

Customer Segmentation in B2B Professional Services Using RFM Analysis and Ethnographic Insights: Evidence from a 15-Year Longitudinal Study

Imam Arie Mulyanto*, Jerry Heikal

Universitas Bakrie, Indonesia

Email: Imamarie27@gmail.com*, jerry.heikal@bakrie.ac.id

Abstract. The professional services industry, particularly infrastructure and environmental management consulting, faces increasingly complex challenges in managing long-term business-to-business (B2B) customer relationships. This study employed a mixed-methods approach with a sequential explanatory design. In the initial stage, quantitative analysis was conducted using the Recency, Frequency, and Monetary (RFM) method based on historical transaction data from 150 clients over a fifteen-year period at PT Infratama Yakti, a professional consulting firm. Customer data processing and segmentation were performed using SPSS statistical software to identify distinct behavioral segments, resulting in the consolidation of 27 initial segments into six segment groups. In the subsequent stage, an ethnographic approach was applied to interpret relational dynamics and identify pain points associated with each customer segment. The findings indicate that only a small proportion of clients are classified as strategic key clients; however, this segment contributes the highest economic value and relationship stability. Turn-away clients were identified as the primary focus group, as they fall into the latent churn category, characterized by declining relationship recency despite a history of significant value contribution. Accordingly, the required tactical approach involves issue-based communication or engagement centered on specific challenges relevant to the client's current condition. Through this approach, weakened relationships can be restored before evolving into permanent churn.

Keywords: customer segmentation, RFM analysis, ethnography, B2B professional services, latent churn.

INTRODUCTION

The knowledge-intensive professional services industry, including infrastructure and environmental management consultants, faces increasingly complex competitive dynamics as demands for project efficiency, accountability, and sustainability increase. In this industry, the value a company creates is determined not only by the quality of technical output but also by its ability to build and maintain long-term relationships with strategic B2B clients. The relationship marketing literature confirms that, in the B2B context, the sustainability of customer relationships often determines long-term performance more than the acquisition of new clients alone (Acheampong et al. 2023; Koponen et al. 2022; Lasrado et al. 2023; Lee et al. 2019; Venkatesan et al. 2022).

Historical transaction data aggregated from PT Infratama Yakti over a fifteen-year period show a fluctuating annual sales pattern, reflecting the characteristics of project-based professional consulting services (Figure 3). The observed volatility indicates that revenue generation is highly dependent on episodic client engagement rather than ongoing transactions. Periods of declining sales are not necessarily related to the explicit termination of customer relationships but rather to decreases in engagement frequency, indicating the existence of the phenomenon of latent churn. This pattern emphasizes the importance of implementing transaction-based customer segmentation to understand the dynamics of long-term customer value and relationship sustainability more comprehensively (Huaman Llanos et al. 2024; Llanos et al. 2024; Pai et al. 2026; Pratama et al. 2024; Utomo et al. 2025).

Despite this, professional services companies continue to face serious challenges related to customer churn, heterogeneous customer loyalty, and inequality in value contribution among clients. In contrast to the retail or e-commerce sector, churn in professional services is often latent—marked not by explicit contract termination but by a decrease in the intensity of collaboration and the absence of follow-up projects within a certain period. This condition aligns with findings from various RFM-based segmentation studies showing that customers or partners with low interaction levels and deteriorating recency scores have the potential to become at-risk or hibernating groups, despite historically having made significant contributions (Ibrahim & Heikal, 2025; Aldyah et al., 2024).

In addition to latent churn, customer loyalty in the B2B context has also been shown to be non-homogeneous. Customer segmentation research across industries demonstrates that not all loyal customers consistently provide high economic value. A study of PT Five Ocean Indonesia, for example, found that only a small percentage of partners continuously fall into the best customer category, while the majority remain in a potential segment characterized by moderate contributions and fluctuating transaction patterns (Harahap et al., 2025). Similar findings were reported in a B2B partnership segmentation study at PT Petir Indonesia, where loyal, potential, and disloyal partners exhibit significantly different characteristics in terms of their contributions to the sustainability of the company's projects (Harahap et al., 2025).

