

Marketing R&D Cooperation as a Mediator Between Customer Relationship Orientation, Digital Banking Orientation, and Marketing Performance at bank BJB

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ABSTRACT

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This study investigates how Customer Relationship Orientation (CRO) and Digital Banking Orientation (DBO) affect Marketing Performance (MP) through the mediating role of Marketing Research and Development Cooperation (MRDC) at Bank BJB. The population consisted of 1,762 marketing and R&D employees in Indonesia, with 316 respondents selected using proportional random sampling. Data were analyzed with Partial Least Squares Structural Equation Modeling (PLS-SEM). The results show that both CRO and DBO significantly influence MRDC, which in turn mediates their effect on MP. Among the dimensions, Strategic Digital Commitment had the strongest contribution within DBO, while the technology aspect was dominant in CRO. These findings highlight the critical role of marketing-R&D collaboration and digital integration to increase marketing performance. The study offers practical implications for managers to strengthen digital-based strategies, improve product/service innovation, and enhance customer engagement. It also provides theoretical contributions by linking relationship orientation, digital orientation, and R&D cooperation in the banking sector, and also giving suggestion on directions for future research.

1. Introduction

The study of firm performance has become a central concern in management and business. It reflects the extent to which strategic objectives are achieved effectively and efficiently (Nazaritehrani & Mashali, 2020). Performance can be assessed through financial, operational, human resources, and marketing aspects (Esubalew & Raghurama, 2020). Among these, marketing performance can function as means to reach customers, build the brand, and generate revenue (Varadarajan, 2020). Effective marketing can enhance sales, loyalty, and brand image, so that it works as a key indicator of business success, including in banking (Chauhan et al., 2022; Chen, 2020).

In the banking sector, marketing plays a role to attract and retain customers, while introduce new products and services, and respond to consumer behavior (Rosário & Casaca, 2023). Achieving optimal marketing performance has therefore become a strategic priority for banks to sustain competitiveness in this industry. This trend is evident worldwide, including in Indonesia. The Indonesian banking sector faces complex market full of digital technology, shifting customer preferences, and the emergence of fintech and digital banks (Bueno et al., 2024). In turn, competition extends beyond traditional banks to technology-

based entities that bring faster and more user-friendly financial services (Kharisma, 2020). Customers also demand personalized, accessible, and digital experiences, that require banks to adopt adaptive and innovative marketing strategies (Royo-Vela et al., 2024). The main challenge is to integrate marketing efforts to understand market needs and respond to external changes (Mir & Bhat, 2022).

Based on various previous studies, the factors influencing marketing performance are highly diverse, reflecting the complexity and dynamics of marketing strategies across different industrial contexts. Several key factors that are consistently identified include market orientation (Udriyah et al., 2019; Na et al., 2019), innovation capability including product and marketing innovation (Falihat et al., 2020; Adam et al., 2019), digital strategy (Saura, et al., 2020), social media marketing capability (Tarsakoo & Charoensukmongkol, 2019), customer relationship management (Hendrayati, H., Marimon, F., Hwang, WY. et al., 2025), digital marketing (Hendrayati, H., Achyarsyah, M., Marimon, F., Hartono, U., & Putit, L., 2024) and (Yusuf, R., Hendrayati, H., Bastian, Z., Nurhasan, R., & Adnan, A. Z., 2024), as well as purchase intentions (Rakhmanita, A., Hurriyati, R., Disman, D., Hendrayati, H., & Susilawati, E., 2023).

To survive and compete in a rapidly changing environment, banks must implement marketing strategies that are not only reactive to market trends but also proactive in creating value through innovation and cross-functional collaboration (Alsmadi, 2024). Modern marketing is integrated within the organizational ecosystem, particularly with research and development (R&D) functions (Campanella et al., 2020). Marketing–R&D cooperation enhances the relevance of products and accelerates innovation based on customer insights (Paiva et al., 2020; Zatonatska et al., 2022). This collaboration enriches marketing strategies with accurate data and research findings, ensuring faster responses to market dynamics (Nijssen & Ordanini, 2020). For such cooperation to be effective, a strong strategic orientation is required. Customer Relationship Orientation (CRO) provides direction for building close relationships and understanding customer needs, thereby strengthening loyalty, trust, and sustainable value creation (Alam et al., 2021; Paşcalău et al., 2024). On the other hand, rapid technological developments require banks to not only adapt but also actively develop Digital Banking Orientation (DBO) as a framework for thinking and acting in the digital era (Juliana et al., 2024; Liyanaarachchi et al., 2020).

