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CONFERENCE CHAIR'S REMARKS
PROFESSOR AGUNG DHARMAWAN BUCHDADI, ST, MM, Ph.D

Assalamu'alaikum warahmatullahi wabarakatuh.

Good morning and warm greetings to everyone.

Distinguished keynote speakers, Associate Professor Rosle Mohidin from University Malaysia Sabah, Malaysia, Dr. Tamer Zaki Fouad Mohamed, Ph.D. from Wjeen International Co., Ltd., Saudi Arabia, Dr. Zaiton Osman from University Malaysia Sabah, Malaysia, and Dr. Wahyu Jatmiko from the University of Southampton, United Kingdom.

Distinguished academics, researchers, practitioners, students, and all participants of The 4th International Conference on Accounting, Management, Economics, Business, and Social Sciences (ICAMEBSS).

It is a great honor for me, Prof. Agung D. Buchdadi, Ph.D., as the Conference Chair, to welcome all of you to the 4th ICAMEBSS. We are grateful to gather here today to exchange ideas, research findings, and collaborative perspectives from various countries and academic disciplines.

This year's conference theme, "Advancing Sustainability from Innovation to Impact in Business, Economic, and Social Science Systems," reflects our shared commitment to creating meaningful and sustainable impacts through innovation, research, and collaboration. In today's dynamic global environment, academics and practitioners play an important role in developing solutions that contribute to economic growth, social development, and sustainable business practices.

We are proud to host distinguished keynote speakers whose expertise and international experiences will provide valuable insights and inspire productive discussions throughout this conference. We hope this 4th ICAMEBSS will strengthen academic networks, encourage international collaboration, and produce impactful research contributions for the global community.

I would also like to express my sincere appreciation to all committee members, institutional partners, presenters, and participants for your support and dedication in making this conference possible.

Finally, I wish all participants a successful and inspiring conference experience. Thank you very much.

Wassalamu'alaikum warahmatullahi wabarakatuh..

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PROGRAM

09:00 – 09:30 AM	:	**Registration**
09:30 – 09:35 AM	:	**Opening Ceremony of the 4th ICAMEBSS 2026**
09:35 – 09:40 AM	:	**National Anthem: Indonesia Raya**
09:40 – 09:45 AM	:	**Welcome Speech by the Conference Chair**
09:45 – 09:50 AM	:	**Opening Remarks: Associate Professor Rosle Bt Mohidin**
09:50 – 09:55 AM	:	**Announcement for Parallel Sessions of 4th ICAMEBSS 2026**
09:55 – 01:00 PM	:	**Parallel Session**
01:00 – 01:30 PM	:	**Seminar Session: 1st Speaker Dr. Zaiton Usman**
01:30 – 02:00 PM	:	**Seminar Session: 2nd Speaker Tamer Zaki Fouad Mohamed, Ph.D.**
02:00 – 02:30 PM	:	**Seminar Session: 3rd Speaker Dr. Wahyu Jatmiko**
02:30 – 02:45 PM	:	**Photo Session**
02:45 PM	:	**Closing Ceremony**

PRESENTATION SCHEDULE

Room: 1 (ZOOM) Hours: 09.55-13.00 Jakarta Time

No. Moderator: Nazwanda Junika Putri (Universitas Negeri Jakarta)

1. PT PESAT LAND PROPERTI MARKETING STRATEGY TO INCREASE SALES
   Adiva Crestoriena
2. STRATEGIC MARKETING PRACTICES IN A HEALTHY BEVERAGE MSME: THE KOKOPLUS CASE
   Aestika Anggika
3. URBAN-RURAL POVERTY DISPARITIES IN INDONESIA: EVIDENCE AND POLICY IMPLICATIONS
   Ahmad Soleh
4. DETERMINANTS OF SUSTAINABILITY REPORTING IN EMERGING MARKETS
   Ai Hendrani
5. SUSTAINABLE DEVELOPMENT OF ENGLISH TEACHING COMPETENCIES OF NON-ENGLISH BACKGROUND TEACHERS IN RURAL INDONESIA: A PRELIMINARY STUDY
   Aryani Delewati
6. SUSTAINABLE PRODUCTIVE ZAKAT GOVERNANCE FOR MSME EMPOWERMENT IN INDONESIA
   Askardija R. Adji
7. THE MEDIATING ROLE OF JOB CRAFTING ON THE IMPACT OF SOCIAL SUPPORT TO SUBJECTIVE WELL-BEING
   Bahagia Tarigan
8. RETHINKING THE GOVERNANCE–PERFORMANCE NEXUS: DOES CSR DISCLOSURE TRULY MATTER IN THE INDONESIAN PROPERTY SECTOR?
   Barlia Annis Syahzuni
9. EMPIRICAL STUDY OF GENERAL INSURANCE PERFORMANCE IN INDONESIA BASED ON FINANCIAL INDICATORS: EXPLANATORY SEQUENTIAL MIXED METHODS APPROACH
   Fitria Virgantari
10. GREEN HUMAN RESOURCE MANAGEMENT AND INDUSTRIAL SUSTAINABILITY IN BATAM
    Haniyatus Solikhah
11. POTENTIAL OF ECONOMIC GROWTH THROUGH MSME DEVELOPMENT IN CIBURUY VILLAGE, CIGOMBONG DISTRICT, BOGOR REGENCY
    Herman
12. ENVIRONMENTAL MANAGEMENT ACCOUNTING AND STRATEGIC RESILIENCE: ROLES OF INFORMATION SYSTEMS AND ORGANIZATIONAL CULTURE
    Indah Yani
13. ACTIVITY-BASED COSTING FOR HOMESTAY PRICING UNDER EXPECTED UTILITY THEORY
    Firda Rachma Amalia

Room: 2 (ZOOM) Hours: 09.55-13.00 Jakarta Time

Moderator: Ika Miftahul Janah (Universitas Negeri Jakarta)

No.

1. CONSERVATION OF RESOURCES THEORY IN CONTEMPORARY SERVICE INDUSTRY DYNAMICS: A BIBLIOMETRIC STUDY
   Jemi Cahya Adi Wijaya
2. MACHINE LEARNING-BASED CONSUMER PURCHASE PREDICTION AND SEGMENTATION FOR PERSONALIZED E-COMMERCE MARKETING
   Lukmanul Hakim
3. TOURIST EXPERIENCES IN INDONESIAN COMMUNITY-BASED CULTURAL TOURISM VILLAGES
   Masetya Mukti
4. ANALYSIS OF THE BREAK-EVEN POINT (BEP) IN PROFIT PLANNING FOR AN OYSTER MUSHROOM CULTIVATION BUSINESS IN KELINDANG ATAS VILLAGE, MERIGI KELINDANG DISTRICT, CENTRAL BENGKULU REGENCY
   Melati Afriani
5. OSING LOCAL WISDOM-BASED BUSINESS STRATEGIES FOR MSME SUSTAINABILITY IN BANYUWANGI, INDONESIA
   Moh. Fahrurrozi
6. TAX CONSULTANTS' PERCEPTIONS OF THE CORETAX ADMINISTRATION SYSTEM: A TECHNOLOGY ACCEPTANCE MODEL APPROACH
   Ravika Permata Hati
7. HUMAN RESOURCE MANAGEMENT IN PUBLIC SECTOR: CHALLENGES AND SUSTAINABLE DEVELOPMENT
   Rona Tanjung
8. THE INFLUENCE OF DIGITAL MARKETING STRATEGY ON CUSTOMER LOYALTY IN INDONESIAN E-COMMERCE MSMES IN INDONESIA
   Siti Hanila
9. UNDERSTANDING LECTURERS' PROACTIVE WORK BEHAVIOR IN SUPPORTING CONTEXTUAL PERFORMANCE IN INDONESIAN PRIVATE HIGHER EDUCATION
   Suswati Nasution
10. FROM SILOS TO SYNERGY: A BIBLIOMETRIC ANALYSIS OF INTERNAL AUDIT AND ENTERPRISE RISK MANAGEMENT INTEGRATION (1990–2025)
    Taha Ahmad Jaber
11. THE INFLUENCE OF UTILIZING WEB MONITORING TOOLS, SOCIAL MEDIA MONITORING TOOLS, AND SEARCH ENGINE OPTIMIZATION ON MARKETING PLANNING AND ENHANCEMENT AT TRI BHAKTI BUSINESS SCHOOL
    Frengki Panangian, Gandung Hanif
12. STOCK VALUATION OF PT DCI INDONESIA TBK. BASED ON FUNDAMENTAL ANALYSIS AS THE BASIS FOR INVESTMENT DECISIONS
    Stella Nathasya
13. ENHANCING MSME CAPACITY AND COMMUNITY EMPOWERMENT IN SUPPORTING SUSTAINABLE TOURISM DEVELOPMENT IN THE PUNCAK AREA, BOGOR REGENCY
    Anwar Sulaiman