The problem of inequality in value contribution among customers or partners indicates that companies can no longer manage their entire customer portfolio homogeneously. Without data-driven segmentation, decisions regarding resource allocation, assignment of senior experts, and priorities for high-risk relationship development are often based solely on managerial intuition. A number of empirical studies in Indonesia show that data-driven approaches—particularly RFM (Recency, Frequency, Monetary) segmentation—can help companies identify high-value customers, potential customers, and customers at risk of churn more systematically (Syahfitri & Heikal, 2024; Wulansari & Heikal, 2024).

RFM analysis has been widely used in B2C and e-commerce contexts to understand customer behavior and design more targeted marketing strategies. Olivia and Heikal's (2025) study, for example, shows that customers with high frequency and monetary scores contribute significantly to revenue, whereas customers with low recency scores require specific reactivation strategies. Similarly, research in the retail, beauty products, and coffee shop sectors demonstrates that RFM segmentation is effective in differentiating loyal, potential, and at-risk customers and serves as a foundation for developing more targeted retention and loyalty strategies (Pradina et al., 2024; Arthanugraha et al., 2024; Passalaras et al., 2024).

However, the application of RFM in the context of B2B professional services presents more complex conceptual challenges. Transactions are project-based and irregular and are often influenced by external factors such as public policy, organizational changes within the client, and decision-making dynamics. Consequently, the recency and frequency dimensions in professional services do not always fully reflect a customer's overall strategic value. This indicates that stand-alone RFM analysis has the potential to produce partial interpretations if it is not complemented by a deeper contextual understanding.

These limitations highlight the need to integrate quantitative approaches with interpretive qualitative approaches. In management and marketing literature, ethnography is considered a relevant approach for exploring relational dynamics, tacit knowledge, and the social meanings

that develop in long-term relationships between companies and their B2B clients. This approach enables researchers to understand the why behind the numbers—that is, the underlying reasons for quantitatively identified transaction patterns. Although a number of RFM studies in Indonesia have successfully identified customer segments and their strategic implications, most still focus on the B2C context and have not explicitly integrated ethnographic insights (Ibrahim & Heikal, 2025; Syahfitri & Heikal, 2024).

This research gap is increasingly relevant in the context of infrastructure and environmental consulting firms, which often maintain long-term client relationships and manage project portfolios spanning decades. PT Infratama Yakti, as a consulting firm that has operated for decades, possesses a rich historical customer database as well as deep relational experience with various government, state-owned, private-sector, and international institutional clients. However, as in many other professional services organizations, the use of historical data for customer segmentation and strategic decision-making still tends to be descriptive and heavily reliant on management's subjective judgment.

Based on this description, it can be concluded that there is a strong need for a customer segmentation approach that is not only based on historical transaction data but also capable of capturing the relational and contextual dimensions of B2B professional services relationships. The integration of RFM analysis with ethnographic approaches is therefore seen as having the potential to provide a more comprehensive understanding of customer value, latent churn risk, and long-term relationship management priorities.

Therefore, the purpose of this study is to develop and apply customer segmentation in the context of B2B professional services by combining RFM analysis based on fifteen years of historical transaction data with ethnographic insights. Specifically, this study aims to identify customer segments based on the Recency, Frequency, and Monetary dimensions and to interpret the characteristics and relational dynamics of each segment through an ethnographic approach so that it can provide strategic implications for customer relationship management and managerial decision-making in the infrastructure and environmental consulting services industry.

MATERIALS AND METHODS

This study employed a mixed-methods approach with a sequential explanatory design, in which quantitative analysis based on customer transaction data was conducted in the initial stage and followed by a qualitative ethnographic approach to deepen the interpretation of segmentation results. This approach was chosen to address the limitations of purely quantitative analysis in capturing the complexity of B2B professional services relationships, which are long-term, relational, and contextual (Harahap et al., 2025; Syahfitri & Heikal, 2024).

The first stage of the research applied RFM (Recency, Frequency, Monetary) analysis to identify customer behavior patterns based on historical transaction data. RFM analysis was selected because it has been widely used to group customers or business partners according to activity level, transaction intensity, and economic contribution in both B2C and B2B contexts (Ibrahim & Heikal, 2025; Harahap et al., 2025).

