INDONESIAN JOURNAL OF MULTIDISCIPLINARY SCIENCE

P-ISSN: 2808-5957
E-ISSN: 2808-6724

Development of Competitive Strategy in the Handheld Mobile Computing Industry (Case Study: PT. XYZ)

Vika Restianti, Mohamad Syamsul Ma'arif, Zenal Asikin
IPB University, Indonesia
Email: vikarestianti11@gmail.com, msyamsul@apps.ipb.ac.id, zasikin@apps.ipb.ac.id

ABSTRACT

The rapid growth of the handheld mobile computing industry in Indonesia has intensified the need for effective digital solutions across critical sectors, including logistics, retail, and manufacturing. Despite this potential, many companies struggle to identify competitive strategies that leverage their internal resources while responding to dynamic external environments. This study, Development of Competitive Strategy in the Handheld Mobile Computing Industry (Case Study: PT. XYZ), aims to formulate an optimal competitive strategy for PT XYZ by applying a comprehensive analytical framework that integrates the Resource-Based View (RBV), VRIO, PESTEL, Five Forces, SWOT, and Quantitative Strategic Planning Matrix (QSPM). Data were collected through in-depth interviews with key management personnel and analyzed using a qualitative descriptive approach. The findings indicate that PT XYZ possesses significant competitive advantages, including strong bulk purchasing capabilities, a positive customer reputation, strategic partnerships, and a solution-oriented organizational culture focused on customer satisfaction. Based on QSPM analysis, the study recommends prioritizing a product development strategy that emphasizes greater product diversification and enhanced device compatibility to strengthen market position. These results highlight the importance of aligning internal strengths with external market opportunities, providing actionable insights for managers seeking to enhance competitiveness in a rapidly evolving digital industry. The study also offers implications for other firms in similar sectors to strategically leverage their unique resources to maintain sustainable growth and adapt to technological advancements.

Keywords:

digitalization, mobile computing, competitive strategy

This is an open access article under the CC BY-SA license.

INTRODUCTION

The development of information technology has had a significant impact on business transformation in various sectors, both at the national and global levels. One form of technology adoption is the use of *mobile computing handheld* devices to support company operations (Li, 2023; Mukhtar et al., 2020; Wu et al., 2018). *Handheld mobile computing* is becoming an important component in industries that demand data speed and accuracy, such as logistics, manufacturing, distribution, and retail. These devices enable real-time data collection and processing in the field, thereby improving operational efficiency and productivity. In Indonesia, the demand for these devices shows an increasing trend in line with the acceleration of digital transformation in various industries (Mallisetty, 2023; Sulastri et al., 2023; Wilson, 2020; Zahrah & Dwiputra, 2023). However, most of the *mobile computing handheld* devices used are still dominated by imported products. This shows that there are opportunities as well as challenges for local industry players to compete in a highly competitive market. However, the HKT industry in Indonesia is still heavily dependent on imported products from global

principals . This dependence causes local companies not only to face challenges in terms of costs and logistics but also in terms of bargaining power with principals, fluctuations, government regulations such as the Domestic Component Level (TKDN) policy, and device certification. Competition between distributors and solution providers is also getting tighter, requiring companies to have a clear competitive advantage, both in terms of products, services, and marketing strategies.

PT XYZ is one of the companies engaged in providing *handheld mobile computing* solutions, including hardware distribution, software, and integration services. The company has been operating for more than a decade and has established strategic partnerships with various global principals. Despite having extensive experience and network, PT XYZ faces increasingly complex challenges, such as exchange rate fluctuations, changes in government regulations, and increasing competition from local and international competitors. Government policies related to the Domestic Component Level (TKDN) and postel certification/type approval are both obstacles and incentives for companies to innovate. On the other hand, customers' expectations for fast, responsive, and integrated services are increasing. This situation requires companies to not only focus on product distribution but also to strengthen service capabilities and develop technology-based solutions. Therefore, it is necessary to formulate an appropriate and sustainable competitive strategy.