CONTENTS

CONFERENCE CHAIR'S REMARKS PROFESSOR AGUNG DHARMAWAN BUCHDADI, ST, MM, Ph.D 2

CONFERENCE COMMITTEE 3

PROGRAM 4

PRESENTATION SCHEDULE 5

CONTENTS 7

PT PESAT LAND PROPERTI MARKETING STRATEGY TO INCREASE SALES
Adiva Crestoriena 10

STRATEGIC MARKETING PRACTICES IN A HEALTHY BEVERAGE MSME: THE KOKOPLUS CASE
Aestika Anggika 17

URBAN-RURAL POVERTY DISPARITIES IN INDONESIA: EVIDENCE AND POLICY IMPLICATIONS
Ahmad Soleh 29

DETERMINANTS OF SUSTAINABILITY REPORTING IN EMERGING MARKETS
Ai Hendrani 45

SUSTAINABLE DEVELOPMENT OF ENGLISH TEACHING COMPETENCIES OF NON-ENGLISH BACKGROUND TEACHERS IN RURAL INDONESIA: A PRELIMINARY STUDY
Aryani Delewati 46

SUSTAINABLE PRODUCTIVE ZAKAT GOVERNANCE FOR MSME EMPOWERMENT IN INDONESIA
Askardija R. Adji 60

THE MEDIATING ROLE OF JOB CRAFTING IN THE RELATIONSHIP BETWEEN SOCIAL SUPPORT AND SUBJECTIVE WELL BEING AMONG FAMILY BUSINESS OWNERS
Bahagia Tarigan 73

RETHINKING THE GOVERNANCE–PERFORMANCE NEXUS: DOES CSR DISCLOSURE TRULY MATTER IN THE INDONESIAN PROPERTY SECTOR?
Barlia Annis Syahzuni 84

EMPIRICAL STUDY OF GENERAL INSURANCE PERFORMANCE IN INDONESIA BASED ON FINANCIAL INDICATORS: EXPLANATORY SEQUENTIAL MIXED METHODS APPROACH
Fitria Virgantari 100

GREEN HUMAN RESOURCE MANAGEMENT AND INDUSTRIAL SUSTAINABILITY IN BATAM
Haniyatus Solikhah 101

POTENTIAL OF ECONOMIC GROWTH THROUGH MSME DEVELOPMENT IN CIBURUY VILLAGE, CIGOMBONG DISTRICT, BOGOR REGENCY
Herman..... 110

ENVIRONMENTAL MANAGEMENT ACCOUNTING AND STRATEGIC RESILIENCE: ROLES OF INFORMATION SYSTEMS AND ORGANIZATIONAL CULTURE
Indah Yani..... 111

ACTIVITY-BASED COSTING FOR HOMESTAY PRICING UNDER EXPECTED UTILITY THEORY
Firda Rachma Amalia 126

CONSERVATION OF RESOURCES THEORY IN CONTEMPORARY SERVICE INDUSTRY DYNAMICS: A BIBLIOMETRIC STUDY
Jemi Cahya Adi Wijaya 134

MACHINE LEARNING-BASED CONSUMER PURCHASE PREDICTION AND SEGMENTATION FOR PERSONALIZED E-COMMERCE MARKETING
Lukmanul Hakim 148

TOURIST EXPERIENCE IN JAVA COMMUNITY-BASED CULTURAL TOURISM VILLAGES: CONTENT ANALYSIS
Masetya Mukti 158

ANALYSIS OF THE BREAK-EVEN POINT (BEP) IN PROFIT PLANNING FOR AN OYSTER MUSHROOM CULTIVATION BUSINESS IN KELINDANG ATAS VILLAGE, MERIGI KELINDANG DISTRICT, CENTRAL BENGKULU REGENCY
Melati Afriani..... 168

OSING LOCAL WISDOM-BASED BUSINESS STRATEGIES FOR MSME SUSTAINABILITY IN BANYUWANGI, INDONESIA
Moh. Fahrurrozi 178

TAX CONSULTANTS' ACCEPTANCE OF THE CORETAX ADMINISTRATION SYSTEM
Ravika Permata Hati 201

HUMAN RESOURCE MANAGEMENT IN PUBLIC SECTOR: CHALLENGES AND SUSTAINABLE DEVELOPMENT
Rona Tanjung..... 208

THE INFLUENCE OF DIGITAL MARKETING STRATEGIES ON CUSTOMER LOYALTY IN INDONESIAN E-COMMERCE MSMES IN INDONESIAN
Siti Hanila 214

UNDERSTANDING LECTURERS' PROACTIVE WORK BEHAVIOR IN SUPPORTING CONTEXTUAL PERFORMANCE IN INDONESIAN PRIVATE HIGHER EDUCATION
Suswati Nasution 227

FROM SILOS TO SYNERGY: A BIBLIOMETRIC ANALYSIS OF INTERNAL AUDIT AND ENTERPRISE RISK MANAGEMENT INTEGRATION (1990–2025)
Taha Ahmad Jaber 239

THE INFLUENCE OF UTILIZING WEB MONITORING TOOLS, SOCIAL MEDIA MONITORING TOOLS, AND SEARCH ENGINE OPTIMIZATION ON MARKETING PLANNING AND ENHANCEMENT AT TRI BHAKTI BUSINESS SCHOOL
Frengki Panangian, Gandung Hanif..... 240

STOCK VALUATION OF PT DCI INDONESIA TBK. BASED ON FUNDAMENTAL ANALYSIS AS THE BASIS FOR INVESTMENT DECISIONS
Stella Nathasya..... 254

ENHANCING MSME CAPACITY AND COMMUNITY EMPOWERMENT IN SUPPORTING SUSTAINABLE TOURISM DEVELOPMENT IN THE PUNCAK AREA, BOGOR REGENCY
Anwar Sulaiman..... 268

PT PESAT LAND PROPERTI MARKETING STRATEGY TO INCREASE SALES

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Abstract

The property sector plays a vital role in the economy, but property developers often face various internal and external challenges. PT Pesat Land Properti, as a developer, strives to maintain and increase its property sales. Therefore, the purpose of this internship is to understand the marketing strategies implemented by PT Pesat Land Properti to increase sales. The methods used in this internship include direct observation, interviews with the company, and participation in marketing activities such as content creation, social media promotions, digital marketing through marketplaces, and mentoring prospective buyers. The data obtained were then analyzed using a qualitative approach through IFE, EFE, IE, SWOT, and QSPM matrix analysis. The results of the analysis indicate that digital marketing strategies and direct promotions can increase consumer reach and purchase interest. Based on the *Strengths, Weaknesses, Opportunities & Threats* (SWOT) analysis, the most appropriate strategy to implement is the S-O (*Strengths-Opportunities*) strategy by utilizing the company's strengths to seize market opportunities. The results of the *Quantitative Strategic Planning Matrix* (QSPM) analysis indicate that strategies to increase digital promotion, utilize social media, and improve customer service are top priorities for increasing company sales. These findings are expected to serve as a reference for developing more innovative and sustainable marketing strategies.

Keyword: marketing strategy; IFE; EFE; IE; SWOT; QSPM

1. Introduction

Population growth and urbanization have significantly increased the demand for housing and residential properties. Housing is no longer viewed merely as a basic necessity but also as a symbol of lifestyle and social welfare. This condition has encouraged the rapid development of the property industry in Indonesia, particularly in urban and suburban areas.

West Java is one of the provinces with the highest population growth in Indonesia. According to data from the Central Statistics Agency, the population of West Java is projected to reach approximately 57.1 million people by 2035. This growth directly affects the increasing demand for housing and creates opportunities for property developers to expand their business activities.

The Bandung area, including Bandung City and Bandung Regency, has considerable potential for property development due to its large population and rapid infrastructure growth. In addition, the Indonesian property market continues to show positive trends. Mordor

Intelligence (2023) estimated that the Indonesian property market would reach USD 64.78 billion in 2024 and continue to grow in the following years.

PT Pesat Land Properti is a company engaged in property marketing and sales in Bandung and surrounding areas. The company offers residential properties targeting middle and upper-middle-class consumers with price ranges between IDR 695 million and IDR 1.35 billion. In carrying out its marketing activities, the company utilizes several marketing approaches such as canvassing, property listings, and digital promotion through social media platforms including Instagram and TikTok.

However, despite implementing various marketing strategies, the company still faces challenges in increasing and stabilizing sales performance. Competition among property developers has become increasingly intense, while changes in consumer preferences and economic conditions also influence purchasing decisions. Moreover, the company has not fully optimized the use of digital technology and customer data management in supporting marketing activities.

To address these challenges, an appropriate marketing strategy is required. One strategic analysis approach commonly used in business development is SWOT analysis, which identifies strengths, weaknesses, opportunities, and threats affecting organizational performance. In addition, strategic management tools such as IFE, EFE, IE, and QSPM matrices can help companies formulate and prioritize effective marketing strategies. Therefore, this study aims to analyze the marketing strategies implemented by PT Pesat Land Properti and formulate appropriate strategic recommendations to increase property sales.