The second stage used an ethnographic approach to interpret the meaning behind the results of the RFM segmentation, particularly in relation to relationship dynamics, value perception, and non-transactional factors affecting the sustainability of client relationships. In

this study, ethnography functioned as an interpretive tool to enrich and contextualize the quantitative findings derived from the RFM analysis.

The population of this study consisted of all B2B customers recorded in the internal database of PT Infratama Yakti during the fifteen-year observation period. The unit of analysis was the client organization rather than the individual, reflecting the project-based and organizational nature of B2B consulting relationships.

At the quantitative stage, total population sampling was applied, meaning that all customers with recorded transaction histories during the observation period were included in the analysis. At the qualitative stage, informants were selected purposively, focusing on organizational actors who had direct and continuous involvement in managing client relationships. These informants included senior consultants, project managers, and members of management with cross-project and long-term experience in client engagement.

In the RFM analysis, Recency was measured as the time gap between the end of the observation period and the customer's most recent project or contract. Frequency referred to the number of projects or cooperation engagements recorded for each customer during the observation period. Monetary represented the cumulative value of contracts or projects generated by each customer over the same period (Syahfitri & Heikal, 2024).

At the ethnographic stage, analysis focused on identifying qualitative themes representing relational challenges or risks in client relationships, referred to in this study as ethnographic pain values. These themes included factors such as dependence on key individuals, complexity of project coordination, regulatory sensitivity, and uncertainty regarding the continuity of cooperation. Such relational dimensions often influence strategic decision-making but are not directly reflected in transaction data (Harahap et al., 2025).

Quantitative analysis was conducted by processing transaction data using SPSS software following procedures commonly applied in RFM segmentation research. The data were first cleaned and standardized to ensure measurement consistency. Each customer was then assigned Recency, Frequency, and Monetary scores based on the distribution of each variable. These scores were subsequently combined to classify customers into segments representing differences in transaction value and engagement patterns.

The qualitative stage involved ethnographic analysis of observational notes, historical project documentation, and reflections derived from informant experiences. The analysis aimed to identify ethnographic pain values associated with each RFM segment in order to explain the contextual factors behind specific transaction patterns. For example, the analysis explored why some customers with low frequency remained strategically important or why certain high-monetary customers exhibited characteristics associated with latent churn risk.

Integration of the two analytical approaches was conducted at the interpretation stage. The results of the RFM segmentation were combined with the ethnographic findings to produce a customer mapping that considered not only economic contribution but also relationship quality and long-term strategic potential. This integrated approach enabled the study to generate more contextually grounded managerial implications for customer relationship management in the B2B professional services industry (Harahap et al., 2025; Syahfitri & Heikal, 2024).

RESULTS AND DISCUSSION

The results of RFM's analysis of PT Infratama Yahaki's B2B customer data during the 15-year observation period show that the structure of the company's customer portfolio is heterogeneous and very uneven in terms of the timeliness of relationships, project intensity, and economic value contribution. Based on the outputs of the RFM Analysis Table (Figure 4) and RFM Data View (Figure 5), all customers can be systematically classified into a combination of Recency, Frequency, and Monetary scores, with total observations valid and no data lost. This indicates that the company's historical database is mature enough to be used as the basis for customer segmentation based on transaction behavior.

Case Processing Summary							
	Valid		Cases Missing		Total		
	N	Percent	N	Percent	N	Percent	
Frequency score * Monetary score * Recency score	150	100,0%	0	0,0%	150	100,0%	

