.

CFA Model on Variables ICT Capability (IC): The second variable tested with the CFA model is the ICT Capability (IC) variable the Standardised Solution CFA model results obtained with the Lisrel 8.80 program.





Chi-Square=11.41, df=9, P-value=0.24856, RMSEA=0.051

Figure 3. CFA Model Variables ICT Capability (IC)

Source: Lisrel 8.80, 2023

Figure 3 explains the CFA ICT Capability variable yield, which will be described in Table 4.

Table 4. Validation and Reliability Test of ICT Capability (IC) Variable

Indicator	Λ	λ^2	e	CR	AVE	Description
IC1	0.790	0.624	0.350			
IC2	0.760	0.578	0.420			
IC3	0.920	0.846	0.230			
IC4	0.790	0.624	0.370	0.976	0.626	Valid and Reldiable
IC5	0.650	0.423	0.550			
IC6	0.810	0.656	0.320			
Total	4.720	3.751	2.240			

Source: Lisrel 8.80, 2023

Table 4 shows that six indicators are declared valid. This is because all indicators in the IC variable have a factor loading (λ) more than 0.500. Then, in the reliability test. The IC variable has been declared reliable because CR is more than 0.700 (0.976) and AVE is more than 0.500 (0.626). This means that the IC variable from the loading factor of each indicator is valid and reliable. It can be seen that the most significant indicator that forms the ICT Capability variable is the use of ICT, with an R-value of 84.600 per cent.

CFA Model on Variables Marketing Automation (MA). The third variable evaluated within the framework of the Confirmatory Factor Analysis (CFA) model pertains to the marketing automation (MA) construct. The findings derived from the Standardised Solution CFA model are presented below, as executed through the Lisrel 8.80 software program.



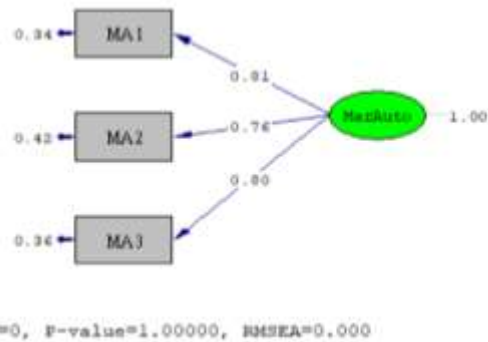


Figure 4. CFA Model Variable Marketing Automation
Source: Lisrel 8.80, 2023

CFA X_2 model validation and reliability test is shown in **Figure 4** and will be described in **Table 5**.

Table 5. Validation and Reliability Test of Marketing Automation Variable

Indicator	λ	λ^2	e	CR	AVE	Description
MA1	0.810	0.656	0.330	0.833	0.624	Valid and Reliable
MA2	0.760	0.578	0.470			
MA3	0.800	0.640	0.330			
Total	2.370	1.874	1.130			

Source: Lisrel 8.80, 2023

Table 5 illustrates that the Confirmatory Factor Analysis (CFA) model for the marketing automation variable, comprising three indicators, is deemed valid. This assertion is substantiated by the fact that all indicators associated with this variable exhibit factor loading (λ) exceeding 0.500. Furthermore, in the context of reliability assessment, the marketing automation variable demonstrates a Composite Reliability (CR) of greater than 0.700 (0.833) and an Average Variance Extracted (AVE) surpassing 0.500 (0.624), thereby indicating that the marketing automation construct is both valid and reliable.

CFA Framework Concerning CRM-B2B Constructs. Presented below are the outcomes of the Standardised Solution CFA framework acquired through the Lisrel 8.80 software.

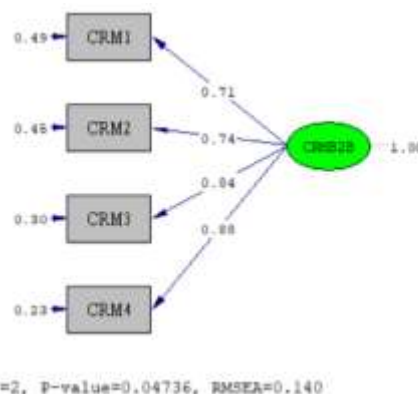


Figure 5. CFA Model Variables B2B CRM
Source: Lisrel 8.80, 2023



Figure 5 shows the results of the validation and reliability test of the B2B CRM CFA model, which are described in Table 6.