2. Literature Review

2.1 Marketing Strategy

Marketing strategy refers to a comprehensive plan developed by a company to achieve marketing objectives and gain competitive advantages in the market. According to Kotler and Keller (2016), marketing strategy involves identifying target markets, understanding customer needs, and delivering value more effectively than competitors. An effective marketing strategy allows companies to maintain customer relationships, improve brand awareness, and increase sales performance. In the property industry, marketing strategies are particularly important due to the highly competitive market environment and changing consumer preferences.

2.2 SWOT Analysis

SWOT analysis is a strategic planning tool used to evaluate internal and external factors affecting company performance. SWOT consists of strengths, weaknesses, opportunities, and threats. According to Rangkuti (2016), SWOT analysis helps organizations identify their strategic position and formulate appropriate business strategies. Strengths and weaknesses represent internal factors, while opportunities and threats represent external environmental factors. Through SWOT analysis, companies can maximize strengths and opportunities while minimizing weaknesses and threats.

2.3 QSPM Analysis

The Quantitative Strategic Planning Matrix (QSPM) is a strategic management tool used to determine the most appropriate alternative strategy among several strategic options.

David and David (2017) explain that QSPM objectively evaluates alternative strategies based on internal and external strategic factors previously identified. The QSPM method assigns attractiveness scores to each alternative strategy to determine which strategy provides the highest strategic benefits for the company.

3. Material and Method

3.1 Research Design

This study employed a qualitative descriptive approach to analyze the marketing strategy implemented by PT Pesat Land Properti. The research was conducted during an internship program in the Marketing Division of PT Pesat Land Properti located on Jl. Permata Taman Sari IX No.4, Cisaranten Kulon, Arcamanik District, Bandung City, West Java. The data collection period lasted for four months, from July 21, 2025, to November 21, 2025.

3.2 Data Collection

Data collection was conducted through several qualitative methods, including direct observation, semi-structured interviews, documentation, and active participation in company marketing activities. Observation and participation were carried out by directly taking part in operational promotional activities such as property listings, social media content creation on Instagram and TikTok, and canvassing activities. Interviews were conducted with field supervisors and marketing managers to obtain primary information regarding current marketing strategies, internal company operations, and field challenges. Documentation methods were used to collect relevant company history, product specifications, and past sales data.

3.3 Data Analysis

Following the strategic formulation framework by David & David (2017), the data obtained were systematically analyzed using five sequential strategic management matrix tools, namely:

1. Internal Factor Evaluation (IFE) Matrix to evaluate strengths and weaknesses.
2. External Factor Evaluation (EFE) Matrix to evaluate opportunities and threats.
3. Internal-External (IE) Matrix to determine the company's precise quadrant position.
4. SWOT Matrix to generate alternative matching strategies.
5. Quantitative Strategic Planning Matrix (QSPM) to determine priority alternatives objectively.

4. Result

4.1 IFE and EFE Matrix Analysis

The results of the internal and external evaluation data processing are shown comprehensively in Table 1 and Table 2 below.

Table 1. Internal Factor Evaluation (IFE) Matrix

Internal Factors	Weight	Rating	Weighted Score
Strengths			

1. Good understanding of local market & direct relationships	0,11	4,0	0,44
2. Communicative, responsive, and professional services	0,11	4,0	0,44
3. Marketing strategy fits target market characteristics	0,10	3,6	0,36
4. Effective use of social media to expand promotion	0,10	3,6	0,36
5. Strategic location and competitive product prices	0,11	4,0	0,44
Weaknesses			
1. Limited number of marketing human resources	0,09	3,3	0,29
2. Manual and simple consumer data management	0,11	4,0	0,44
3. Suboptimal use of digital technology	0,09	3,3	0,29
4. Non-intensive follow-up of potential buyers	0,10	3,6	0,36
5. Non-systematic long-term marketing planning	0,11	4,0	0,44
Total IFE Score	**1,00**		**3,86**

Table 2. R Square

External Factors	Weight	Rating	Weighted Score
Opportunities			
1. Increasing community housing needs	0,11	4,0	0,44
2. Regional and infrastructure development	0,11	4,0	0,44
3. Cost-efficient social media marketing reach	0,10	3,6	0,36

4. Millennial segments and first-time homebuyers	0,10	3,6	0,36
5. Lifestyle changes prioritizing location comfort	0,11	4,0	0,44
Threats			
1. Fierce competition between property developers	0,09	3,3	0,29
2. Unstable economic conditions reducing purchasing power	0,10	3,6	0,36
3. Changing trends and consumer preferences	0,10	3,6	0,36
3. Changing trends and consumer preferences	0,11	4,0	0,44
5. Aggressive innovation and promotion of competitors	0,11	4,0	0,44
Total EFE Score	**1,00**		**3,93**

4.2 IE Matrix Positioning

Based on the calculation results, PT Pesat Land Properti obtained a total score of 3.86 for the IFE matrix and 3.93 for the EFE matrix. When plotted into the Internal-External (IE) Matrix, these coordinates position the company in **Quadrant I (Grow and Build)**. This indicates that aggressive and intensive market penetration strategies are highly appropriate.

4.3 Strategy Prioritization (QSPM Analysis)

The evaluation of alternative strategies using QSPM yielded the following Total Attractiveness Scores (TAS):

- **Strategy 1 (TAS: 7.59):** Increasing follow-up intensity toward potential buyers, strengthening communicative and professional services, and optimizing marketing strategies according to target market characteristics.
- **Strategy 3 (TAS: 7.50):** Optimizing social media and digital promotion to expand market reach to millennial segments and first-time buyers.
- **Strategy 5 (TAS: 7.18):** Preparing systematic long-term marketing planning.
- **Strategy 2 (TAS: 7.07):** Developing a structured, digital-based consumer database system (CRM).
- **Strategy 4 (TAS: 6.45):** Improving digital marketing competencies and capabilities of the marketing HR team.

5. Discussion

The findings indicate that PT Pesat Land Properti possesses strong internal capabilities (IFE: 3.86) and highly favorable external opportunities (EFE: 3.93) to expand its business performance. The company's strengths in understanding local market characteristics, providing communicative service, and maintaining strategic product locations with competitive pricing serve as significant competitive advantages in the Bandung property industry.

The data analysis also demonstrates that digital marketing plays a vital role in expanding market reach and attracting potential buyers. Utilizing social media platforms like Instagram and TikTok has proven to be an effective promotional approach due to wide audience coverage and cost efficiency. This aligns with the high demand from the millennial segment and first-time homebuyers who extensively rely on digital channels for gathering residential information before purchasing.

However, several operational weaknesses still hinder marketing effectiveness, particularly manual customer data management and the lack of consistent consumer follow-ups. This limitation reduces the company's ability to conduct optimized market segmentation and conversion.

The QSPM analysis shows that Strategy 1 scored the highest (TAS: 7.59), establishing it as the top priority. Improving customer-facing responsiveness and intensifying potential buyer follow-ups can bridge immediate communication gaps, thereby accelerating transaction closures. Simultaneously, Strategy 3 (TAS: 7.50) acts as a critical driver to funnel high-quality digital leads from social media platforms into the sales pipeline.

6. Conclusion, Implication, and Recommendation

6.1 Conclusion

This study concludes that PT Pesat Land Properti has strong internal and external conditions that support business development. Based on the IFE and EFE analyses, the company is positioned in the "Grow and Build" quadrant (Quadrant I), indicating that aggressive market penetration strategies are appropriate. The QSPM analysis determined that increasing follow-up intensity toward potential buyers (TAS: 7.59) and optimizing digital marketing (TAS: 7.50) are the most recommended priority strategies.

6.2 Implication

The practical implication of this study is that relying on traditional canvassing or unstructured property listings is no longer sufficient to secure a high conversion rate in the competitive Bandung property market. Shifting into systematic digital promotional channels and reinforcing highly responsive customer service will significantly maximize transaction closures and brand trust.

6.3 Recommendation

1. **Implement a CRM System:** The company should transition from manual tracking to a structured digital database system to manage consumer inquiries and data logs effectively.

2. **Optimize Social Media Assets:** Maximize video content marketing on Instagram and TikTok to showcase structural quality, location accessibility, and promotional updates tailored to young families.
3. **Establish Standardized Follow-up Schedules:** Train the marketing team to execute rigorous, professional, and rapid-response communication for all incoming digital leads.