Gambar 4. RFM Analysis Table

Cust_ID	Date_most_recent	Transaction_count	Amount	Recency_score	Frequency_score	Monetary_score	RFM_score
CUST_129	09-Dec-24	8	6.502.907.888	3	3	2	332
CUST_130	26-Jan-25	2	1.412.503.055	3	1	2	312
CUST_131	01-Oct-23	3	2.369.081.499	2	1	3	213
CUST_132	23-Sep-25	3	2.118.233.023	3	1	2	312
CUST_133	06-Sep-20	2	1.627.043.390	1	2	2	122
CUST_134	01-Nov-19	8	6.846.317.275	1	3	3	133
CUST_135	21-Dec-18	2	2.179.344.758	1	2	3	123
CUST_136	03-Dec-24	5	4.136.995.035	3	2	3	323
CUST_137	28-Sep-17	4	1.914.086.460	1	3	2	132
CUST_138	01-Dec-23	3	4.209.404.471	2	1	3	213
CUST_139	23-Nov-19	3	329.672.475	1	2	2	122
CUST_140	24-May-12	1	37.312.362	1	1	1	111
CUST_141	20-Nov-21	5	1.711.033.922	1	3	1	131
CUST_142	15-Nov-23	3	1.034.738.981	2	1	2	212
CUST_143	05-Aug-23	5	908.323.805	2	2	1	221
CUST_144	19-Dec-16	2	2.048.711.013	1	2	3	123
CUST_145	18-Jan-25	12	7.192.629.867	3	3	3	333
CUST_146	25-Oct-19	5	1.418.550.745	1	3	1	131
CUST_147	11-Oct-23	2	1.423.680.599	2	1	2	212
CUST_148	26-Sep-23	2	155.581.716	2	1	1	211
CUST_149	26-Oct-25	2	94.269.178	3	1	1	311
CUST_150	18-May-25	4	715.604.120	3	1	1	311

Figure 5. RFM Data View

The distribution of RFM scores shows that only a small percentage of customers are on a combination of high scores simultaneously, especially in groups with a Recency score = 3, Frequency score = 3, and Monetary score = 3 (RFM 333). Customers in this group represent strategic key clients, i.e. clients who are currently active, have relatively frequent project involvement, and contribute significant contract value. Empirically, this group reflects a pattern of stable and sustainable long-term relationships, in which the company plays the role not only as a service provider, but also as a strategic partner in various projects across the years. These findings are consistent with the RFM literature which states that customers with high scores in all three dimensions are the group with the highest lifetime value and deserve to be a top priority in customer relationship management strategies (Ibrahim & Heikal, 2025; Syahfitri & Heikal, 2024).

However, the results of the analysis also show that most customers are not in the elite segment, but are spread across a combination of medium and low scores, such as RFM 211,

221 and 231 (Figure 6), which indicates a fairly sharp variation in transaction behavior. Customers with relatively low Frequency and Monetary scores, but still have a fairly good Recency, reflect the pattern of project-based clients, i.e. clients who are only involved in certain projects in a certain period without high continuity of cooperation. In the context of infrastructure and environmental consulting services, this pattern is prevalent because client engagement is heavily influenced by budget cycles, public policies, and episodic project needs. These findings reinforce the argument that in the context of B2B professional services, a low transaction frequency does not necessarily reflect low strategic customer value (Harahap et al., 2025).

The outputs of the RFM Frequency Score Table (Figure 6) and Bin Count (Figure 7) show that there is a significant proportion of customers with low Recency scores, but have a relatively high Monetary history. This group indicates the existence of latent churn, i.e. customers who have historically contributed large economic value, but in the last observation period no longer show project activity. This phenomenon is in line with the findings of RFM studies in various sectors that show that customers with deteriorating recency are at high risk of churn, even though they were previously classified as high-value customers (Aldyah et al., 2024; Olivia & Heikal, 2025). In the context of PT Infratama Yakti, this group has very important strategic implications because the loss of high-value clients is often only realized after a long time lag.

Frequency score * Monetary score * Recency score Crosstabulation							
Count							
		Recency score			Monetary score		
		1	2	3	Total		
1	Frequency score	1	4	5	4	13	
		2	7	8	8	23	
		3	4	5	5	14	
	Total	15	18	17	50		
2	Frequency score	1	6	6	6	18	
		2	6	7	6	19	
		3	4	5	4	13	
	Total	16	18	16	50		
3	Frequency score	1	7	7	7	21	
		2	2	3	2	7	
		3	7	8	7	22	
	Total	16	18	16	50		
Total	Frequency score	1	17	18	17	52	
		2	15	18	16	49	
		3	15	18	16	49	
	Total	47	54	49	150		