Table 6. Validation and Reliability of CRM B2B Variable

Indicator	λ	λ^2	e	CR	AVE	Description
CRM1	0.710	0.504	0.470	0.872	0.633	Valid and Reliable
CRM2	0.740	0.548	0.380			
CRM3	0.840	0.706	0.330			
CRM4	0.880	0.774	0.290			
Total	3.170	2.532	1.470			

Source: Lisrel 8.80, 2023

Table 6 shows elucidates that the Confirmatory Factor Analysis (CFA) model of the CRM B2B variable, which encompasses four indicators, is deemed valid. This assertion is predicated on the observation that all indicators associated with the CRM B2B variable exhibit a loading factor (λ) exceeding 0.500. Subsequently, the outcomes derived from the reliability assessment of the CFA model yielded a Composite Reliability (CR) value surpassing 0.700 (0.873) and an Average Variance Extracted (AVE) value exceeding 0.500 (0.633), thereby affirming the validity and reliability of the CRM B2B variable.

CFA model on Marketing Performance (MP). The fifth variable examined within the context of the Confirmatory Factor Analysis (CFA) model is the MP variable. Presented below are the findings derived from the Standardised Solution CFA model, which was acquired utilising the Lisrel 8.80 software application.

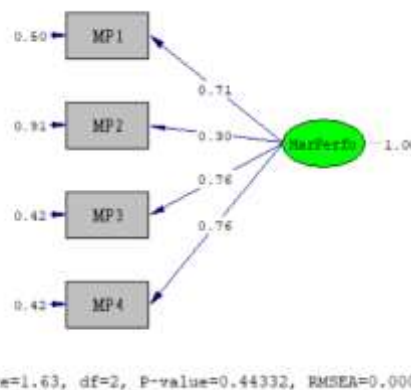
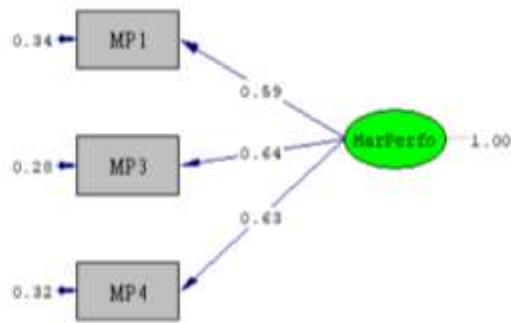


Figure 6. Initial CFA Model Variable Marketing Performance

Source: Lisrel 8.80, 2023

Figure 6 shows that MP2 is less than 0.500, namely 0.300, so it must be eliminated. The results can be seen in Figure 7.





Chi-Square=0.00, df=0, P-value=1.00000, RMSEA=0.000

Figure 7. Final CFA Marketing Performance Variable
Source: Lisrel 8.80, 2023

Figure 7 shows the product of the CFA MP model's validation and reliability tests, which are described in **Table 7**.

Table 7. Validation and Reliability Test of Marketing Performance Variable

Indicator	λ	λ^2	e	CR	AVE	Description
MP1	0.700	0.490	0.500	0.783	0.548	Valid and Reliable
MP3	0.810	0.656	0.340			
MP4	0.700	0.490	0.510			
Total	2.210	1.636	1.350			

Source: Lisrel 8.80, 2023

Table 7 demonstrates that three indicators exhibit a loading factor (λ) that exceeds 0.500, thereby confirming their validity within the MP variable. Additionally, the Composite Reliability (CR) value exceeds 0.700 (0.783), while the Average Variance Extracted (AVE) surpasses 0.500 (0.548). Therefore, it can be inferred that the MP variable is valid and reliable.