Marketing performance in the banking sector is often assessed through sales turnover, sales increase, sales return, and area coverage at both global and national levels (Ibekwe, 2021; Kamau & Njuguna, 2020; Lim & Rokhim, 2020; Mbonu & Amahalu, 2021). Internationally, banks such as JPMorgan Chase, HSBC, and DBS have demonstrated strong outcomes through expanded coverage, financial product growth, and customer retention (Dadoukis et al., 2021; Eriksson et al., 2020). However, studies on how these dimensions operate in emerging economies remain limited. In Indonesia, challenges persist in extending coverage to rural areas and competing with fintech and digital banks despite increasing financial penetration (Amanda, 2023; Anwar et al., 2019; Syahyono et al., 2020). At the regional level, Bank BJB illustrates these empirical gaps, struggling with sales performance, service retention, and market expansion beyond West Java and Banten, while facing mounting digital competition (Kharisma, 2020).

2. Literature Review and Hypotheses Development

2.1 Customer Relationship Orientation and Marketing Performance

In the context of the banking industry, Customer Relationship Orientation is very crucial because of the continuous nature of the service, which has a direct impact on trust, and concerns customer security and comfort (Hosseini & Aali, 2021). Banks with strong CRO can manage customer relationships as both financial transactions and long-term

relationships. Through this approach, banks can build customer loyalty, increase retention, and encourage the adoption of digital services. CRO in the banking sector is reflected in proactive service, the provision of financial solutions tailored to customer needs, personalized and consistent communication, and the use of technology such as Customer Relationship Management (CRM) to manage data and interactions systematically.

CRO and CRM are closely related, as both are rooted in a company's efforts to build and maintain valuable relationships with customers (Mudjahidin et al., 2024; Ngo et al., 2024; Paşcalău et al., 2024). Within this research framework, CRO is positioned as a strategic variable influencing bank marketing performance. Based on empirical evidence from various studies, it can be concluded that CRO plays a crucial role in improving marketing performance by strengthening customer relationships, increasing loyalty, utilizing customer data more effectively, and supporting sustainable value creation in bank-customer interactions. In this regard, we propose the following hypothesis:

H1: Customer Relationship Orientation has a positive effect on Marketing Performance.

2.2 Digital Banking Orientation and Marketing Performance

The relationship between Digital Banking Orientation (DBO) and Marketing Performance in general and within the banking sector has been widely discussed by previous researchers. This relationship is increasingly relevant in the context of the digital transformation sweeping the global banking industry, including in Indonesia. DBO has proven to be a crucial enabler in improving bank marketing performance. Through DBO, banks are able to provide more relevant, faster, and customer-oriented services. This ultimately improves the effectiveness of marketing communications, customer acquisition and retention, and contributes to overall business growth.

The DBO concept is inseparable from digital transformation. Over the past two decades, this digital transformation has become a disruptive force, transforming various industrial sectors, from manufacturing and healthcare to education, and ultimately, the banking and financial services sector (Sunmola & Javahernia, 2021). This transformation, in turn, impacts how companies manage their internal operations. It also influences consumer expectations regarding speed, convenience, and service quality (Kolodiziev et al., 2021). Digital technology encourages companies to focus on innovation, process simplification, and value-added creation. All of this is, of course, based on data and connectivity, which ultimately determine business success and long-term performance (Kitsios et al., 2021). Based on these propositions, the following hypothesis can be formulated.

H2: Digital Banking Orientation has a positive effect on Marketing Performance.