Gambar 6. RFM Frequency Score Table

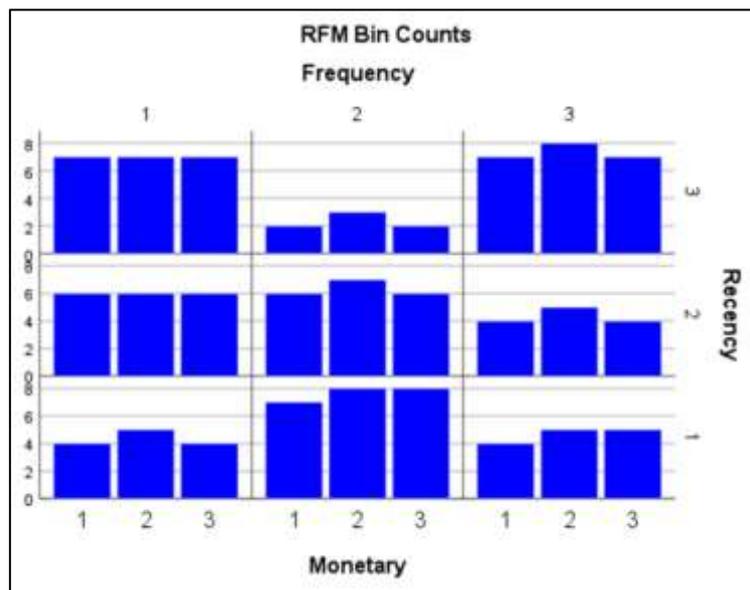


Figure 7. RFM Bin Counts

The results of the RFM Heat Map Chart (Figure 8) clarify the pattern of inequality of customer portfolios, where the concentration of the company's economic value rests on a relatively small segment of customers. This pattern reflects the Pareto principle in customer management, where a small percentage of clients account for the dominant proportion of revenue. Customer segmentation studies in various industries in Indonesia also show a similar pattern, both in the service, manufacturing, and e-commerce sectors, where the high-value customer segment tends to be limited in number but has a significant financial impact (Wulansari & Heikal, 2024; Arthanugraha et al., 2024).

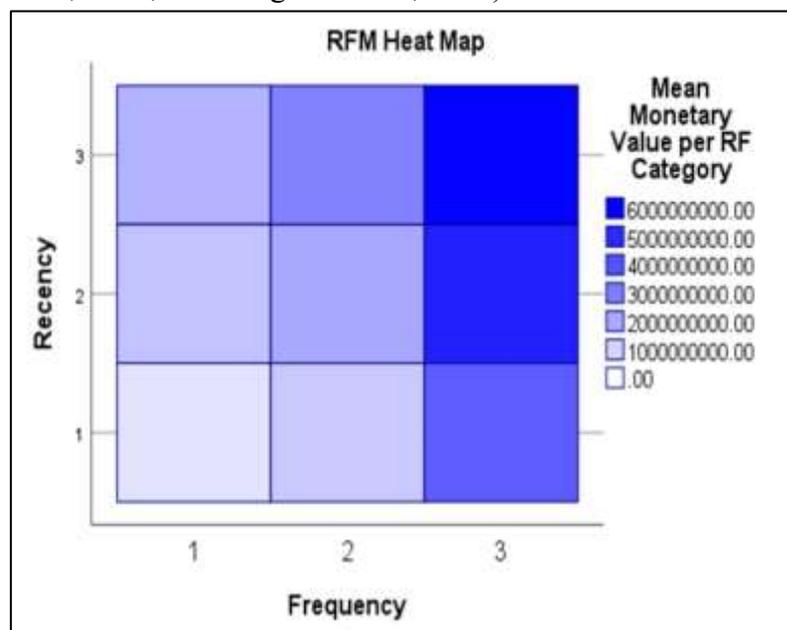


Figure 8. RFM Heat Map

Although RFM's analysis has successfully identified key patterns in customer transaction behavior, this quantitative approach has not fully explained why customers in certain segments

exhibit such behavior. Therefore, the findings of RFM in this study are further interpreted through ethnography to identify the pain values inherent in each segment. From 150 customers, 6 segment groups were obtained, which were then taken 3 sample respondents from each segment group category. Below is a table of ethnographic results of Pain Value and Share Pain Value.