Initial Structural Analysis. Within the Confirmatory Factor Analysis (CFA) measurement framework, all variables have been validated as reliable and valid. This implies that all latent variables are accurately quantified. The ensuing step entails formulating a structural model to clarify the interrelationships among the latent variables.



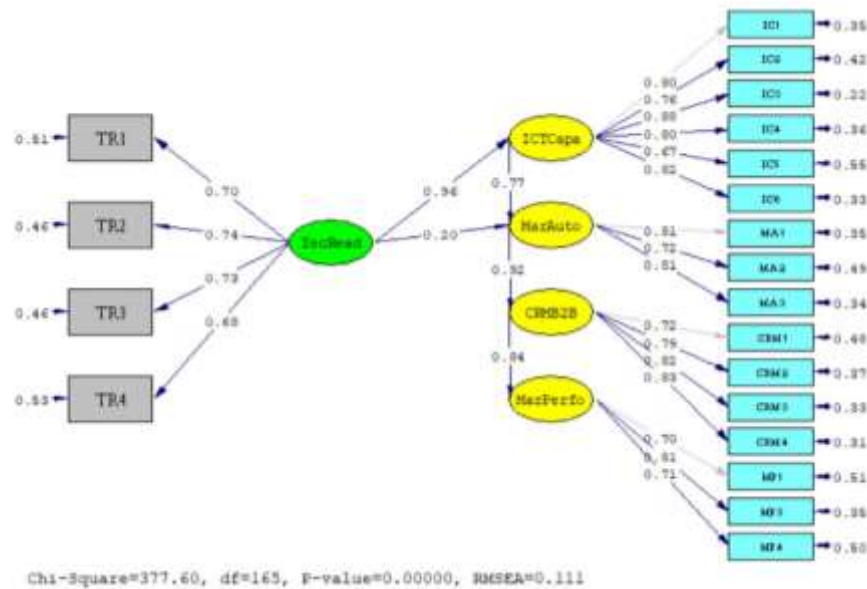


Figure 8. Initial Structural Model

Source: Lisrel 8.80, 2023

Figure 8 shows the result of the initial structural model used in this research. Based on this figure, the loading factor for every variable can be explained, which will be explained more in Table 8.

Validation and Reliability Test of Initial Structural Model. This investigation's validation assessment utilised 21 indicators. The examination aims to ascertain the validity of the indicators within the study's context. The findings from the validation assessment of the comprehensive structural model employing the Lisrel 8.80 software are presented below.

Table 8. Validation and Reliability Test Data on the Initial Mode

Indicator	λ	λ^2	e	CR	AVE	Description
TR1	0.690	0.476	0.520	0.804	0.506	Valid dan Reliabel
TR2	0.740	0.548	0.460			
TR3	0.740	0.548	0.460			
TR4	0.670	0.449	0.530			
IC1	0.800	0.640	0.350	0.910	0.629	Valid dan Reliabel
IC2	0.770	0.593	0.410			
IC3	0.880	0.774	0.220			
IC4	0.800	0.640	0.360			
IC5	0.670	0.449	0.550			
IC6	0.820	0.672	0.330			
MA1	0.810	0.656	0.340	0.821	0.606	Valid dan Reliabel
MA2	0.710	0.504	0.490			
MA3	0.810	0.656	0.350			
CRM1	0.700	0.490	0.510	0.865	0.617	Valid dan Reliabel
CRM2	0.770	0.593	0.400			
CRM3	0.830	0.689	0.310			
CRM4	0.830	0.689	0.310			
MP1	0.700	0.490	0.570	0.758	0.512	Valid dan Reliabel
MP2	0.810	0.656	0.450			
MP3	0.710	0.504	0.550			

Source: Primary Data Processed (2023)



Table 8 shows, the comprehensive structural model evaluation indicates that the 21 assessed indicators have been deemed valid. This determination is attributed to all indicators exhibiting λ values exceeding 0.500.

GOF on Model Initial Structural. **Table 9** shows illustrates the data about the GOF results of the initial model encompassing the entirety of the structural framework in this investigation.