This research was conducted to respond to the strategic needs of PT XYZ in facing market dynamics and competitive challenges that continue to develop. By using a comprehensive analysis approach, it is hoped that this research will be able to produce a competitive strategy that is not only reactive to current conditions but also proactive in facing future changes. The research focus includes the identification of strategic resources, the analysis of the external environment, and the formulation and selection of relevant strategies. The Resource-Based View (RBV) approach and VRIO analysis can be used to identify internal resources and capabilities that provide a competitive advantage. Meanwhile, PESTEL and Porter's Five Forces analysis can help companies understand external dynamics such as regulation, market conditions, technology, and competition intensity. Through SWOT analysis, the company can thoroughly map its strategic position. The next step is to determine the priorities of the strategy using the Quantitative Strategic Planning Matrix (QSPM) so that the chosen strategy is objective and measurable. This integrative approach will provide a solid foundation in formulating policies and the company's tactical steps going forward. In this way, the company can maintain its position in the industry and create a long-term competitive advantage.

Previous research by Hitt et al. (2018) highlighted that firms leveraging unique internal resources through the Resource-Based View (RBV) achieve sustained competitive advantage, particularly in technology-driven industries. However, this study primarily focused on large multinational corporations, leaving a gap regarding medium-sized local companies operating in highly import-dependent sectors, such as the Indonesian *handheld mobile computing* industry. Another study by Li and Liu (2020) examined the impact of strategic alignment between internal capabilities and external market dynamics using SWOT and PESTEL analyses, demonstrating that proactive environmental scanning enhances organizational resilience. Nevertheless, their research did not integrate quantitative strategic decision-making tools such as the QSPM, which limits the objectivity in prioritizing strategies. This integrative approach not only identifies the firm’s unique resources and capabilities but also objectively prioritizes strategies in response to complex market dynamics, regulatory fluctuations, and rising customer expectations. The research aims to formulate a sustainable competitive strategy for PT XYZ, providing managerial insights to enhance operational efficiency, strengthen market positioning, and ensure long-term business sustainability in a highly competitive and rapidly evolving technological landscape.

METHOD

This research was applying a comprehensive analytical framework that integrates the Resource-Based View (RBV), VRIO, PESTEL, Five Forces, SWOT, and Quantitative Strategic Planning Matrix (QSPM). It was conducted at PT. XYZ which is in the Central Jakarta area. The research time was conducted in January 2025 – June 2025. The data was obtained through in-depth interviews with the management of PT XYZ and supported by literature studies and secondary data.

The data used in this study are primary and secondary data. According to Sugiyono (2019), primary data is a source of data obtained directly from the original source (not through intermediary media). The method used to obtain primary data is the interview method. In this study, primary data was obtained from the results of interviews with experts who have been determined to have the authority to formulate alternative strategies. Meanwhile, secondary data is a source of data that can be obtained by researchers indirectly through intermediary media (obtained and recorded by other parties). Secondary data in this study was obtained from related agencies such as the Central Statistics Agency, the Ministry of Trade of the Republic of Indonesia, the Ministry of Industry of the Republic of Indonesia, PT. XYZ and others.

In this study, the method used is a descriptive qualitative method. The research method is based on data processing that is descriptive in nature. Descriptive qualitative research was conducted to explain existing research without providing manipulation of the variable data studied by conducting direct interviews, (Hanyfah et al. 2022). To select respondents in this study, a non-probability sampling technique is used, where the technique is not based on the law of probability so that it does not provide the same opportunity or opportunity for each element or member of the population to be selected as a sample.

RESULTS AND DISCUSSION

Internal Condition Analysis

Internal factor analysis is a systematic approach that aims to evaluate the performance of a company by focusing on the utilization and management of resources and capabilities owned and controlled internally by the company. This approach assumes that competitive advantage can be achieved through the optimization of strategic assets sourced from within the company. In this study, internal factor analysis was carried out using VRIO analysis with a Resource-Based View (RBV) approach. Resources are defined as the form of assets owned and controlled by the company, both tangible and intangible, which play a strategic role in supporting the achievement of the company's goals (Grant 2016).