Table 1. Pain Value and Share Pain Value of Respondents

No	Respondent Group	Pain Value (Questionnaire Answers)	Share Pain Value (Analysis per segment group)
Group Segment 1: Strategic Key-Clients			
1	The need to improve approach innovation.	Most respondents place pain value as room for improvement, not as a source of fundamental dissatisfaction.	
2	. Speed of adaptation to changing project contexts.		
3	Expect a more proactive strategic response.		
Group Segment 2: Project Based-Clients			
1	The unsustainability of post-project relationships.	Tend to judge that relationships stop not because of the quality of service, but rather because of the absence of follow-up initiatives.	
2	Lack of strategic follow-up		
3	Unclear opportunities for advanced collaboration		
Group Segment 3: Turn Away-Clients			
1	. Declining relevance of services	Respondents did not show explicit rejection, but gradually withdrew due to a lack of needs and lack of ongoing engagement.	
2	Changes in organizational priorities.		
3	Low intensity of communication after the project is completed.		
Group Segment 4: Runaway-Clients			
1	Lack of differentiation compared to other providers.	Tend to move without open conflict, suggesting that the relationship is not strong enough to maintain when other options are available.	
2	Ease of moving to alternative competitor service providers.		
3	Lack of relational attachment.		
Group Segment 5: Disappointed-Clients			
1	Unmet expectations of the final result.	Respondents still acknowledge technical competence, but procedural dissatisfaction is the main factor in weakening trust.	
2	A process that is considered less efficient.		
3	Communication that is felt to be unresponsive at crucial moments.		
Group Segment 6: Hurt-Clients			
1	Perceived negative experiences are significant	Respondents showed strong resistance to re-engagement, signaling that the relationship had been severed relationally, not just functionally.	
2	Communication conflicts		
3	Perception was disadvantaged in previous cooperation.		

Furthermore, the integration between RFM results and ethnographic pain values results in a more holistic mapping of the customer (Figure 7). Customers with high RFM scores and low pain values can be categorized as strategic partners who need to be retained through a long-term relationship management approach. Customers with medium RFM scores but manageable pain values represent project-based clients who require strategic interventions to increase the intensity and sustainability of the relationship. Meanwhile, customers with low RFM scores and high pain values categorized as turn-away-clients need to be selectively evaluated to

determine the feasibility of further relationship development. The runaway-clients category refers to customers who gradually stop engaging without showing any signs of conflict or explicit dissatisfaction. The category of disappointed clients includes customers who experience dissatisfaction with certain aspects of the cooperation process, although not always with the technical quality of the core service. And finally, the hurt clients category represents customers who have experienced a deeper negative experience and have a direct impact on the perception of the company. These experiences can be in the form of communication conflicts, significant discrepancies in expectations, or certain events that cause a sense of disadvantage, both operationally and relationally.

Table 2. RFM label segment & group

No	RFM	Company	Segment Label	Label Group
1	331	7	Excellent Strategic Key Clients	Strategic Key Clients Group
2	231	8	Good Strategic Key Clients	Strategic Key Clients Group
3	232	7	Normative Strategic Key Clients	Strategic Key Clients Group
4	223	4	Excellent Project Based Client	Project Based Clients Group
5	322	6	Good Project Based Client	Project Based Clients Group
6	322	6	Normative Project Based Client	Project Based Clients Group
7	231	8	Excellent Turn Away Client	Turn Away Clients Group
8	132	8	Good Turn Away Client	Turn Away Clients Group
9	231	7	Normative Turn Away Client	Turn Away Clients Group
10	322	2	Excellent Runaway Clients	Runaway Clients Group
11	323	3	Good Runaway Clients	Runaway Clients Group
12	332	2	Normative Runaway Clients	Runaway Clients Group
13	313	7	Bad Runaway Clients	Runaway Clients Group
14	312	7	Very Bad Runaway Clients	Runaway Clients Group
15	233	7	Excellent Disappointed Clients	Disappointed Clients Group
16	232	4	Good Disappointed Clients	Disappointed Clients Group
17	223	5	Normative Disappointed Clients	Disappointed Clients Group
18	222	6	Bad Disappointed Clients	Disappointed Clients Group
19	213	7	Very Bad Disappointed Clients	Disappointed Clients Group
20	133	6	Excellent Hurt Clients	Hurt Clients Group
21	132	6	Good Hurt Clients	Hurt Clients Group
22	132	5	Normative Hurt Clients	Hurt Clients Group
23	233	5	Bad Hurt Clients	Hurt Clients Group
24	233	4	Very Bad Hurt Clients	Hurt Clients Group
25		4	Hurt Clients	Hurt Clients Group
26		5	Bad Hurt Clients	Hurt Clients Group
27		4	Very Bad Hurt Clients	Hurt Clients Group
Total	150			