Table 9. GOF on the Initial Model

Goodness-of-fit index	Test Criteria	Value	Test Results
Chi-Square	-	393.800	-
Degree of Freedom	-	165	-
P-Value	More than 0.050	0	Not Fit
RMR	Less than or equal to 0.100	0.037	Fit
SRMR	Less than or equal to 0.080	0.059	Fit
RMSEA	Less than or Equal to 0.080	0.110	Not Fit
GFI	More than 0.900	0.730	Not Fit
AGFI	More than 0.900	0.660	Not Fit
NFI	More than 0.900	0.930	Fit
NFI	More than 0.900	0.960	Fit
CFI	More than 0.900	0.960	Fit
PNFI	More than 0.900	0.810	Not Fit
PGFI	More than 0.900	0.580	Not Fit

Table 9 shows illustrates that six out of eleven criteria fail to meet the standards for an adequate measurement model (i.e., it is deemed unfit), particularly concerning the RMSEA. According to prevailing consensus, the RMSEA criterion is predominantly employed to assess the appropriateness of a model; consequently, it is imperative to modify the structural model presented in this research.

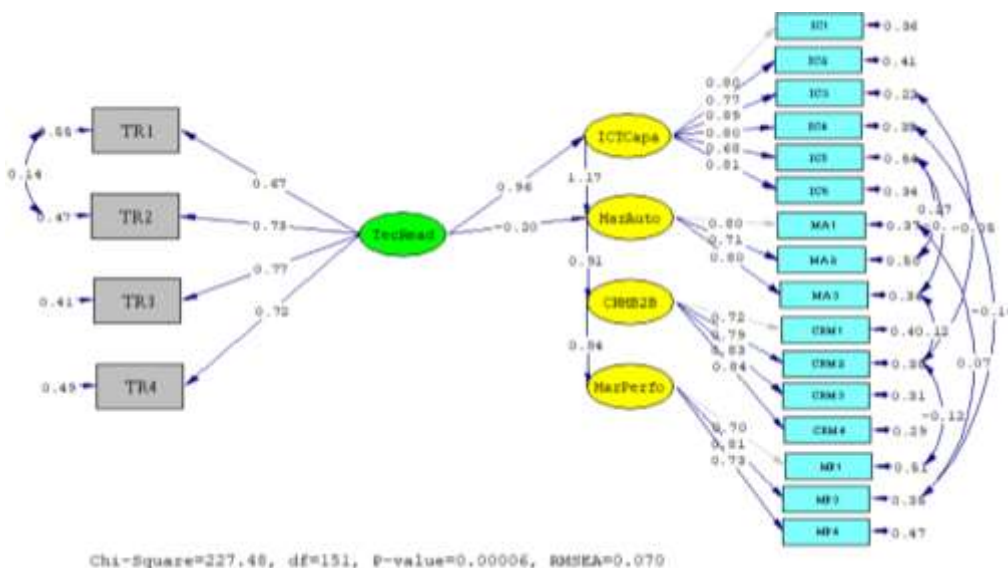


Figure 9. Final Structural Model

Source: Lisrel 8.80, 2023



Figure 9 shows the modified results of this study. Based on **Figure 9**, the loading factor of the final structural model after modification is shown, which will be explained more in **Table 10** validation and Reliability Test of the Final Structural Model. After its modification, the comprehensive final model was assessed to ascertain the reliability of all metrics utilised in this investigation. The outcomes of the validation assessment for the final model are presented in **Table 10**.