7. References

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Strategic Marketing Practices in a Healthy Beverage MSME: The Kokoplus Case

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Abstract

This study aims to explore the strategic marketing practices implemented by Kokoplus, a micro, small, and medium enterprise (MSME) operating in the healthy beverage sector. The research examines how the business develops market positioning, customer experience, and promotional strategies in response to increasing consumer awareness of healthy lifestyles and growing competition in the beverage industry. The study is guided by the perspectives of strategic marketing, segmentation-targeting-positioning (STP), customer experience, and digital marketing. This research employed a qualitative descriptive approach using a case study method. Data were collected through semi-structured interviews with the business owner, direct observation, and business documentation. The data were analyzed using descriptive-conceptual analysis to understand the implementation of marketing practices within the business context. The findings indicate that Kokoplus has significant market potential due to its coconut-based healthy beverage products and its alignment with current healthy lifestyle trends. However, the business still faces several challenges, including limited brand awareness, unstructured promotional activities, and suboptimal utilization of digital marketing platforms. The study also found that product authenticity and direct interaction with customers contribute positively to customer experience and emotional engagement. This study contributes practical insights for MSME marketing development and provides academic contributions to the discussion of strategic marketing practices in emerging healthy beverage businesses.

Keywords: strategic marketing; MSME; customer experience; digital marketing; healthy beverage; qualitative study

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1. Introduction

In recent years, consumer awareness of healthy lifestyles has continued to increase, encouraging the growth of demand for natural, functional, and wellness-oriented beverage products. Consumers are no longer only concerned with taste and refreshment, but also with the perceived health value, natural ingredients, and functional benefits offered by beverages. This condition has created opportunities for healthy beverage businesses to develop products that are aligned with consumers' changing preferences toward healthier consumption habits. Functional beverages are increasingly viewed as products that provide additional value beyond basic hydration, particularly through ingredients that support wellness and daily health needs (Gupta et al., 2023). In line with this trend, consumer attitudes toward functional beverages are

influenced by perceived benefits, product knowledge, and the relevance of the product to a healthy lifestyle (Kowalska et al., 2024).

The healthy beverage market also provides opportunities for plant-based and natural beverage products. Plant-based beverages have gained attention because they are often associated with naturalness, health consciousness, and alternative consumption choices (Anjos et al., 2024). Moreover, consumers show interest in healthier beverage options when the products are perceived as beneficial and relevant to their needs, although purchase decisions may still be influenced by price, availability, and product familiarity (Hallak et al., 2022). In Indonesia, the increasing public attention toward sugar intake and healthier food and beverage consumption further strengthens the relevance of healthy beverage products. This situation is also reflected in public discussions regarding healthier product innovation in the food and beverage industry, including efforts to encourage products with better health value (Databoks Katadata, 2023; Kontan, 2025).

In this context, micro, small, and medium enterprises (MSMEs) in the beverage industry need to develop strategic marketing practices to remain competitive. MSMEs often have flexibility in responding to market opportunities, but they also face limitations in brand awareness, promotional consistency, market reach, and digital marketing capabilities. Strategic marketing is therefore important because it helps businesses define their market position, identify target customers, communicate product value, and build long-term competitiveness (Chernev, 2018; Kotler et al., 2022). For MSMEs, marketing strategy is not only related to selling products, but also to creating a clear value proposition, building customer relationships, and strengthening business differentiation in a competitive market.

Digital marketing has also become an essential element for MSMEs because it enables businesses to reach customers more efficiently, build brand awareness, and communicate product value through digital channels. Previous studies show that digital marketing can support SME performance by improving market access, customer engagement, and promotional effectiveness (Jadhav et al., 2023; Wu et al., 2024). Social media marketing is also considered important for MSMEs in Indonesia because it helps businesses improve visibility, interact with customers, and support business performance (Tatik & Setiawan, 2024). However, the effectiveness of digital marketing depends on how consistently and strategically businesses manage their digital platforms, content, and customer communication (Chaffey & Ellis-Chadwick, 2022).

Kokoplus is a healthy beverage MSME that offers coconut-based drink products, including green coconut water, young coconut drink, iced coconut, coconut jelly, and coconut-based iced cream. The business is located in Kukusan, Beji, Depok, and is managed directly by its owners. Kokoplus has potential because its coconut-based product concept is aligned with healthy lifestyle trends and consumer demand for natural beverage products. Product authenticity and direct customer interaction also become important strengths because they can create trust, emotional engagement, and positive customer experience. However, Kokoplus still faces several marketing challenges, including limited brand awareness, promotional activities that are not yet structured, and digital marketing platforms that have not been optimally utilized.

Although many studies have discussed strategic marketing, digital marketing, and consumer behavior in the healthy beverage or MSME context, limited attention has been given to how healthy beverage MSMEs implement strategic marketing practices in their real business

operations through a qualitative case study approach. Most previous studies tend to discuss consumer attitudes, digital marketing impact, or MSME performance more generally, while the practical implementation of market positioning, customer experience, and promotional strategy in a specific healthy beverage MSME remains underexplored. Therefore, this study focuses on Kokoplus as a case study to explore how strategic marketing practices are implemented in developing market positioning, strengthening customer experience, and supporting promotional activities. This study is expected to provide practical insight for healthy beverage MSMEs in improving competitiveness through clearer positioning, stronger customer engagement, and more structured digital marketing practices.

2. Literature Review

2.1 Strategic Marketing Practices

Strategic marketing practices refer to the process of formulating and implementing marketing decisions that enable a business to create value, reach target customers, and build sustainable competitiveness. In a competitive market, marketing strategy is not only concerned with promotional activities, but also with how a business defines its target market, differentiates its product, communicates value, and strengthens customer relationships. Kotler et al. (2022) explain that marketing management involves identifying customer needs, creating value, and building strong customer relationships through effective market-oriented strategies. Similarly, Chernev (2018) emphasizes that strategic marketing helps businesses align their market offerings with customer needs and competitive conditions.

For MSMEs, strategic marketing is especially important because these businesses often operate with limited resources while facing intense competition from larger firms and similar small businesses. Therefore, MSMEs need a clear marketing direction to strengthen product differentiation, brand awareness, and market positioning. Kustiningsih et al. (2022) highlight that MSME performance is influenced by the ability to build organizational capacity and strategic relationships, which support competitiveness in a changing business environment. In the context of Kokoplus, strategic marketing practices are needed to transform the business potential of coconut-based healthy beverages into stronger customer awareness, clearer market positioning, and more consistent promotional activities.

2.2 Segmentation, Targeting, and Positioning

Segmentation, targeting, and positioning are key elements in strategic marketing because they help businesses identify the most relevant customer groups and communicate a distinct product value. Market segmentation allows businesses to divide the market based on customer characteristics, needs, and behavior, while targeting helps the business select the most attractive market segment. Positioning then becomes the process of shaping how customers perceive the product compared with competitors (Kotler et al., 2022).

In the healthy beverage market, positioning is strongly related to the perceived health value, product naturalness, and relevance to consumers' lifestyles. Consumers who are increasingly aware of healthy consumption tend to consider the benefits and credibility of beverage products before making purchase decisions. Kowalska et al. (2024) explain that consumer attitudes and intentions toward functional beverages are influenced by perceived benefits, knowledge, and

product relevance. This indicates that healthy beverage businesses need to communicate product value clearly so that consumers understand the benefits offered. In the case of Kokoplus, positioning as a coconut-based healthy beverage MSME can be strengthened by emphasizing natural ingredients, freshness, and alignment with healthy lifestyle trends.

2.3 Healthy and Functional Beverage Consumption

Healthy and functional beverages have become increasingly relevant as consumers pay more attention to wellness, nutrition, and healthier consumption habits. Functional beverages are products that offer benefits beyond basic refreshment, often through ingredients associated with health, energy, hydration, digestion, or overall wellness. Gupta et al. (2023) state that functional beverages continue to develop through various functional ingredients and consumer demand for health-oriented products. This trend indicates that consumers are increasingly seeking beverages that provide both practical consumption benefits and perceived health value. Plant-based beverages are also gaining attention because they are commonly associated with naturalness, sustainability, and healthier alternatives. Anjos et al. (2024) explain that consumer perception and knowledge play an important role in shaping the consumption of plant-based beverages. In addition, Hallak et al. (2022) found that consumer demand for healthy beverages is influenced by willingness to pay, perceived health benefits, and barriers such as price and accessibility. These studies show that healthy beverage businesses must not only offer products with health-related value, but also communicate those benefits effectively to consumers.

Kokoplus is relevant to this market trend because its main product base is coconut and coconut-based beverages. Coconut-based products can be positioned as natural, fresh, and suitable for consumers who are interested in healthier beverage choices. However, the opportunity in the healthy beverage market needs to be supported by clear product communication and consistent marketing practices. Without structured marketing, product potential may not fully translate into stronger brand awareness and business growth.

2.4 Customer Experience and Product Authenticity

Customer experience refers to the overall impression formed through customer interactions with a product, service, brand, and business environment. In small businesses, customer experience is often shaped not only by the product itself, but also by direct interaction, service quality, communication, and emotional connection. Kotler et al. (2022) explain that customer value and satisfaction are central to marketing because they influence customer relationships and long-term business performance. Therefore, MSMEs need to create positive experiences that make customers trust the product and feel connected to the business.

