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Building Community-Based Economy at Neighborhood (RT) Level Through People's Business and Digital Sales: Implementation Study of WarungRakyat Application

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Abstract: This study explores the integration of communal values, physical shelf arrangement (basket marketing), and digital technology through the WarungRakyat application to empower the neighborhood-level economy (RT). Using mixed methods, including surveys, focus group discussions, and Apriori algorithm analysis, this study was conducted in two RTs in Meruya Selatan, Jakarta Barat. The results indicate that the application improved business efficiency and product visibility. Community collaboration (gotong royong) strengthened logistics and participation. The study offers an integrative empowerment model aligned with the SDGs.

Keywords: Community Empowerment, Warungrakyat, Digital Sales, Gotong Royong, Basket Marketing

INTRODUCTION

Strengthening community-based economics at the neighborhood level is crucial for addressing economic vulnerability at the grassroots level. Although various digital solutions have emerged, their relevance and effectiveness for micro-urban communities remain underexplored Previous discussions noted that both maintaining relationships with current customers and developing long-term relationships with potential customers are essential (HD. Wijaya, 2024, 1281). Gotong royong, a traditional form of community solidarity in Indonesia, offers a unique foundation for collaborative business practices (Setyawan, 2023; Putri & Hasanah, 2021; Nursalim, 2022; Rachman, 2020; Wibowo & Santosa, 2022). However, its potential in the context of digital economic transformation has not been adequately researched. This study investigates how digital tools like WarungRakyat, when combined with physical strategies such as shelf organization (basket marketing), can increase visibility and sales for community-run businesses. Previous research has shown that effective shelf layout influences consumer

impulsive behavior (Widodo, 2021; Sulistyowati, 2020; Prasetyo, 2019; Harahap, 2021; Kartika, 2022) and that technology adoption among micro-enterprises remains uneven (Rahardjo, 2022; Yusuf, 2020; Handayani et al., 2021; Sari & Lestari, 2021; Lazuardi & Fadhilah, 2023). The Sustainable Development Goals (SDGs) emphasize building inclusive and resilient communities (UNDP, 2023).

This study addressed three research questions: (1) How does mutual cooperation (gotong royong) affect the neighborhood-based economic model, (2) How can basket marketing through WarungRakyat increase the competitiveness of small businesses, and (3) How effective are digital applications in supporting community businesses? re digital applications in supporting community businesses?

METHOD

This research applied a mixed-method approach. Quantitatively, 30 respondents across two RTs were surveyed using a 5-point Likert scale. Qualitative insights were gained through FGDs and observations. The Apriori algorithm was utilized to detect patterns in consumer purchase behavior, aided by digital logs from the WarungRakyat application. The study location was RT 005 and RT 007 in Meruya Selatan, Jakarta Barat. Respondents included small merchants, local consumers, and RT leaders. Analysis focused on correlating digital adoption and physical presentation with increased sales and engagement (Kotler & Keller, 2016).

RESULTS AND DISCUSSION

Survey results show strong positive perceptions toward the usefulness of digital platforms (avg. 4.3/5) and willingness to continue using WarungRakyat (avg. 4.1/5). Table 1 illustrates the linkage between the two variables:

Table 1. Correlation of Digital Usefulness and Usage Intention

Variable	Average Score
Technology Helps Business	4.3
Willingness to Continue Use	4.1

Source: Research data

Apriori analysis revealed that combinations of basic needs products (rice, oil, noodles) were the most frequently purchased. Observations confirmed that shelf arrangement at the consumer space improved impulse buying behavior (Widodo, 2021; Sulistyowati, 2020; Prasetyo, 2019; Harahap, 2021; Kartika, 2022). The application's dashboard features helped vendors track product flow efficiently.

Community participation (gotong royong) facilitated collective delivery systems and shared promotion strategies, boosting resilience (Setyawan, 2023; Putri & Hasanah, 2021; Nursalim, 2022; Rachman, 2020; Wibowo & Santosa, 2022). Challenges included internet instability and low digital literacy, mitigated through mentoring and internet subsidies. The application not only supported economic activity but also became a community tool for organizing logistics and sharing surplus inventory (Rahardjo, 2022; Yusuf, 2020; Handayani et al., 2021; Sari & Lestari, 2021; Lazuardi & Fadhilah, 2023).

The findings show a significant interplay between the application of gotong royong and digital basket marketing strategy. The gotong royong model fosters trust, task-sharing, and mutual support among community members, which ensures that initiatives like WarungRakyat are accepted and sustained. Meanwhile, the visibility and attractiveness of the product shelf, when supported by digital infrastructure, increases consumer interest and repeat transactions. Together, these two variables enhance both social and economic capital. Where gotong royong enhances cohesion and operational efficiency, basket marketing adds measurable commercial

value. The synergy between social cohesion and structured visual merchandising results in a more robust and inclusive RT-level economy.

A case simulation was also conducted to test the application of Apriori algorithm in a household setting where residents displayed WarungRakyat etalase (shelves) at their homes. The digital tracking system captured purchasing combinations from neighboring consumers. Frequent itemsets such as rice–eggs–instant noodles reappeared in many transaction logs. Based on these patterns, shelf layout was restructured to group high-frequency items. As a result, transaction time shortened and customers tended to increase basket size. This finding confirms the practicality of deploying Apriori analysis not only in retail kiosks but also in decentralized micro-shelf models inside consumer households, further strengthening WarungRakyat's adaptive implementation strategy.

CONCLUSION

This study demonstrates that the strategic integration of traditional communal values (gotong royong) with digital innovation can significantly strengthen the economic resilience of neighborhood (RT) communities. The WarungRakyat application not only facilitates structured and transparent sales processes, but also functions as a digital platform that cultivates collective ownership and participation across stakeholders—merchants, consumers, and local leaders.

The implementation of basket marketing—through the arrangement of physical shelves informed by real-time consumer data—enhances product visibility, stimulates impulse buying, and aligns better with localized consumption patterns. Meanwhile, the use of Apriori algorithm enables merchants to adapt offerings based on actual demand, contributing to more efficient inventory management and personalized service.

Importantly, the research findings suggest that this integrative model is scalable, replicable, and adaptable across other RTs or semi-urban clusters with similar socio-economic contexts. When backed by mentoring and basic digital infrastructure, the WarungRakyat model becomes a viable blueprint for inclusive, data-driven, and community-powered economic transformation, aligning with several Sustainable Development Goals (SDGs), especially those related to decent work, innovation, and reducing inequality.

In conclusion, the synergy between social capital (through gotong royong) and technological capital (via WarungRakyat and Apriori analytics) creates a sustainable pathway for neighborhood-scale entrepreneurship and digital empowerment

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