Table 10. Validation and Reliability Test Data on the Final Model

Indicator	λ	λ^2	e	CR	AVE	Description
TR1	0.670	0.449	0.550	0.813	0.522	Valid dan Reliabel
TR2	0.730	0.533	0.470			
TR3	0.770	0.593	0.410			
TR4	0.720	0.518	0.490			
IC1	0.800	0.640	0.360	0.910	0.630	Valid dan Reliabel
IC2	0.770	0.593	0.410			
IC3	0.890	0.792	0.220			
IC4	0.800	0.640	0.350			
IC5	0.680	0.462	0.540			
IC6	0.810	0.656	0.340			
MA1	0.800	0.640	0.370	0.813	0.592	Valid dan Reliabel
MA2	0.710	0.504	0.500			
MA3	0.800	0.640	0.360			
CRM1	0.720	0.518	0.400	0.880	0.648	Valid dan Reliabel
CRM2	0.790	0.624	0.380			
CRM3	0.830	0.689	0.310			
CRM4	0.840	0.706	0.290			
MP1	0.700	0.490	0.510	0.790	0.558	Valid dan Reliabel
MP2	0.810	0.656	0.350			
MP3	0.730	0.533	0.470			

Source: Primary Data Processed (2023)

Table 10 shows illustrates that all indicators within the conclusive model possess λ values exceeding 0.500, affirming the validity of the 20 indicators incorporated in this ultimate model. **Table 10** reveals that five variables within the final model exhibit a Composite Reliability (CR) value surpassing 0.700 and an Average Variance Extracted (AVE) exceeding 0.500, indicating that these five variables are valid and reliable within this research. The Goodness of Fit (GOF) analysis of the final structural model is presented in **Table 11**.

Table 11. GOF in the Final Model

Goodness-of-fit index	Test Criteria	Value	Test Results
Chi-Square	-	269.050	-
Degree of Freedom	-	151	-
P-Value	More than 0.050	0	Not Fit
RMR	Less than or equal to 0.100	0.310	Fit
SRMR	Less than or equal to 0.080	0.050	Fit



RMSEA	Less than or Equal to 0.080	0.070	Fit
GFI	More than 0.900	0.820	Not Fit
AGFI	More than 0.900	0.750	Not Fit
NFI	More than 0.900	0.950	Fit
NFI	More than 0.900	0.980	Fit
CFI	More than 0.900	0.980	Fit
PNFI	More than 0.900	0.810	Not Fit
PGFI	More than 0.900	0.580	Not Fit

Source: Lisrel 8.80, 2023

Table 11 shows illustrates that the constructed structural model has successfully satisfied multiple goodness-of-fit (GOF) statistical benchmarks. Precisely, 6 out of 11 criteria have been fulfilled to qualify as an effective measurement model (fit). Notably, the Root Mean Square Error of Approximation (RMSEA) has adhered to the statistical standard of being less than or equal to 0.080 (RMSEA: 0.070).

R-Square. The R-square results of this research are shown below:

Table 12. R square results

Variables	R Square Result
ICT Capability	0.930
Marketing Automation	0.950
B2B CRM	0.830
Marketing Performance	0.690

Source: Lisrel 8.80, 2023

Table 12 shows that the R-square of ICT Capability is 93 per cent, Marketing Automation is 95 per cent, B2B CRM is 83 per cent, and Marketing Performance is 69 per cent.

Hypothesis Test. All parameters are evaluated using the t-test statistic. A variable is considered significant if the t-count value exceeds 1.960, whereas if it is below 1.960, it is deemed not statistically significant. **Figure 10** illustrates the outcomes of the T-values assessing the comprehensive model.