Product authenticity is also important in the context of healthy beverages because consumers tend to value products that are perceived as natural, fresh, and credible. Tavares et al. (2026) explain that health-related claims and product information can influence consumer behavior and food choice, especially when consumers perceive the product as relevant to their health concerns. For Kokoplus, authenticity is reflected in its coconut-based product concept, direct preparation, and outlet-based customer interaction. These elements can strengthen customer trust because customers can directly observe or experience the product offering.

Direct interaction with customers also provides an advantage for MSMEs because it enables the business to receive feedback, build emotional engagement, and create a more personal

relationship with consumers. This is consistent with the findings of the Kokoplus case, where product authenticity and direct customer interaction become key strengths in shaping customer experience. Therefore, customer experience in this study is understood as an important part of strategic marketing practices that can support customer engagement and business competitiveness.

2.5 Digital Marketing for MSMEs

Digital marketing refers to the use of digital technologies, platforms, and online channels to communicate value, reach customers, build relationships, and support business performance. Chaffey and Ellis-Chadwick (2022) explain that digital marketing involves the strategic use of digital media and technology to achieve marketing objectives. For MSMEs, digital marketing is important because it provides opportunities to reach wider markets with more flexible and cost-efficient promotional activities.

Previous studies show that digital marketing has a significant role in supporting SME development and performance. Jadhav et al. (2023) found that digital marketing can influence SMEs by improving customer reach, marketing effectiveness, and business visibility. Wu et al. (2024) also indicate that digital marketing strategy is related to SME performance because it supports market communication and competitiveness. In the Indonesian MSME context, Tatik and Setiawan (2024) explain that social media marketing is important for MSME performance because it helps businesses increase visibility and interact with customers.

However, digital marketing does not automatically improve business performance if it is not managed strategically. Jung and Shegai (2023) emphasize that digital marketing innovation can affect firm performance through marketing capability. This means that businesses need the capability to plan content, manage digital platforms, communicate consistently, and evaluate promotional activities. In the case of Kokoplus, digital marketing is relevant because the business still faces challenges in optimizing digital platforms and conducting structured promotional activities. Therefore, digital marketing should be developed not only as a communication tool, but also as a strategic practice to increase brand awareness, customer engagement, and market reach.

3. Material and Method

This study employed a qualitative descriptive approach using a case study design. This approach was selected because the study aims to explore and describe the strategic marketing practices implemented by Kokoplus within its real business context. A qualitative approach is appropriate for understanding business phenomena in depth, particularly when the research focuses on meanings, practices, experiences, and contextual conditions rather than numerical measurement (Creswell & Poth, 2023). In addition, a case study design is suitable when the researcher seeks to investigate a contemporary phenomenon within a specific real-life context, especially when the boundaries between the phenomenon and its context are closely related (Yin, 2018).

The object of this study is Kokoplus, a healthy beverage MSME located in Kukusan, Beji, Depok. Kokoplus offers coconut-based beverage products, including green coconut water, young coconut drink, iced coconut, coconut jelly, and coconut-based iced cream. The business was selected because it represents an emerging healthy beverage MSME that has strong market

potential due to its natural coconut-based product concept and its alignment with current healthy lifestyle trends. However, Kokoplus also faces several marketing challenges, including limited brand awareness, unstructured promotional activities, and suboptimal use of digital marketing platforms. Therefore, this case is relevant for examining how strategic marketing practices are implemented in the context of a small healthy beverage business.

3.1 Design Study

This study was designed as a descriptive qualitative case study. The research focuses on exploring how Kokoplus develops its market positioning, creates customer experience, and utilizes promotional and digital marketing activities to support business growth. The case study design enables the researcher to obtain a deeper understanding of Kokoplus' marketing practices by examining the business directly and contextually.

The data sources in this study consisted of the business owner, direct observation, and business documentation. The business owner was selected as the key informant because the owner is directly involved in managing Kokoplus' products, customer interaction, promotion, and daily business operations. Direct observation was conducted to understand the product offering, sales channel, customer interaction, and business environment. Business documentation was also used to support the analysis, including available information related to products, promotional activities, and business identity.

Data were collected through semi-structured interviews, observation, and documentation. Semi-structured interviews were used to obtain information about Kokoplus' business background, product concept, target market, marketing practices, promotional activities, customer interaction, and challenges faced by the business. Observation was conducted to capture the real business situation and customer-facing activities. Documentation was used to complement the interview and observation data so that the findings could be understood more comprehensively. These data collection techniques are consistent with qualitative case study research, which commonly uses multiple sources of evidence to strengthen contextual understanding (Yin, 2018).

3.2 Data Analysis

The data in this study were analyzed using descriptive-conceptual analysis. The analysis process began with organizing the data obtained from interviews, observation, and business documentation. The data were then reviewed and categorized based on the main concepts used in the study, namely strategic marketing practices, segmentation-targeting-positioning, customer experience, and digital marketing. After that, the findings were interpreted by connecting the empirical data from Kokoplus with relevant marketing theories and previous studies.

The analysis focused on identifying how Kokoplus positions its coconut-based healthy beverage products, how product authenticity and direct customer interaction shape customer experience, and how digital marketing practices are used to support promotional activities. Strategic marketing theory was used to understand how Kokoplus creates value and builds competitiveness through market positioning and promotional practices (Chernev, 2018; Kotler et al., 2022). Digital marketing theory was also used to analyze how digital platforms can

support brand awareness, customer engagement, and market reach for MSMEs (Chaffey & Ellis-Chadwick, 2022; Jadhav et al., 2023; Tatik & Setiawan, 2024).

Based on the research focus, the research model of this study illustrates that strategic marketing practices are examined through three main components: segmentation-targeting-positioning, customer experience, and digital marketing. These components are used to understand how Kokoplus strengthens business competitiveness and customer engagement as a healthy beverage MSME.



Figure 1. Research Model

4. Result

The findings of this study show that Kokoplus has strong market potential as a healthy beverage MSME, particularly because its product concept is aligned with the increasing consumer preference for natural and healthier beverage options. Kokoplus offers coconut-based beverage products that are perceived as fresh, natural, and relevant to current healthy lifestyle trends. This finding is consistent with previous studies which explain that consumer interest in healthy and functional beverages is influenced by perceived health benefits, natural ingredients, and product relevance to wellness-oriented lifestyles (Gupta et al., 2023; Kowalska et al., 2024). Plant-based and natural beverages are also increasingly associated with health consciousness and alternative consumption choices, making Kokoplus' coconut-based product concept relevant to the growing healthy beverage market (Anjos et al., 2024).

The first finding relates to market positioning. Kokoplus positions itself as a coconut-based healthy beverage MSME that offers natural and refreshing products. This positioning is supported by the uniqueness of its product base, namely coconut, which can be associated with freshness, naturalness, and healthier consumption. From a strategic marketing perspective, clear positioning is important because it helps a business communicate its value proposition and differentiate itself from competitors (Chernev, 2018; Kotler et al., 2022). However, the findings also indicate that Kokoplus' positioning still needs to be communicated more consistently so that customers can more easily recognize the brand identity and product value.

The second finding concerns marketing challenges. Although Kokoplus has promising market potential, its marketing practices are still relatively informal. The main challenges identified in this study include limited brand awareness, promotional activities that are not yet structured, and digital marketing platforms that have not been optimally utilized. This condition shows that Kokoplus still needs a more systematic marketing strategy to support business growth. For MSMEs, limited resources often affect marketing consistency, but digital marketing can help improve visibility, customer reach, and promotional effectiveness when managed strategically (Jadhav et al., 2023; Wu et al., 2024).

The third finding relates to customer experience. Kokoplus' product authenticity and direct customer interaction are important strengths in creating positive customer experience. Customers can directly interact with the business through outlet-based selling, which allows the business to build trust and emotional engagement. This finding supports the view that customer experience is shaped not only by the product itself, but also by interaction, communication, and the value perceived by customers (Kotler et al., 2022). In the context of healthy beverages, authenticity and clear product information can strengthen consumer trust because customers tend to consider health-related value when choosing food and beverage products (Tavares et al., 2026).

The fourth finding concerns digital marketing utilization. Kokoplus has opportunities to use digital platforms to improve brand awareness and expand market reach. However, the findings show that its digital marketing practices have not been fully optimized. Promotional activities still need to be planned more consistently, including content creation, product communication, customer interaction, and brand identity development. Chaffey and Ellis-Chadwick (2022) explain that digital marketing should be managed strategically to achieve marketing objectives, while Tatik and Setiawan (2024) emphasize that social media marketing is important for MSMEs in Indonesia because it can support visibility, customer interaction, and business performance.

Overall, the results indicate that Kokoplus has significant growth potential as a healthy beverage MSME. Its main strengths are product authenticity, natural coconut-based products, and direct customer interaction. Nevertheless, Kokoplus still needs to strengthen its brand identity, develop more structured promotional activities, and optimize digital marketing platforms. These findings suggest that strategic marketing practices are essential for transforming Kokoplus' market potential into stronger brand awareness, customer engagement, and business competitiveness.