VRIO Analysis

Using the Resource-Based View (RBV) approach, it can be identified that PT XYZ has a number of internal assets and organizational capabilities that strategically meet the dimensions of VRIO, namely having value, rare, inimitable, and supported by an adequate organizational system (organized). Key components that reflect these advantages include the company's reputation that has been built firmly in the market, long-term exclusive relationships with global principals, and the use of integrated information technology through Enterprise Resource Planning (ERP) and Customer Relationship Management systems (CRM). This advantage is reinforced by the presence of highly competent human resources and a corporate culture that consistently encourages innovation and customer-oriented solutions. These findings are consistent with the theory put forward by Barney (1991) who emphasizes that long-term competitive advantage often stems from dynamic

capabilities and intangible resources that competitors cannot easily replicate. However, physical assets such as warehouse facilities or logistics infrastructure cannot be used as the main mainstay in creating differentiation because of their relatively easy substitution by competitors. Therefore, the company's strategy going forward needs to be focused on optimizing and developing strategic resources that are difficult to replicate in order to maintain a competitive position in the dynamic mobile computing handheld industry. Based on the results of the identification of internal factors through the analysis of VRIO, there are 25 internal factors derived from the resources and capabilities of PT. XYZ. Each of these factors is divided into two groups, namely weaknesses and strengths.

External Condition Analysis

External factor analysis is a process to identify and evaluate the forces of conditions outside the company that can affect the company's performance and strategy. The analysis of external factors used in the study was the Five Forces analysis and the PESTEL analysis. PESTEL analysis is a method used in strategic planning to assess the extent to which macro external factors can create opportunities or threats to the company (David 2017), by identifying and analyzing political, economic, social, technological, environmental, and legal factors. While the Five Forces analysis is an important tool for analyzing the attractiveness of an industry as well as understanding how external forces affect a company's profitability and competitive strategy (Hill et al. 2017).

Analyzes PESTEL

The PESTEL analysis aims to identify six dimensions of the macro external environment that affect the business dynamics of companies in the handheld mobile computing industry. From the political aspect, national policies such as Making Indonesia 4.0 and the Digital Indonesia Roadmap 2021–2024 are catalysts for the growth of the technology sector, including the mobile device industry as carried out by PT XYZ. Nonetheless, companies must navigate the complexities of import regulations and compliance with TKDN policies and personal data protection regulated in various national regulations, such as Presidential Regulation of the Republic of Indonesia Number 32 of 2022 concerning Commodity Balances, Trade Regulation No. 16–24 of 2025 concerning OSS and INATRADE-based import licensing policies, regulations, and procedures, and regulations, and Permenperin No. 6 of 2024 stipulating technical reporting and use obligations Import surveyor for electronic devices.

Economically, PT XYZ is affected by fluctuations in the rupiah exchange rate against foreign currencies because it still depends on imported products from global principal. Global economic instability also has an impact on the company's logistics and operational costs. However, the increasing need for digitalization in the logistics, e-commerce, and manufacturing sectors provides promising market potential (BPS, 2024). From the social side, there is an increase in awareness of technology-based operational efficiency and the adoption of automation systems by companies in Indonesia. The quality of after-sales service and technical support systems are important aspects in maintaining customer loyalty, especially from the corporate sector which is highly dependent on the performance of digital devices.

Environmentally, increasing pressure on sustainable business practices encourages companies to apply green technology principles, including energy efficiency and e-waste management. This initiative is in line with the Sustainable Development Goals (SDGs) and at the same time strengthens the company's image in the eyes of stakeholders. Meanwhile, the legal aspect shows the importance of compliance with Postel/Type Approval certification, the Personal Data Protection Law, and contractual regulations that apply in the

procurement of public sector goods and services. Compliance with these regulations not only minimizes legal risks but also strengthens PT XYZ's reputation and legitimacy as a reliable and professional technology partner.

Analyzes Five Forces

This framework is designed to help PT. XYZ in identifying various external pressures that can affect the competitive position of the company. In this study, an assessment was carried out with a likert scale of 1-5 on each aspect, to measure the intensity of the influence on each force on the sustainability of the business process. In the first aspect, namely competition between similar companies where the competition in the mobile computer industry is very high, characterized by many strong competitors both national and international. Rivalry occurs not only in the price aspect, but also in innovation, service quality, and responsiveness to customer needs. This result reflects the significant intensity of the competition. PT. XYZ relies on its advantages in integrated services, a built-in reputation, and strategic partnerships with global principals. In accordance with Porter's (1980) view, high competition will limit the profitability of the industry and encourage companies to continue to innovate to stay relevant.