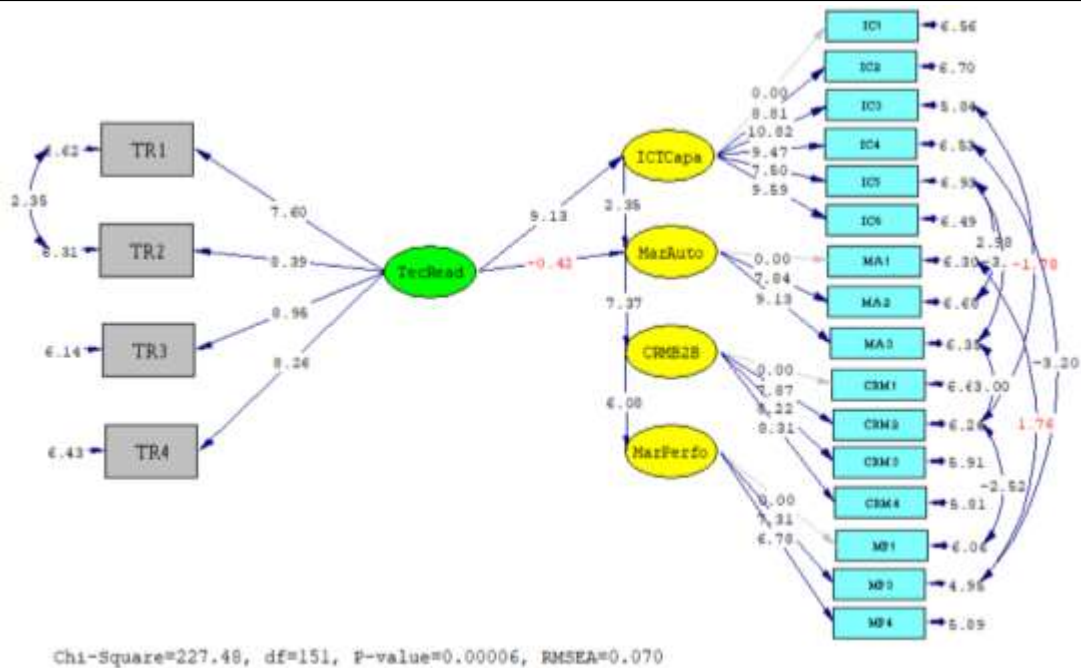


Figure 10. T-Value Test

Source: Lisrel 8.80, 2023

After this model is fit, the next step is the t-value test. The yield of t-test results is shown in Figure 10 and will be described in Table 12.

Table 13. Hypothesis Test Results

Hypothesis	Variable Influence	T-Value	Description
H ₁	TR → IC	9.130	Significant
H ₂	TR → MA	-0.420	Not Significant
H ₃	IC → MA	2.350	Significant
H ₄	MA → CRM	7.370	Significant
H ₅	CRM → MP	6.080	Significant

Source: Lisrel 8.80, 2023

Table 13 shows that it can be concluded as follows: The study conducted on the relationships among various variables reveals compelling findings. Firstly, in Hypothesis 1 (H1), it is established that there exists a positive and significant influence between Technology Readiness (TR) and ICT Capability (IC). The calculated t-value of 9.130 surpasses the critical threshold of 1.960, indicating the statistical significance of the relationship, and thus, the hypothesis is accepted. Conversely, in Hypothesis 2 (H2), a negative and insignificant influence between Technology Readiness (TR) and Marketing Automation (MA) is observed. The T-value of -0.420 falls below the 1.960 limit, leading to the rejection of the hypothesis due to its lack of statistical significance. Moving on to

Hypothesis 3 (H3), a positive and significant influence between ICT Capability (IC) and Marketing Automation (MA) is identified. The calculated t-value of 2.350 exceeds the critical threshold, affirming the significance of this relationship, and consequently, the hypothesis is accepted. In Hypotheses 4 (H4) and 5 (H5), it is revealed that there are positive and significant influences between Marketing Automation (MA) and Customer



Relationship Management (CRM), as well as between CRM and Marketing Performance (MP). The respective t-values of 7.370 and 6.080 surpass the 1.960 limit, indicating the statistical significance of both relationships, leading to the acceptance of these hypotheses. These findings contribute valuable insights to understanding the interplay between technology readiness, ICT capability, marketing automation, customer relationship management, and marketing performance.

DISCUSSION

Based on the result, innovation is the most significant implementation factor in technology readiness in MSMEs B2B at 82 per cent. ICT usage is the most significant factor in the ICT Capability variable at 92 per cent. Relevance of the message is the best factor in marketing automation at 81 per cent. The highest implementation factor in customer relationship management (CRM) is improving the quality of customer relationships at 88 per cent. The most significant marketing performance is increasing sales from existing customers.