No	Label Group	Company
1	Strategic Key Clients	2
2	Project Based Clients	16
3	Turn Away Clients	23
4	Runaway Clients	28
5	Disappointed Clients	34
6	Hurt Clients	27
Total		150

Furthermore, from the pain value table above (Table 2), the target segment group is obtained, namely turnaway-clients which will be the focus of the marketing strategy. The pain value in these segments is latent and accumulative, so the tactics applied need to emphasize

early re-engagement and relevance recovery. Companies need to re-identify the context of changing client needs and undertake a selective and contextual reactivation approach. Instead of a public offering approach, a more effective tactic is specific issue-based or challenge-based communication that is relevant to the client's current conditions. With this approach, it is hoped that clients in the turnaway-clients group segment can upgrade to the strategic key clients group segment and that weakened relationships can be restored before it develops into permanent churn.

Overall, the results of this study show that RFM analysis enriched with an ethnographic approach can provide a deeper understanding of the structure of B2B professional services customer portfolios. These findings not only confirm the effectiveness of RFM as a data-driven segmentation tool, as demonstrated in various previous studies, but also confirm the importance of relational context and tacit knowledge in interpreting segmentation results. Thus, this study contributes to the customer segmentation literature by offering an integrative approach that is more appropriate for the project-based professional services industry and long-term relationships.

CONCLUSIONS

This study developed a more comprehensive understanding of customer segmentation in B2B professional services by integrating RFM (Recency, Frequency, Monetary) analysis based on fifteen years of historical transaction data with ethnographic insights. The findings revealed a highly heterogeneous and concentrated customer portfolio in which only a small proportion of clients belonged to the strategic key client segment yet contributed the majority of economic value and relationship stability, while a substantial number of clients fell into the latent churn category, characterized by declining interaction intensity despite prior contributions. The ethnographic interpretation showed that differences between strategic and latent churn customers were primarily rooted in relational and procedural factors—such as trust, institutionalized relationships, organizational stability, and decision-making dynamics—rather than differences in technical service quality. The study therefore demonstrated that RFM analysis remains useful in B2B professional services but requires contextual interpretation to avoid incomplete conclusions, and that combining transactional analysis with ethnography can better explain long-term relationship dynamics and churn risk. Practically, the integrated segmentation approach enables consulting firms to design differentiated relationship management strategies for strategic clients and at-risk customers. However, the study was limited by its focus on a single consulting firm, its reliance on revenue-based transaction data rather than profitability metrics, and its organization-centered ethnographic perspective. Future research could integrate RFM with Customer Lifetime Value (CLV) or margin-based measures, compare multiple professional service firms across industries, and employ longitudinal qualitative studies involving clients directly to better understand how customer relationships evolve and transition across segmentation categories.

REFERENCES

- Acheampong, S., Pimonenko, T., & Lyulyov, O. (2023). Sustainable marketing performance of banks in the digital economy: The role of customer relationship management. *Virtual Economics*, 6(1), 19–37.