2.3 Customer Relationship Orientation and Marketing R&D Cooperation

Marketing Research & Development Cooperation (MRDC) is essentially a collaboration between marketing and R&D functions within an organization. Its primary goal is to align product/service innovation with consumer needs and preferences (Chirumalla et al., 2018). Thus, on the one hand, marketing focuses on customer needs and trends, while R&D is tasked with creating tangible solutions through product/service innovation. This collaboration can create cross-functional collaboration, a hallmark of adaptive and knowledge-based companies (Nijssen & Ordanini, 2020). Here, MRDC can act as a bridge or mediator between CRO and marketing performance achievement in the banking sector. For the banking industry, with its experience-based banking approach, synergy between

marketing and R&D is crucial (Paiva et al., 2020). Therefore, we propose the following hypothesis:

H3: Customer Relationship Orientation has a positive effect on Marketing R&D Cooperation.

2.4 Digital Banking Orientation and Marketing R&D Cooperation

Digital orientation has now become an integral part of R&D, including in the marketing function. In the banking industry, banks must be agile in adopting digital technology for their business processes (Arici & Gok, 2023). This digital orientation has also been realized in various mobile and internet banking applications (Valsamidis et al., 2020). Customers no longer need to physically visit branch offices to conduct transactions or receive customer service. Essentially, customers can conduct financial activities independently, in real time, and without time or location constraints (Royo-Vela et al., 2024). Banks need to prioritize this DBO so that the MRDC direction can be implemented appropriately, as part of their identity, culture, and business direction (Khan, 2022; Valsamidis et al., 2020). Therefore, this study developed the following hypothesis:

H4: Digital Banking Orientation has a positive effect on Marketing R&D Cooperation.

2.5 Marketing R&D Cooperation and Marketing Performance

The relationship between Marketing Research & Development Cooperation and Marketing Performance is gaining increasing attention, along with the need for innovation and adaptation to external environment (Paiva et al., 2020). The impact of MRDC on marketing performance in various organizations tends to be positive (Dhliwayo & Chebo, 2022; Nijssen & Ordanini, 2020). MRDC can improve the quality of innovation and the efficiency of cross-functional communication, and can also strengthen the market relevance of both customer-oriented and digital-oriented initiatives (Kafouros et al., 2020). In the banking sector, this results in more adaptive products, more personalized services, and more targeted marketing campaigns. In turn, all of this contributes directly to improved marketing performance. Based on this description, the following hypothesis can be proposed:

H5: Marketing R&D Cooperation has a positive effect on Marketing Performance.

2.6 Mediating Effect of Marketing R&D Cooperation

Marketing R&D Cooperation serves as a bridge or mediator between strategic orientations (CRO and DBO) and marketing performance. CRO and DBO provide a strategic foundation: a focus on long-term relationships and customer-driven digitalization. However, for this orientation to truly impact marketing performance (such as customer growth, satisfaction, retention, and campaign effectiveness), it must be operationalized through concrete activities. This is where Marketing R&D Cooperation comes into play. MRDC has also been shown to be a significant mediating variable in the relationship between Customer Relationship Orientation (CRO) and Digital Banking Orientation (DBO) on Marketing Performance. CRO and DBO essentially provide crucial input in the form of an understanding of customer needs and relevant digital technologies. All of this is based on previous literature stating that customer relationship orientation is insufficient if not accompanied by structured marketing research and development synergy. As shown by Guerola-Navarro et al. (2024) and Ngo et al. (2024), a customer-oriented strategy is more effective when integrated with an organization's internal processes, including coordination

between research, marketing, and decision-making. Furthermore, Kitsios et al. (2021) and Kolodiziev et al. (2021) emphasize that digitalization requires internal coordination support to achieve tangible results on business performance. The study of this mediating role is based on the following two hypotheses.

H6: Marketing R&D Cooperation mediates the relationship between Customer Relationship Orientation and Marketing Performance.

H7: Marketing R&D Cooperation mediates the relationship between Digital Banking Orientation and Marketing Performance.