The second aspect is the threat of new entrants, although there is potential for the entry of new players, there are barriers to entry in this industry such as large capital requirements, technical certification (for example type approval), and customer loyalty making market penetration difficult. Then the third aspect is the threat of product substitution, the threat of product substitution to PT. XYZ is at a high or influential level, because the prices offered are relatively cheaper, the availability of more goods and better performance. Therefore, to maintain its competitive position, PT. XYZ needs to continue to show added value that the substitute product does not have. In addition, adapting to technology trends such as cloud integration, IoT, and supporting software is also important for companies to remain relevant in the face of dynamic substitution threats.

The bargaining power of suppliers is the fourth aspect in the analysis of the five forces, where in PT. XYZ's reliance on global vendors with proprietary technology puts the company in a position of relative vulnerability, especially in terms of pricing, specifications, and supply. This is because if the supplier chooses to carry out vertical integration or increase control over distribution. So that PT. XYZ needs to gradually diversify its suppliers, maintain excellence in integration services, and strengthen added value in the eyes of customers so that they do not only depend on the product strength of the main supplier. Then the fifth aspect is consumer bargaining power, consumer bargaining power against PT. XYZ is fairly high or influential. This is based on consumer characteristics where if the cost to switch to a competitor is relatively low, then the consumer's bargaining power increases. Then in the current conditions, consumers can more easily access product specifications, market prices and see reviews on the internet so as to increase consumer negotiation power. The aspects contained in the two analyses are used as a basis for categorizing whether these aspects are included in the opportunities or threats to the company.

Input Stage

The input stage is carried out by identifying External Factor Evaluation or EFE and Internal Factor Evaluation (IFE) that have been carried out in previous identification using several methods.

External Factor Evaluation Matriks (EFE)

In the EFE matrix, weighting is carried out on each variable, the weighting is carried out using the paired comparison method.
The following are the results of the evaluation of external factors contained in Table 1

Table 1 Results of EFE Matrix analysis of PT. XYZ

Code	Peluang (Oppurtunity)	Weight	Rating	Score
P1	Government policies to encourage digital transformation	0,072	4	0,288
P2	Growth in logistics, retail, and e-commerce in Indonesia	0,076	4	0,304
P3	Increased need for efficiency and automation	0,074	4	0,296
P4	Developments in technological trends	0,080	4	0,320
P5	After-sales service	0,078	4	0,312
P6	Technology collaboration with global brands	0,082	4	0,328
P7	Technical HR Development	0,073	4	0,292
P8	Increased product life and recycling	0,072	4	0,288
P9	Sustainability initiatives or corporate social responsibility (CSR) programs in the environmental field	0,072	3	0,216
P10	Contractual renewal and legality of after-sales service	0,073	3	0,219
	Total odds weighting calculation	**0,752**	**-**	**2,863**
Code	**Threats**	**Weight**	**Rating**	**Score**
T1	Changes in import or import duty policies	0,026	1	0,026
T2	Rupiah exchange rate	0,027	1	0,027
T3	Inflation has an impact on the level of customer purchasing power	0,028	1	0,028
T4	Amendments to the Regulation of the Minister of Trade, Industry, KOMDIGI.	0,025	1	0,025
T5	Number and Strength of Competitors	0,028	1	0,028
T6	Product and Service Differentiation	0,029	2	0,058
T7	Better Substitution Product Performance	0,030	1	0,030
T8	Cost and Switching Cost	0,030	2	0,060
T9	Potential for Vertical Integration by Suppliers	0,025	2	0,050
	Total Threat Weight Calculation	**0,248**	**-**	**0,332**
	Total EFE Matrix Calculation	**1,000**		**3,195**

Internal Factor Evaluation Matriks (IFE)

The process of calculating the total score is done in a similar way as in the EFE matrix. The following are the results of the evaluation of external factors contained in Table 2

Table 2 Results of the IFE Matrix analysis of PT. XYZ

Code	Strength	Weight	Rating	Score
S1	Employees who have abilities in their respective fields.	0,033	3	0,099
S2	Establishing relationships with the government	0,046	4	0,184
S3	Establish relationships with principals	0,046	4	0,184
S4	Establish relationships with customers	0,046	4	0,184
S5	Fully equipped office facilities	0,037	3	0,111
S6	Adequate internet availability	0,035	3	0,105
S7	Repair room for after-sales service	0,041	4	0,164
S8	Adequate warehouse to cover the entire product	0,043	4	0,172