- Aldyah, T., Heikal, J., & Pratama, R. (2024). Customer segmentation analysis using the RFM model: Evidence from a specialty coffee business. *Journal of Business and Management Studies*, 6(2), 45–56.
- Arthanugraha, A., Pradina, D. A., & Heikal, J. (2024). Customer segmentation of e-commerce retail using RFM approach. *Journal of Marketing Analytics and Strategy*, 5(1), 23–34.
- Harahap, A. I. B., Siregar, M. R., & Heikal, J. (2025). Customer segmentation using RFM analysis: A case study of PT Five Ocean Indonesia. *Jurnal Manajemen dan Bisnis Indonesia*, 12(1), 67–81.
- Harahap, D. M., Nasution, A. F., & Heikal, J. (2025). B2B partnership segmentation using RFM framework: Evidence from an electrical service company. *Jurnal Riset Manajemen dan Bisnis*, 10(2), 101–115.
- Huaman Llanos, A. A., et al. (2024). Toward enhanced customer transaction insights: An Apriori algorithm-based analysis of sales patterns at University Industrial Corporation. *International Journal of Advanced Computer Science and Applications*, 15(2).
- Ibrahim, G. K. R., & Heikal, J. (2025). Analyzing customer behavior using RFM model: Empirical evidence from manufacturing sector. *Jurnal Manajemen Pemasaran*, 9(1), 14–28.
- Koponen, J. P., & Julkunen, S. M. (2022). Development of long-term B2B customer relationships: The role of self-disclosure and relational cost/benefit evaluation. *European Journal of Marketing*, 56(13), 194–235.
- Lasrado, F., Thaichon, P., & Nyadzayo, M. W. (2023). Exploring the role of relationship management and relationship quality in B2B: Empirical insights and future research directions. *Journal of Business & Industrial Marketing*, 38(5), 1055–1086.
- Lee, H., & Lee, S. H. (2019). The impact of corporate social responsibility on long-term relationships in the business-to-business market. *Sustainability*, 11(19), 5377.
- Llanos, H. A. A., et al. (2024). Toward enhanced customer transaction insights: An Apriori algorithm-based analysis of sales patterns at University Industrial Corporation. *International Journal of Advanced Computer Science and Applications (IJACSA)*, 15(2), 601–609.
- Olivia, R., & Heikal, J. (2025). Application of RFM model for customer segmentation using secondary transaction data. *Journal of Applied Business Analytics*, 7(1), 33–46.
- Pai, P.-Y., Lin, S.-W., & Lu, W.-M. (2026). Integration of association rule mining and RFM analysis with machine learning for e-commerce customer value segmentation: A sustainable retail perspective. *Quality & Quantity*, 60(1), 87–125.
- Passalaras, R. A., Nugroho, S., & Heikal, J. (2024). Customer segmentation strategy for coffee shop business using RFM model. *Journal of Entrepreneurship and Marketing*, 4(2), 59–72.
- Pradina, D. A., Wulandari, S., & Heikal, J. (2024). RFM-based customer segmentation in skincare industry. *Journal of Consumer Behavior and Market Research*, 6(1), 41–55.
- Pratama, S. F., & Putri, N. A. (2024). User profiling based on financial transaction patterns: A clustering approach for user segmentation. *International Journal for Applied Information Management*, 4(4), 217–228.
- Syahfitri, F., & Heikal, J. (2024). RFM analysis for customer segmentation of palm oil products. *Journal of Supply Chain and Business Analytics*, 5(2), 88–102.

Customer Segmentation in B2B Professional Services Using RFM Analysis and Ethnographic Insights: Evidence from a 15-Year Longitudinal Study

- Utomo, B. S., Widoningrum, L. N., Raharjo, S. T., & Sukresna, I. M. (2025). Marketing relations performance behavior in value chain based credit initiative. *Research Horizon*, 5(1), 107–116.
- Venkatesan, R., Kumar, V., & Reinartz, W. (2022). Customer relationship management in business markets. In *Handbook of business-to-business marketing* (pp. 335–358). Edward Elgar Publishing.
- Wulansari, S., & Heikal, J. (2024). Customer segmentation on e-commerce platform using RFM approach. *Journal of Digital Marketing and Analytics*, 6(2), 74–89.



© 2026 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY SA) license (<https://creativecommons.org/licenses/by-sa/4.0/>).