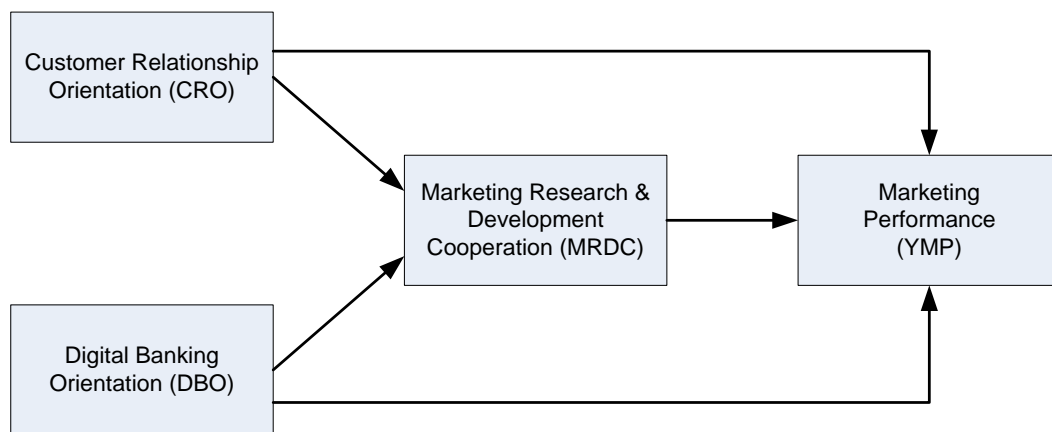


Figure 1. Research Model

3. Methods

This study employed a quantitative design to analyze the data. Data collection was conducted through an online survey at all BJB bank branches, with a questionnaire as the primary instrument. The analysis process included a descriptive approach to explain the characteristics of each variable, as well as an inferential approach to examine the relationships between variables within the formulated model framework. Referring to the research model and objectives, inferential data analysis used Structural Equation Modeling - Partial Least Squares (SEM-PLS) to predict the relationships between the modeled variables through evaluation of the measurement model, structural model, and specifically hypothesis testing with a bootstrapping procedure.

The population in this study was all 1,762 marketing personnel of BJB bank in Indonesia. Proportional random sampling based on region was used, using the formula from Isaac & Michael (1981), resulting in 316 respondents. The instrument used in this study was a questionnaire with a 7-point interval scale, with appropriate statements. Before the instrument was distributed to respondents, the research instrument's validity and reliability were tested.

Customer Relationship Orientation (CRO) as an exogenous latent variable is measured by 3 dimensions: people, process, and technology. Digital Banking Orientation (DBO) is also an exogenous latent variable measured by 4 dimensions: Strategic Digital Commitment, Digital Capability Development, Customer-Centric Digitalization, and Digital Innovation Orientation. Furthermore, as a mediator latent variable, Marketing Research & Development Cooperation (MRDC) includes 4 dimensions: Strategic Alignment, Information Sharing & Communication, Joint Decision Making, and Responsiveness to Market Feedback.

Finally, Marketing Performance (YMP) as an endogenous latent variable consists of 4 dimensions: Sales Turnover, Sales Increase, Sales Return, and Area Coverage.

4. Results and Discussion

4.1 Profiles of bank **bjb** Marketing Staff Respondents

The profiles of bank **bjb** marketing staff respondents were obtained from 316 individuals who participated in a questionnaire at all **bjb** branch offices in Indonesia. This profile includes respondent characteristics such as gender, age, length of service, and educational level, as presented in Table 1.