Table 2 Results of the IFE Matrix analysis of PT. XYZ

Code	Strength	Weight	Rating	Score
S9	Podcast studio to create educational content related to the electronics industry	0,039	4	0,156
S10	The financial condition of PT. XYZ is in good condition	0,045	4	0,180
S11	Have sufficient capital to run the company's operations	0,041	4	0,164
S12	Ability to obtain financing from banks and investment partners	0,039	3	0,117
S13	Bulk buying power	0,042	4	0,168
S14	Recurring revenue	0,041	4	0,164
S15	Good reputation in the eyes of customers	0,043	4	0,172
S16	Ability to cope with changes in technological development	0,042	4	0,168
S17	ERP/CRM-based project management and service management system	0,04	3	0,12
S18	Solution-oriented organizational culture and customer satisfaction	0,040	4	0,16
S19	Strategic partnerships	0,042	4	0,168
	Total Strength weight calculation	**0,781**	-	**2,940**
Code	**Weakness**	**Weight**	**Rating**	**Score**
W1	Provide internal and external training to employees	0,038	2	0,076
W2	Employee Code of Conduct	0,035	1	0,035
W3	Provide competitive employee salaries with similar industry companies	0,034	1	0,034
W4	Employee loyalty to the company	0,039	1	0,039
W5	Performance appraisal of employees	0,039	2	0,078
W6	Having a work-life balance	0,034	1	0,034
	Total Weakness Weight Calculation	**0,219**	**-**	**0,296**
	Total IFE Matrix Calculation	**1,000**	**-**	**3,236**

Matching Stage

The second stage after evaluating internal and external factors at PT. XYZ is the matching stage. The matching stage in this study was carried out using the IE (Internal-External) Matrix and SWOT analysis.

IE Matrix (Internal – External)

The IE matrix aims to help companies map their positions in nine strategy cells based on the results of internal factor analysis (IFE) and external (EFE) scores. The score results on the IFE matrix of PT. XYZ of 3.236 is used as the x-axis and for the EFE matrix the result score of 3.195 is used as the y-axis. The results of the IE matrix analysis in Table 3 show that PT. XYZ is in the position of Cell I (Grow and Build) which reflects a very strong strategic position, both internally and externally. The relevant strategies in cell I are Market Penetration, Market Development, Product Development and Vertical & Horizontal Integration (David 2017). The implementation of these strategies is considered appropriate to encourage aggressive growth and targeted expansion.