Technology Readiness (TR) refers to how Micro, Small, and Medium Enterprises (MSMEs) are prepared to adopt and implement new technologies. This preparedness is evaluated based on the informatics and communication capabilities of the users within these enterprises. The study reveals a significant positive relationship between TR and ICT Capability (IC). Specifically, the higher the TR of an MSME, the more successful it is in developing and utilising ICT capabilities. This finding is consistent with previous research by (Rahman et al., 2023). The theoretical foundation for this relationship is based on the Dynamic Capability View (DCV). DCV posits that an organisation's ability to respond to changes in the business environment hinges on its capacity to transform, build, and reconfigure its capabilities. In this context, MSMEs with high TR are better equipped to learn and adapt to new ICT applications, enhancing their ICT capabilities. This alignment with DCV theory underscores that technological readiness significantly influences ICT Capability, facilitating the adoption and effective use of new technologies to bolster business processes and outcomes.

Contrary to expectations, the study indicates that TR does not significantly impact Marketing Automation (MA). This suggests that the readiness to adopt new technologies alone does not strongly influence the adoption of MA tools within MSMEs. This finding diverges from previous research by (Al-Bashayreh et al., 2022) and (Guerola-Navarro et al., 2021), which suggested a positive impact of TR on MA and highlighted its importance in customer relationship management.

However, this study emphasises the critical role of ICT Capability as an intervening variable. ICT Capability acts as a bridge between TR and MA adoption. While TR alone may not directly drive MA, the enhanced ICT Capability resulting from high TR can facilitate the successful implementation of MA tools. Thus, the indirect influence of TR on MA through ICT Capability is significant, highlighting the importance of developing robust ICT capabilities to leverage marketing automation effectively.

Effect of Technology Readiness (TR) on Marketing Automation (MA). Research results indicate that TR does not have a significant impact directly on Marketing Automation (MA). This means that in the context of the analysis. Technology readiness (TR) does not have a strong and direct influence on MA adoption. This research differs from those conducted by (Silva et al., 2023) in that technology readiness can positively impact



marketing automation and is an essential component of customer relationship management. However, it is important to underline that although the direct impact of TR on MA is not significant. This research analysis highlights the critical role of ICT Capability as an intervening variable in this context. ICT Capability is an intermediary or bridge between technology readiness and MA adoption.

Effect of ICT Capability (IC) on Marketing Automation (MA). The results of this study are based on the competitive advantage theory, which states that good ICT capability can give companies an advantage in managing marketing campaigns using marketing automation. Superior ICT Capability helps MSMEs run. Understand. Moreover, marketing automation tools can be utilised effectively, increasing the efficiency and effectiveness of marketing campaigns (Gil-Gomez et al., 2020; Wasim et al., 2024). The influence of Marketing Automation (MA) on Customer Relationship Management in B2B The effect of marketing automation (MA) on customer relationship management (CRM) in B2B. CRM has a positive and significant influence on CRM. Marketing automation and Customer Relationship Management (CRM) are two concepts that are closely related and can positively influence each other. Implementing marketing automation in CRM also helps improve efficiency in managing customer data and interactions. Integrating marketing automation with CRM also increases personalisation in customer interactions (Gil-Gomez et al., 2020).

CONCLUSION

The empirical outcomes of the investigation indicate that Technology Readiness (TR) exerts a favourable influence on ICT Capability (IC), which subsequently facilitates the adoption of Marketing Automation (MA). Furthermore, MA positively affects Customer Relationship Management (CRM), and CRM, in turn, contributes to the enhancement of Marketing Performance within B2B environments. In conclusion, the implementation of marketing automation within customer relationship management frameworks has the potential to augment the marketing performance of B2B-oriented micro, small, and medium enterprises (MSMEs); however, the prerequisite of technology readiness, alongside the information, communication, and technology capabilities of these MSMEs, remains critical. The recommendation entails a comprehensive examination of the impact of Technology Readiness on the utilisation of marketing automation, mainly due to the current study's findings indicating an insignificant effect, in contrast to prior research conducted by Permata Sari et al., which revealed that technology readiness can indeed exert a positive influence on marketing automation and is a crucial element of customer relationship management.

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