Table 1. Profile of Respondents

Gender	f	%
Male	273	86,4
Female	43	13,6
Total	316	100,0

Age	f	%
Less than 30 years	55	17,4
Between 31 - 40 years old	135	42,7
Between 41 - 50 years old	83	26,3
More than 50 years	43	13,6
Total	316	100,0

Long Time Working	f	%
Less than 5 years	31	9,8
Between 5 - 10 years old	94	29,7
Between 10 - 20 years old	99	31,3
Between 20 - 25 years old	75	23,7
More than 25 years	17	5,4
Total	316	100,0

Formal Education	f	%
1. D4/S1	222	70,3
2. S2	70	22,2
3. S3	13	4,1
4. Others	11	3,5
Total	316	100,0

Based on Table 4.1, most of the marketing employees at Bank **bjb** are male (86.4%), while females account for only 13.6%. This indicates that marketing positions in the banking sector, particularly at Bank **BJB** largely dominated by men. Such a pattern aligns with the broader trend in the banking industry, where roles requiring high mobility, fieldwork, and direct customer interaction are predominantly filled by male employees. In terms of age, the largest group is between 31 and 40 years old (42.7%), followed by 41–50 years (26.3%), while those under 30 represent 17.4% and over 50 represent 13.6%. This suggests that Bank **BJB**'s marketing staff are primarily in their productive years, with substantial work experience that contributes to optimal competence and performance.

Regarding work tenure, employees with 10–20 years of experience form the largest segment (31.3%), followed by those with 5–10 years (29.7%) and 20–25 years (23.7%). Most thus possess moderate to long experience, indicating strong familiarity with customer characteristics, bank products, and effective marketing strategies. Educationally, 70.3% hold a bachelor's or applied degree, 22.2% a master's, and 4.1% a doctorate. This academic profile reflects strong analytical and strategic capabilities, supporting the bank efforts to strengthen marketing performance through qualified human resources.

4.2 Evaluation of Measurement and Structural Model

The first stage is the evaluation of the measurement model, which is used to assess the extent to which the indicators reflect the latent constructs. At this stage, convergent validity is tested using outer loading and average variance extracted (AVE) values, as well as construct reliability using Cronbach's Alpha and composite reliability. Furthermore, discriminant validity is also examined using the Fornell-Larcker criteria to ensure that each construct is truly distinct from the others.

Table 1. Convergent Validity

Variable	Construct	Loading	CR	AVE	Result
Customer Relationship Orientation (CRO)	CRO1	0.884	0.898	0.516	Valid & Reliable
	CRO2	0.881			
	CRO3	0.914			
Digital Banking Orientation (DBO)	DBO1	0.889	0.909	0.547	Valid & Reliable
	DBO2	0.863			
	DBO3	0.847			
	DBO4	0.812			
Marketing R&D Cooperation (MRDC)	MRDC1	0.884	0.901	0.549	Valid & Reliable
	MRCD2	0.856			
	MRCD3	0.886			
	MRCD4	0.858			
Marketing Performance (MP)	MP1	0.873	0.915	0.574	Valid & Reliable
	MP2	0.857			
	MP3	0.881			
	MP4	0.854			

Table 1 shows the results of the convergent validity test for all constructs in the model. All loading factor values are above 0.80, indicating that each indicator has a strong relationship with its respective construct. The Composite Reliability (CR) values, ranging from 0.898 to 0.915, are higher than the threshold of 0.70, confirming internal consistency. Similarly, the Average Variance Extracted (AVE) values, which range from 0.516 to 0.574, exceed the minimum criterion of 0.50, meaning that more than half of the variance in the indicators is explained by their constructs (Hair Jr et al., 2021). These results suggest that all measurement items for CRO, DBO, MRDC, and MP meet the convergent validity requirements.

Table 2. Discriminant Validity

Fornell-Larcker	CRO	DBO	MRDC	MP
CRO	0.704			
DBO	0.640	0.676		
MRDC	0.652	0.605	0.692	

YMP	0.617	0.625	0.633	0.689
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Table 2 presents the results of the discriminant validity test using the Fornell-Larcker criterion. The diagonal values, representing the square root of AVE for each construct, are higher than their correlations with other constructs, confirming good discriminant validity. This means that each variable (CRO, DBO, MRDC, and MP) measures a distinct concept and does not overlap excessively with others. These results indicate that the model constructs are empirically distinct, allowing for reliable assessment of the relationships among Customer Relationship Orientation, Digital Banking Orientation, Marketing R&D Cooperation, and Marketing Performance in the subsequent structural analysis.