Strong Average Weak

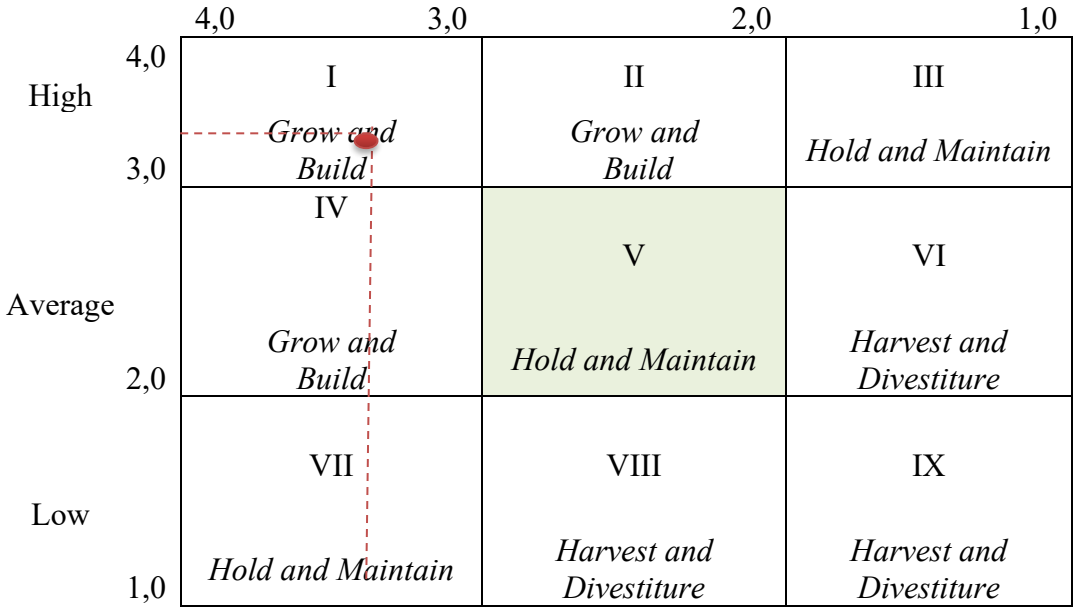


Figure 1. Matriks IE PT. XYZ

TOWS Matrix

The TOWS matrix is used to determine alternative strategies based on strengths, weaknesses, opportunities and threats found in PT. XYZ that has been analyzed in a SWOT analysis. The TOWS matrix will produce four alternative strategies, namely, the S-O (strengths-oppurtunity) strategy, the W-O (weakness-oppurtunity) strategy, the S-T (strengths-threats) strategy, and the W-T (weaknesse-threats) strategy. The following is the TOWS matrix at PT. XYZ:

Tabel 3 TOWS Matriks PT. XYZ

S-O Strategy	W-O Strategy
SO1 : Strengthening digital promotion and education to expand the use of PT. XYZ (Market Penetration) SO2 : Entering new vertical markets with the support of global partners (Market Development) SO3 : Strengthening exclusive contracts with device manufacturers to ensure stable supply and prices (Vertical Integration)	WO1 : Expanding collaboration or acquisition of local partners (Horizontal Integration) WO2: Strengthen the differentiation of after-sales service and national SLA. (Market Penetration)
S-T Strategy	**W-T Strategy**
ST1 : Building a brand through content marketing and case studies. (Market Penetration) ST2 : Strengthening management information systems for regulatory adaptation (Market Penetration) ST3 : Improve device compatibility (Product development)	WT1 : Increasing product diversification (Product development) WT2 : Building a local supply chain to reduce the impact of global supply shocks (Vertical Integration)

Based on the results of the formulation of alternative strategies in Table 3 using TOWS, the matrix is produced, namely progressive and adaptive strategies. The grouping in the strategy recommendations is based on progressive and adaptive strategies, namely,

market penetration, market development, product development, vertical integration and horizontal integration.

Decision Stage

At this stage, companies are faced with the need to select and prioritize strategies that have been identified and analyzed beforehand. In this study, decision-making was carried out using the Quantitative Strategic Planning Matrix (QSPM) analysis tool. The QSPM method is used to evaluate alternative strategies objectively by giving weight and score to each strategy, based on the relative attractiveness to the external and internal factors that have been formulated. So that QSPM allows the selection of the most feasible strategy and in accordance with the company's capabilities and the dynamics of the business environment faced. The recapitulation of the QSPM results is in Table 5 as follows:

Tabel 4. Rekapitulasi hasil QSPM PT. XYZ

	Alternative Strategies				
	Market Penetration	**Market Development**	**Product Development**	**Vertical Integration**	**Horizontal Integration**
QSPM internal factors	3,70	3,62	3,78	3,74	3,66
QSPM external factors	3,58	3,46	3,69	3,59	3,43

It can be seen from Table 4 that the main or priority selected strategy alternatives are product development strategies. Product development is the main alternative strategy because it obtains the highest total attractiveness score in the QSPM method both from internal and external factors. The total attractiveness score of QSPM from internal factors in the market penetration strategy is 3.78 and the results of the total attractiveness score of QSPM from external factors in the strategy is 3.69.

Managerial Implications

One of the top priorities that management must take is to strengthen differentiation strategies through product and service innovation. Based on the results of SWOT and QSPM analysis, companies are advised to develop technological solutions that are superior and integrated with the needs of industries such as logistics, manufacturing, and modern retail. This strategy can be realized by expanding the product portfolio, utilizing cutting-edge technologies such as IoT and RFID, and improving the technical capabilities of human resources through training and certification. This step will strengthen PT XYZ's position as a strategic partner for customers. Then, management needs to strengthen strategic partnerships with global principals to ensure technological continuity and product quality. This collaboration allows the company to access the latest technological innovations, as well as expand the range of distribution and technical support. By becoming the main partner of international principals, PT XYZ can maintain its position as a market leader in the mobile computing industry in Indonesia. Another managerial implication is the importance of building a more responsive and adaptive regulatory compliance system. Changes in import policies, TKDN regulations, and Personal Data Protection Law require companies to have a strong compliance unit. Management also needs to increase collaboration with government

agencies to obtain up-to-date regulatory information that is relevant to the company's business.