Table 1. Summary of Research Findings

No.	Main Finding	Description
1	Market Potential	Kokoplus has strong market potential because its coconut-based beverage products are perceived as natural, fresh, and relevant to the growing healthy lifestyle trend. This product concept supports its opportunity to compete in the healthy beverage sector.

2	Marketing Challenges	Kokoplus still faces several marketing challenges, including limited brand awareness, unstructured promotional activities, and the absence of consistent marketing planning. These challenges indicate the need for more systematic strategic marketing practices.
3	Customer Experience	Product authenticity and direct customer interaction become important strengths of Kokoplus. Outlet-based selling allows the business to build customer trust, create emotional engagement, and deliver a more personal customer experience.
4	Digital Marketing Utilization	Kokoplus has not fully optimized its digital marketing platforms. The business needs more consistent content planning, stronger brand communication, and better use of social media to increase brand awareness and market reach.

5. Discussion

This study demonstrates that Kokoplus has strong market relevance as a healthy beverage MSME because its coconut-based product concept is aligned with the increasing consumer preference for natural and healthier beverage options. The findings show that coconut-based beverages offered by Kokoplus are perceived as fresh, natural, and suitable for consumers who are interested in healthier consumption. This finding is consistent with Gupta et al. (2023), who explain that functional beverages continue to develop due to consumer interest in products that provide health-related value beyond basic refreshment. Similarly, Kowalska et al. (2024) state that consumer attitudes toward functional beverages are influenced by perceived benefits, product knowledge, and relevance to a healthy lifestyle. Therefore, Kokoplus' coconut-based product concept provides an important foundation for strengthening its market positioning in the healthy beverage sector.

The findings also indicate that Kokoplus' product authenticity is one of its main strengths. Product authenticity is reflected in its natural coconut-based concept, direct product offering, and outlet-based selling activities. In the context of healthy beverages, authenticity is important because consumers often consider the credibility, naturalness, and health-related value of a product before making consumption decisions. Tavares et al. (2026) explain that health-related product information can influence consumer behavior and food choice, especially when the information is perceived as relevant to consumers' health concerns. This suggests that Kokoplus needs to communicate its product authenticity more clearly so that customers can better understand the value and benefits of its coconut-based products.

Another important finding is that direct customer interaction plays a significant role in shaping customer experience. As a small business, Kokoplus has the advantage of interacting directly with customers through outlet-based selling. This interaction enables the business to build trust, receive customer feedback, and create a more personal relationship with consumers. From a marketing perspective, customer experience and customer relationships are important because they can influence satisfaction, engagement, and long-term business performance (Kotler et al., 2022). In the case of Kokoplus, customer interaction is not only a selling activity, but also a strategic asset that can strengthen emotional engagement and customer trust.

However, the findings show that Kokoplus still faces several marketing challenges. The main challenges include limited brand awareness, promotional activities that are not yet structured, and digital marketing platforms that have not been optimally utilized. These challenges indicate

that Kokoplus has not fully transformed its market potential into strong market visibility. Strategic marketing is therefore needed to help Kokoplus define a clearer value proposition, strengthen brand identity, and communicate product benefits consistently. Chernev (2018) emphasizes that strategic marketing enables businesses to align their offerings with customer needs and competitive conditions. Therefore, Kokoplus needs a more systematic marketing approach to strengthen its competitiveness in the healthy beverage market.

Digital marketing is also an important issue in the development of Kokoplus. Although digital platforms can help MSMEs increase market reach and brand awareness, the findings indicate that Kokoplus has not fully optimized digital marketing practices. Previous studies show that digital marketing can improve SME visibility, customer reach, and business performance when implemented strategically (Jadhav et al., 2023; Wu et al., 2024). In the Indonesian MSME context, Tatik and Setiawan (2024) also emphasize that social media marketing is important for improving MSME performance because it supports customer interaction and business visibility. Therefore, Kokoplus needs to use digital platforms more consistently, particularly through content planning, product storytelling, customer engagement, and promotional scheduling.

Overall, the discussion shows that Kokoplus' growth potential depends on its ability to integrate product authenticity, customer experience, and digital marketing into more structured strategic marketing practices. Its coconut-based healthy beverage concept provides a strong basis for differentiation, while direct customer interaction supports customer trust and emotional engagement. Nevertheless, to strengthen business competitiveness, Kokoplus needs to improve brand communication, develop consistent promotional activities, and optimize digital platforms as part of its marketing strategy.

6. Conclusion, Implication, and Recommendation

This study concludes that Kokoplus has significant potential as a healthy beverage MSME because its coconut-based product concept is aligned with the growing trend of healthy lifestyle consumption. The business offers natural and refreshing beverage products that can be positioned as healthier alternatives for consumers. The findings show that Kokoplus' main strengths are product authenticity and direct customer interaction, both of which support customer trust, positive experience, and emotional engagement. However, Kokoplus still faces several challenges, including limited brand awareness, unstructured promotional activities, and suboptimal use of digital marketing platforms.

The theoretical implication of this study is that it enriches the discussion of strategic marketing practices in the context of healthy beverage MSMEs. This study shows that strategic marketing in MSMEs is not only related to promotion, but also involves market positioning, customer experience, product authenticity, and digital communication. The findings support the view that strategic marketing helps businesses create value, differentiate their products, and build competitiveness (Chernev, 2018; Kotler et al., 2022). In addition, this study contributes to the understanding of how digital marketing can support MSME visibility and customer engagement when implemented consistently and strategically (Chaffey & Ellis-Chadwick, 2022; Tatik & Setiawan, 2024).

The practical implication of this study is that Kokoplus needs to develop more structured marketing practices to support business growth. First, Kokoplus should strengthen its brand

identity by clearly communicating its value as a coconut-based healthy beverage MSME. Second, Kokoplus should develop consistent promotional planning, including product messages, campaign schedules, and customer communication. Third, the business should optimize digital marketing platforms to increase brand awareness, market reach, and customer engagement. Fourth, Kokoplus should maintain direct customer interaction as one of its key strengths because it can support customer trust and emotional connection.

Based on the findings, this study recommends that Kokoplus create a simple but consistent digital marketing plan. The plan may include regular social media content, product education, customer testimonials, promotional campaigns, and visual branding that highlights the natural and fresh characteristics of coconut-based beverages. Kokoplus should also strengthen its positioning by emphasizing product authenticity, health-related value, and freshness as its main differentiation. In addition, Kokoplus can use customer feedback from outlet-based interaction to improve products, services, and promotional messages.

For future research, this study recommends further investigation involving more healthy beverage MSMEs to compare strategic marketing practices across different business contexts. Future studies may also use quantitative methods to measure the influence of strategic marketing, digital marketing, and customer experience on customer satisfaction, customer loyalty, or purchase intention. Therefore, the findings of this study can be further developed into broader empirical research on healthy beverage MSMEs and strategic marketing practices.

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Urban–Rural Poverty Disparities in Indonesia: Evidence and Policy Implications

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Abstract

Poverty remains a major development challenge in Indonesia, particularly due to persistent disparities between urban and rural areas. This study aims to analyze urban-rural poverty disparities in Indonesia and formulate relevant policy implications. A descriptive quantitative approach was employed using secondary data from Statistics Indonesia (BPS) for the 2016–2025 period. The analysis focused on several poverty indicators, including the number of poor people, poverty rate, Poverty Gap Index (P1), Poverty Severity Index (P2), and Theil Index. The findings show that poverty in Indonesia generally declined during the period of analysis, both in terms of the number of poor people and the poverty rate. However, rural areas consistently recorded higher poverty levels than urban areas. The Poverty Gap Index and Poverty Severity Index also indicate that poverty in rural areas is not only more widespread, but also deeper and more severe. Furthermore, the Theil Index confirms that urban-rural poverty disparity remains persistent, reflecting the spatial dimension of poverty in Indonesia. These findings imply that poverty reduction policies should be more contextual and region-based. Strengthening social protection, improving rural productivity, expanding access to education and health services, enhancing infrastructure and digital connectivity, and creating inclusive employment opportunities are essential to reduce urban-rural poverty disparities. Therefore, poverty reduction strategies should not only focus on lowering the national poverty rate, but also on narrowing regional disparities and improving the capabilities of poor households, particularly in rural areas.

Keywords: Poverty, Urban-Rural Disparity, Macroeconomic Policy, Theil Index, Poverty Reduction

1. Introduction

Poverty remains one of the major issues in global development. Within the framework of the Sustainable Development Goals (SDGs), poverty eradication is positioned as the first goal, namely ending poverty in all its forms everywhere (United Nations, 2017). This indicates that poverty is not merely understood as low income, but also as a condition characterized by limited access to education, health services, decent work, social protection, and economic opportunities. Sen (1999) explains that poverty can be viewed as a form of capability deprivation, referring to the limited ability of individuals to live a life they have reason to value. Therefore, development should not only be directed toward increasing income, but also toward expanding opportunities and freedoms for people to move out of vulnerable conditions.