Table 3. Coefficient of Determination (R-Square)

Model	R Square	R Square Adjusted
Marketing Research & Development Cooperation (MRDC)	0.702	0.700
Marketing Performance (MP)	0.764	0.762

The overall model (measurement and structural model) from SmartPLS can be depicted in Figure 2.

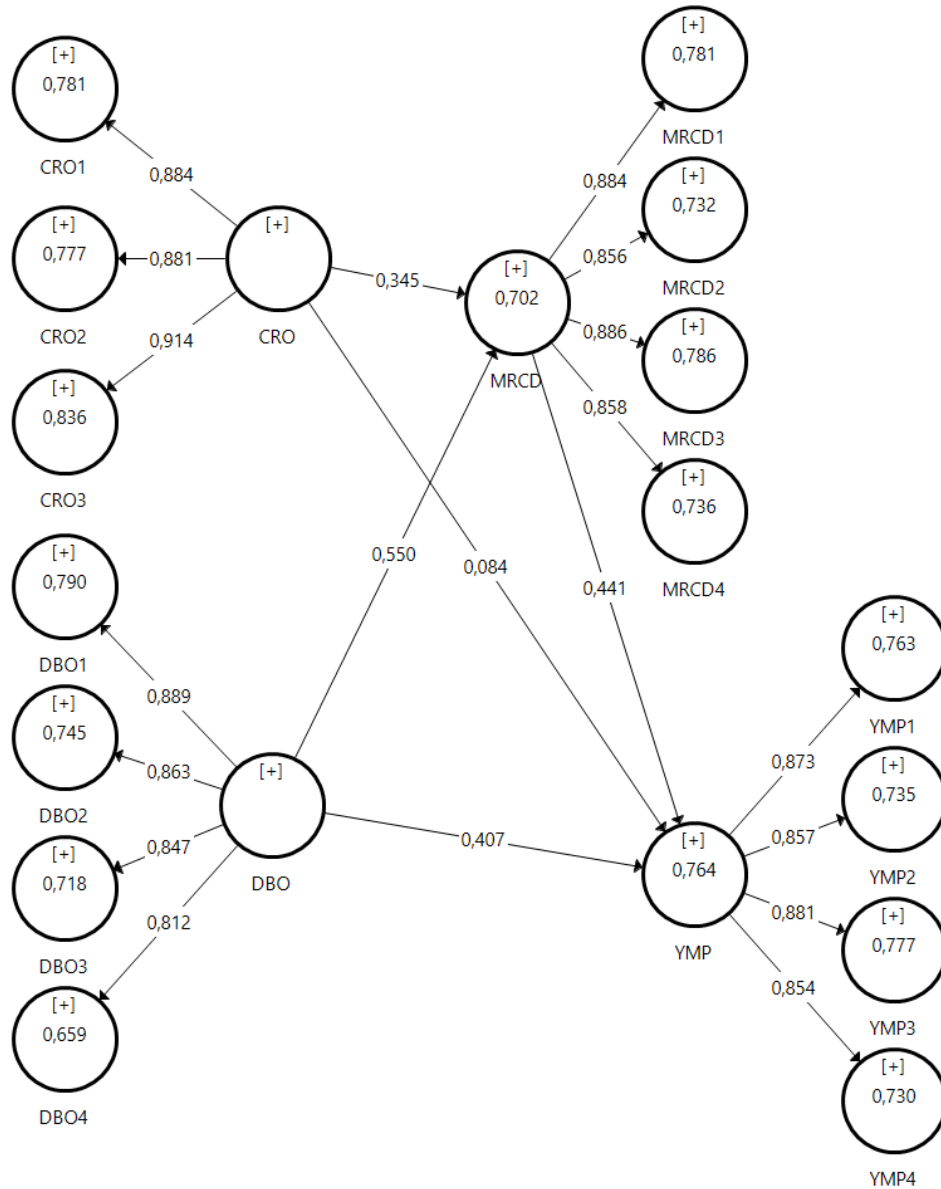


Figure 2. Measurement and Structural Models

Based on the structural model estimation results, the R-square value for the Marketing Research & Development Cooperation (MRDC) variable is 0.702, with an adjusted R-square of 0.700. This indicates that 70.2% of the variation in MRDC can be explained by the exogenous variables influencing it, while the remaining 29.8% is explained by factors outside the model. Furthermore, the R-square value for the Marketing Performance (MP) variable is 0.764, with an adjusted R-square of 0.762. This means that 76.4% of the variation in MP can be explained by the constructs within the model, while the remaining 23.6% is influenced by other factors. This value is considered strong, indicating that the exogenous constructs have a substantial contribution to marketing performance. In general, both R-square values show that the research model has high explanatory power.

After the measurement model and structural model are deemed to meet the criteria, the next step is hypothesis testing. Hypothesis testing in PLS-SEM is performed using the bootstrapping method to obtain path coefficients, t-statistics, and p-values, thereby determining the significance of the influence between constructs in the research model. This

hypothesis testing indicates whether the relationship proposed in the conceptual framework can be accepted or rejected based on the research data (see Table 4).

Table 4. Results of Hypotheses Testing

Direct Path	Coefficient	t	p	Result
CRO → MRDC	0.345	6.446	0.000	Accepted
CRO → MP	0.084	1.736	0.042	Accepted
DBO → MRDC	0.550	11.196	0.000	Accepted
DBO → MP	0.407	7.824	0.000	Accepted
MRDC → MP	0.441	8.328	0.000	Accepted
Mediation (Indirect)	Coefficient	t	p	Result
CRO → MRDC → MP	0.152	5.229	0.000	Mediated
DBO → MRDC → MP	0.243	6.627	0.000	Mediated