CONCLUSION

The handheld mobile computing industry in Indonesia faces intense competition marked by rivalry, threats from new entrants, consumer bargaining power, and substitutes, demanding adaptive strategic responses from companies like PT XYZ. Leveraging internal strengths such as bulk purchasing power, strong customer reputation, strategic partnerships, and a solution-oriented culture, PT XYZ holds sustainable competitive advantages according to VRIO analysis. The study recommends a primary strategy focused on product development through greater diversification and enhanced device compatibility, supported by secondary strategies including vertical integration to build a local supply chain, deeper market penetration via digital promotion and education, differentiation in after-sales service, improved national SLAs, and strengthened management systems for regulatory compliance. For sustained success, PT XYZ should monitor market trends, invest in employee training for new technologies, and promote collaborative innovation with local partners. Future research could explore the impact of emerging technologies such as AI and IoT on competitive strategies in Indonesia's handheld mobile computing industry, as well as the role of sustainability initiatives in shaping long-term industry dynamics.

REFERENCES

Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.

David, F. R. (2017). *Strategic Management: A Competitive Advantage Approach*. Pearson Education.

Grant, R. M. (2016). *Contemporary Strategy Analysis* (9th ed.). Wiley.

Hanyfah, S., Fernandes, G. R., & Budiarso, I. (2022). Penerapan Metode Kualitatif Deskriptif Untuk Aplikasi Pengolahan Data Pelanggan Pada Car Wash. *Seminar Nasional Riset dan Inovasi Teknologi (SEMNAS RISTEK) 2022*.

Hill, C. W. L., Schilling, M. A., & Jones, G. R. (2017). *Strategic Management Theory: An Integrated Approach* (12th ed.). Cengage Learning.

Hitt, M. A., Ireland, R. D., & Hoskisson, R. E. (2018). *Strategic management: Concepts and cases: Competitiveness and globalization* (12th ed.). Cengage Learning.

Li, X., & Liu, Y. (2020). Strategic alignment and firm performance: Evidence from technology-intensive industries. *Journal of Business Research*, 112, 220-230. https://doi.org/10.1016/j.jbusres.2019.11.029

Li, Y. (2023). Key Technologies of Financial Digital Industry Innovation and Green Development Driven by Information Technology. *International Journal of Computational Intelligence Systems*, 16(1). https://doi.org/10.1007/s44196-023-00262-1

Mallisetty, M. S. (2023). *Digital transformation: advancements in business*. Book Saga Publications.

Mukhtar, S., Putri, K. Y. S., Suseno, D. A., Wibowo, A., & Wardana, L. W. (2020). Influence of information technology towards the development economics of SMEs in Indonesia. *Humanities and Social Sciences Letters*, 8(3), 280-291. https://doi.org/10.18488/journal.73.2020.83.280.291

Porter, M. E. (1980). *Competitive strategy: Techniques for analyzing industries and competitors*. Free Press.

Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.

Sulastri, S., Mulyadi, H., Disman, D., Hendrayati, H., & Purnomo, H. (2023). Resilience acceleration model of small and medium enterprises through digital transformation. *Journal of Eastern European and Central Asian Research*, 10(4), 645-662. https://doi.org/10.15549/jeecar.v10i4.1355

Wilson, S. (2020). The pandemic, the acceleration of digital transformation and the impact on cyber security. *Computer Fraud and Security*, 2020(12), 15-18. https://doi.org/10.1016/S1361-3723(20)30128-7

Wu, J., Guo, S., Huang, H., Liu, W., & Xiang, Y. (2018). Information and communications technologies for sustainable development goals: State-of-the-art, needs and perspectives. *IEEE Communications Surveys and Tutorials*, 20(3), 2389-2406. https://doi.org/10.1109/COMST.2018.2812301

Zahrah, F., & Dwiputra, R. (2023). Digital Citizens: Efforts to Accelerate Digital Transformation. *Jurnal Studi Kebijakan Publik*, 2(1), 1-11. https://doi.org/10.21787/jskp.2.2023.1-11