In the context of developing countries, poverty is often closely related to structural problems, such as low productivity, limited access to capital, low quality of human resources, and unequal distribution of development outcomes. Todaro and Smith (2020) emphasize that economic development should not only be measured by output growth, but also by a country's ability to reduce poverty, inequality, and unemployment. Similarly, the World Bank (2022) emphasizes that poverty reduction requires not only economic recovery and growth, but also policies that protect poor and vulnerable groups from various social and economic shocks. Therefore, poverty reduction needs to be analyzed more comprehensively, including by considering regional dimensions, since poverty may have different characteristics across regions.

Indonesia has made progress in reducing poverty. Based on data from Statistics Indonesia, the percentage of poor people in Indonesia in September 2025 was 8.25 percent, equivalent to 23.36 million people (Statistics Indonesia [BPS], 2026). This figure decreased compared to March 2025 and September 2024. The decline indicates an improvement in the socio-economic conditions of the population, while also reflecting the contribution of various development and social protection policies implemented by the government. However, the reduction of poverty at the national level does not necessarily indicate that all regional groups have experienced the same level of improvement. One important issue that still requires attention is the poverty disparity between urban and rural areas.

BPS data show that in September 2025, the percentage of poor people in urban areas was 6.60 percent, while in rural areas it reached 10.72 percent (BPS, 2026). This difference indicates that the poverty rate in rural areas remains much higher than in urban areas. In terms of absolute numbers, the number of poor people in rural areas also remained relatively high, reaching 12.18 million people, compared to 11.18 million people in urban areas (BPS, 2026). This condition demonstrates that poverty in Indonesia has a strong spatial dimension; therefore, poverty analysis should not be limited to the national level, but should also consider the different characteristics of urban and rural areas.

Urban-rural poverty disparities reflect unequal access to economic and social resources. Urban areas generally have better access to formal employment, centers of economic growth, infrastructure, education, health services, technology, and markets. In contrast, rural areas continue to face various limitations, such as low agricultural productivity, limited non-agricultural employment opportunities, suboptimal market access, inadequate basic infrastructure, and uneven quality of human resources. Fattah et al. (2025) show that rural poverty and unemployment in Indonesia remain challenges closely related to agricultural sector dynamics, land-use changes, migration, and the effectiveness of village fund allocation. In addition, Smas et al. (2025) emphasize that the utilization of Village Funds can play an important role in overcoming extreme poverty in Indonesia, although its effectiveness depends on governance quality, targeting accuracy, and the suitability of programs to local needs.

Rural poverty also tends to be structural, as many poor households depend on the agricultural sector and informal employment with relatively low productivity and income. This condition makes poor rural households more vulnerable to economic shocks, food price fluctuations, climate change, limited access to technology, and weak market connectivity. The World Bank (2023) emphasizes that although Indonesia has achieved significant progress in reducing poverty, there are still economically vulnerable groups who may fall back into poverty when facing shocks such as pandemics, natural disasters, or economic pressures. This situation

highlights the importance of strengthening economic security and social protection systems for poor and vulnerable households, particularly in rural areas.

In addition, urban poverty also has its own characteristics. Urban poverty is generally associated with a high cost of living, vulnerability among informal workers, limited access to decent housing, and income instability. Therefore, although the urban poverty rate is lower than that of rural areas, urban poor groups still face significant socio-economic risks. In other words, urban and rural poverty have different sources of vulnerability, meaning that poverty reduction policies cannot be implemented through a uniform approach. This is consistent with the view of Todaro and Smith (2020), who argue that development policies in developing countries must consider differences in economic structure, employment opportunities, and social conditions across regions.

Technological development and digitalization are also important factors in understanding urban-rural poverty disparities. Yokota et al. (2025) found that increased internet use is associated with poverty reduction in Indonesia, although its impact may differ between urban and rural areas. In rural areas, the expansion of internet infrastructure has the potential to become an important instrument for strengthening community access to market information, education, financial services, and business opportunities. However, the benefits of digitalization can only be optimized if supported by improved digital literacy, adequate infrastructure availability, and inclusive economic access.

In an effort to reduce poverty, the Indonesian government has implemented various social protection programs, including the Family Hope Program (Program Keluarga Harapan/PKH), Non-Cash Food Assistance/Food Assistance Program (Bantuan Pangan Non Tunai/Program Sembako), and the Smart Indonesia Program (Program Indonesia Pintar/PIP). The Ministry of Social Affairs of the Republic of Indonesia explains that PKH is a conditional social assistance program designed to improve access to health, education, and social welfare services for poor and vulnerable families. In addition, the Food Assistance Program/BPNT aims to reduce the burden of food expenditure among poor households through food assistance mechanisms. Meanwhile, PIP is designed to support children from poor and vulnerable families so that they can maintain access to education and reduce the risk of dropping out of school. Nugroho et al. (2021) state that poverty alleviation programs in Indonesia have evolved over time, but still face challenges, particularly in terms of targeting accuracy, program effectiveness, and integration among programs.

Based on the above discussion, the study of poverty disparities between urban and rural areas in Indonesia is important to conduct. This research not only aims to describe differences in poverty levels across regions, but also seeks to provide a deeper understanding of the characteristics, dynamics, and factors that explain why rural poverty remains higher than urban poverty. Such analysis is important to ensure that national poverty reduction occurs inclusively and is capable of reducing regional disparities. The importance of this approach is also supported by the World Bank (2023), which emphasizes the need for policies that strengthen economic security, improve human capital, and create more productive employment opportunities for poor and vulnerable groups.

Therefore, the study entitled “Urban-Rural Poverty Disparities in Indonesia: Evidence and Policy Implications” has both academic and policy significance. Academically, this study contributes to the literature on spatial poverty and regional development inequality. From a

policy perspective, the findings of this study are expected to serve as a basis for formulating poverty reduction strategies that are more contextual, region-based, and responsive to the characteristics of both urban and rural poverty. Future poverty reduction policies need to be directed not only toward reducing the national poverty rate, but also toward narrowing the urban-rural gap through strengthening social protection, improving rural productivity, expanding access to education and health services, enhancing basic and digital infrastructure, and creating more inclusive employment opportunities.

2. Literature Review

2.1 Capability Approach

The first theory used in this study is the Capability Approach developed by Sen (1999). This theory explains that poverty should not only be understood as a lack of income, but also as a deprivation of human capabilities. In this perspective, individuals are considered poor when they have limited ability to achieve a decent and valuable life. These limitations may include inadequate access to education, health services, decent work, social protection, infrastructure, and economic opportunities.

In the context of urban-rural poverty disparities, the Capability Approach is relevant because poverty in rural areas is not only caused by low income, but also by limited access to basic services and productive opportunities. Rural communities often face constraints in accessing quality education, health facilities, markets, technology, and formal employment. These limitations reduce their ability to improve welfare and escape poverty. Therefore, poverty reduction should not only focus on increasing household income, but also on expanding people's capabilities and opportunities, especially among poor and vulnerable groups in rural areas.

2.2 Economic Development Theory

The second theory is Economic Development Theory. Todaro and Smith (2020) explain that economic development is a multidimensional process that includes not only economic growth, but also poverty reduction, inequality reduction, employment creation, and improvement in people's welfare. Development success cannot be measured only by the increase in national output, but also by the extent to which development benefits are distributed fairly across different groups and regions.

This theory is relevant to the study because urban-rural poverty disparities indicate that development outcomes are not evenly distributed. Urban areas generally have better access to formal employment, infrastructure, education, health services, technology, and markets. In contrast, rural areas often face structural constraints such as low agricultural productivity, limited non-agricultural employment opportunities, weak access to markets, and inadequate infrastructure. These differences contribute to the persistence of higher poverty rates in rural areas compared to urban areas. Therefore, reducing poverty requires development policies that are inclusive and capable of addressing structural inequalities between urban and rural regions.

2.3 Spatial Poverty and Regional Inequality Theory

The third theory is Spatial Poverty and Regional Inequality Theory. This theory emphasizes that poverty has a strong geographical dimension. Poverty is not distributed equally

across regions because economic activities, public services, infrastructure, and employment opportunities tend to be concentrated in certain areas. Kanbur and Venables (2005) explain that spatial inequality is important because regional differences can affect income distribution, access to services, and development opportunities. Similarly, the World Bank (2009) highlights that economic development is influenced by spatial factors such as density, distance, and division.

In the context of Indonesia, this theory helps explain why poverty rates differ between urban and rural areas. Urban areas are usually closer to centers of economic growth and have stronger connectivity, better infrastructure, and greater access to services. Meanwhile, rural areas often face disadvantages related to distance from markets, lower economic density, limited infrastructure, and weaker connectivity to growth centers. These spatial disadvantages can limit economic opportunities and contribute to persistent poverty in rural communities.