Table 4 presents the results of hypothesis testing using the PLS approach. All direct relationships in the model were found to be significant. Customer Relationship Orientation (CRO) has a positive and significant effect on Marketing R&D Cooperation (MRDC) with a coefficient of 0.345 and on Marketing Performance (MP) with a coefficient of 0.084. Digital Banking Orientation (DBO) shows an even stronger direct influence on both MRDC (0.550) and MP (0.407), indicating that digital capability plays a major role in driving cooperative marketing innovation and improving performance. MRDC also positively affects MP with a coefficient of 0.441, proving its strategic role in linking marketing and innovation.

For the indirect effects, both CRO and DBO significantly influence MP through MRDC, with coefficients of 0.152 and 0.243, respectively. This means MRDC successfully mediates the relationship between customer- and digitally-oriented strategies and marketing outcomes. In summary, the findings demonstrate that a strong digital orientation and customer relationship focus enhance marketing cooperation with R&D, which in turn leads to better marketing performance. The model confirms that MRDC serves as a key bridge connecting strategic orientations to measurable performance outcomes in the banking sector.

5. Discussion

The hypothesis testing results show that all proposed relationships in the model are significant. Both Customer Relationship Orientation (CRO) and Digital Banking Orientation (DBO) have meaningful effects on Marketing R&D Cooperation (MRDC) and Marketing Performance (MP), while MRDC also plays a key role in improving MP. Among all relationships, the strongest effect comes from DBO on MRDC, showing that digital orientation is the main driver of effective collaboration between marketing and R&D functions. This finding aligns with Kitsios et al. (2021), who emphasized that digital transformation strengthens bank strategies through process integration and service innovation.

The strong influence of DBO on MRDC also reflects the need for banks to respond to changes in customer behavior in the digital era. Digital integration allows faster and more transparent communication and joint decision-making, improving responsiveness to market dynamics. MRDC also has a strong effect on MP, confirming that close collaboration between marketing and R&D improves innovation and customer satisfaction, consistent with Chirumalla et al. (2018). In the context of Bank bjb, this collaboration produces products and services that fit local customer needs and foster loyalty.

Meanwhile, CRO also contributes significantly to MRDC and MP, though its influence is smaller. CRO focuses on people and relationship aspects, providing the foundation of trust and customer engagement (Hosseini & Aali, 2021). However, in the digital era, marketing success depends more on technological innovation and internal collaboration. Therefore, DBO and MRDC act as the main performance drivers, while CRO strengthens long-term relationships. This implies that Bank bjb's marketing success relies not only on customer relations but also on digital commitment and functional synergy to achieve sustainable performance in the future.

The results also indicate that Marketing Research and Development Cooperation (MRDC) serves as a significant mediator between Customer Relationship Orientation (CRO) and Marketing Performance (MP). This finding confirms that a customer-oriented approach alone is insufficient without structured marketing research and development synergy. As highlighted by Guerola-Navarro et al. (2024) and Ngo et al. (2024), customer-oriented strategies become more effective when integrated with internal processes such as research, marketing, and decision-making coordination. The mediation also shows that CRO's indirect effect on MP is stronger than its direct impact, supporting Kotler, Pfoertsch, and Sponholz (2021), who emphasize the need for alignment between customer relationship orientation and research activities to sustain marketing performance.

MRDC also mediates the relationship between Digital Banking Orientation (DBO) and Marketing Performance with a stronger influence than in the CRO pathway. This indicates that digital transformation in banking produces greater marketing impact when accompanied by intensive research and development collaboration. Kitsios et al. (2021) and Kolodziev et al. (2021) assert that digitalization requires strong internal coordination to yield tangible business outcomes. The high mediating role of MRDC further suggests that strategic digital commitment and innovation capability need to be synchronized through research–marketing frameworks, echoing Hidayat-ur-Rehman (2024), who found that fintech adoption is more effective when supported by organizational literacy and coordination.

These dual mediation findings highlight MRDC as a vital bridge linking external strategies, both customer-based and digital, with marketing performance achievements. MRDC connects strategic orientation with practical implementation, aligning with Davcik et al. (2021) and Nijssen and Ordanini (2020), who underscore the role of cross-functional collaboration in innovation success. Empirically in Bank bjb, both CRO and DBO prove most effective when integrated through MRDC, showing that marketing performance thrives on a strong research and development collaboration framework.

6. Conclusion

This study is about the Marketing R&D Cooperation as a Mediator Between Customer Relationship, Digital Banking Orientation, and Marketing Performance at bank **bjb**. The variable overview at Bank bjb shows that Customer Relationship Orientation (CRO) shows a high level, with the Technology aspect contributing the most, compared to People and Process. Digital Banking Orientation (DBO) is also high, especially in the Strategic Digital Commitment dimension, while Digital Innovation Orientation is relatively lower. Marketing R&D Cooperation (MRDC) at bank bjb tends to be strong in Strategic Alignment and Joint Decision Making, while Information Sharing & Communication and Responsiveness to Market Feedback are lower. Marketing Performance (MP) shows the highest contribution to Sales Return, followed by Sales Turnover, while Sales Increase and Area Coverage are still limited due to limited geographic expansion.

Regarding the direct influence of CRO and DBO on MRDC, it was found that Customer Relationship Orientation (CRO) and Digital Banking Orientation (DBO) both

have a significant positive effect on MRDC, with DBO having a greater contribution. This indicates that a strong digital orientation and strategic commitment in banking encourage more effective marketing research and development collaboration. Regarding the direct influence of CRO, DBO, and MRDC on Marketing Performance (MP), it was found that all variables—CRO, DBO, and MRDC—had a significant positive effect on Marketing Performance (MP). DBO was the most dominant pathway for increasing MP, while MRDC also played a significant role in supporting marketing performance. CRO had a positive but relatively smaller impact than DBO and MRDC. Marketing R&D Cooperation (MRDC) acted as a mediator in the influence of CRO and DBO on MP. This mediation was significant, especially in the DBO through MRDC on MP pathway, indicating that marketing R&D collaboration strengthens the effect of digital orientation on marketing performance. In other words, customer orientation and digital banking can optimally improve marketing performance when accompanied by effective R&D collaboration.

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Author contribution.

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