Based on these three theories, this study views urban-rural poverty disparities as the result of multidimensional and spatially uneven development processes. Poverty in rural areas is not only caused by low income, but also by limited capabilities, unequal access to development resources, structural economic constraints, and regional disparities. Therefore, poverty reduction policies need to be designed based on regional characteristics. Policy strategies should include strengthening social protection, improving rural productivity, expanding access to education and health services, enhancing basic and digital infrastructure, and creating more inclusive employment opportunities.

3. Material and Method

3.1 Design Study

This study employed a descriptive quantitative design to analyze urban-rural poverty disparities in Indonesia. This design was selected because the study aims to describe, compare, and interpret poverty conditions between urban and rural areas based on official statistical data. The data used in this study were secondary data obtained from Statistics Indonesia (Badan Pusat Statistik/BPS). BPS was selected as the main data source because it provides official and nationally recognized poverty statistics in Indonesia. The study covers the period from 2016 to 2025 in order to observe the development of poverty conditions over time. The analysis focused on poverty indicators by area of residence, namely urban and rural areas. The main indicators examined include the number of poor people, poverty rate, poverty gap index, poverty severity index, and the Theil index. These indicators were used to describe the level, depth, severity, and disparity of poverty between urban and rural areas.

3.2 Data Analysis

The data were analyzed using descriptive quantitative analysis. The analysis was conducted through data tabulation, comparison, trend analysis, and descriptive interpretation. First, poverty data from BPS were organized based on year and area of residence. Second, the indicators were compared between urban and rural areas to identify differences in poverty conditions. Third, trend analysis was used to observe changes in poverty indicators during the 2016–2025 period. The Theil index was used to measure the degree of disparity between urban and rural poverty conditions. A higher Theil index indicates a greater level of disparity, while

a lower value reflects a more equal distribution. The results of the analysis were then interpreted to explain the pattern and persistence of urban-rural poverty disparities in Indonesia. This study did not apply econometric or inferential statistical methods. Instead, it emphasized descriptive analysis supported by official statistical data. The findings were used to formulate policy implications related to inclusive and region-based poverty reduction strategies in Indonesia.

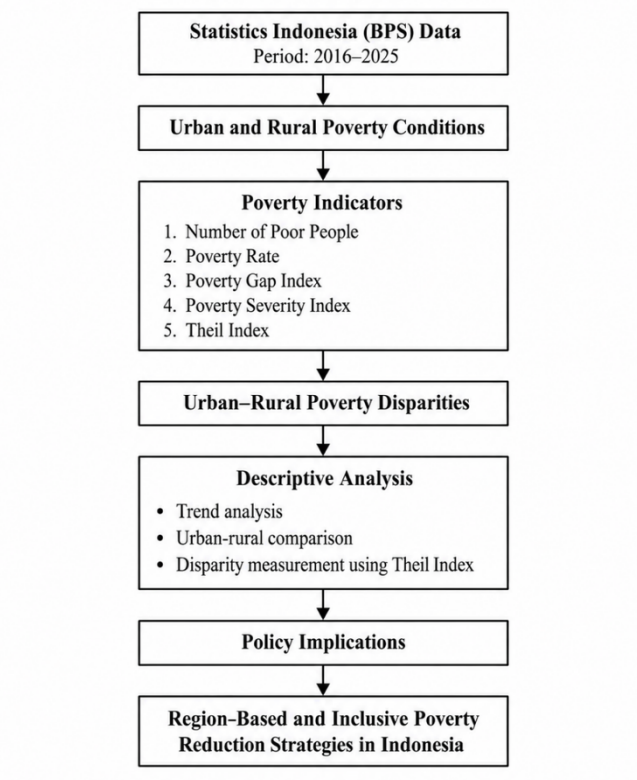


Figure 1. Research Model

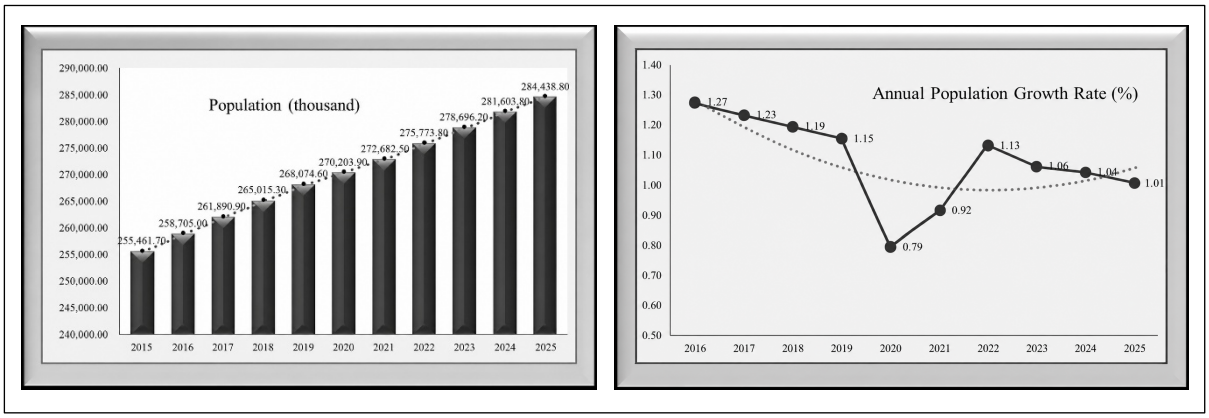
The research model shows that this study uses secondary data from Statistics Indonesia (BPS) for the 2016–2025 period. The analysis focuses on poverty indicators in urban and rural areas, including the number of poor people, poverty rate, poverty gap index, poverty severity index, and the Theil Index. These indicators are analyzed descriptively through trend analysis and urban-rural comparison to identify the pattern of poverty disparities. The results are then used to formulate policy implications for inclusive and region-based poverty reduction strategies in Indonesia.

4. Result

This section presents the empirical findings on poverty dynamics in Indonesia by examining population trends, national poverty conditions, urban-rural poverty disparities, poverty gap index, poverty severity index, and the Theil index based on Statistics Indonesia (BPS) data from 2016 to 2025.

4.1 Population Dynamics in Indonesia

Indonesia is the fourth most populous country in the world, making population dynamics an important context for understanding poverty reduction and development challenges. Figure 2 shows that Indonesia's population continued to increase during the 2015–2025 period, rising from 255,461.70 thousand people in 2015 to 284,438.80 thousand people in 2025. However, the annual population growth rate showed a fluctuating and generally declining pattern, decreasing from 1.27 percent in 2016 to 1.01 percent in 2025. The lowest growth rate occurred in 2020 at 0.79 percent, before increasing again to 1.13 percent in 2022. This trend indicates that although Indonesia's population continues to grow, the rate of growth has tended to slow over time.



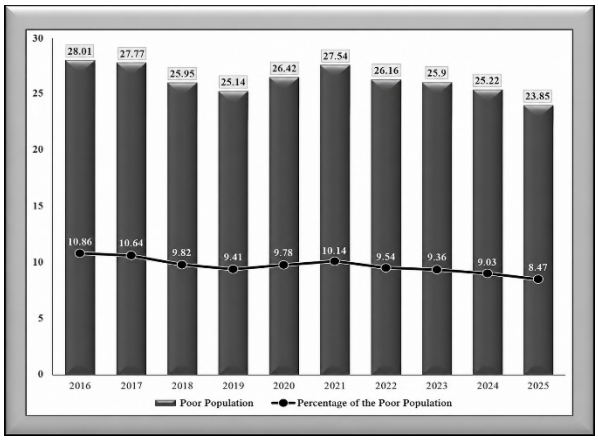
Source: Statistics Indonesia (BPS), processed by the author.
Figure 2. Population and Annual Population Growth Rate in Indonesia, 2015–2025

4.2 National Poverty Trends in Indonesia

Figure 3 presents the trend in the number and percentage of poor people in Indonesia during the 2016–2025 period. Overall, national poverty showed a declining trend, both in terms of the number of poor people and the poverty rate. The number of poor people decreased from 28.01 million in 2016 to 23.85 million in 2025. Similarly, the percentage of poor people declined from 10.86 percent in 2016 to 8.47 percent in 2025.

Although the general trend declined, there were fluctuations in several years. The number of poor people decreased steadily from 2016 to 2019, reaching 25.14 million people, with the poverty rate falling to 9.41 percent. However, poverty increased again in 2020 and 2021, with the number of poor people rising to 26.42 million and 27.54 million, respectively. The poverty rate also increased to 9.78 percent in 2020 and 10.14 percent in 2021. This increase indicates that poverty reduction was affected by socio-economic pressures during that period.

After 2021, poverty in Indonesia declined consistently. The number of poor people decreased from 26.16 million in 2022 to 23.85 million in 2025, while the poverty rate fell from 9.54 percent to 8.47 percent. These findings indicate that Indonesia has made progress in reducing poverty at the national level. However, the remaining number of poor people is still substantial, suggesting that poverty reduction remains an important development priority.

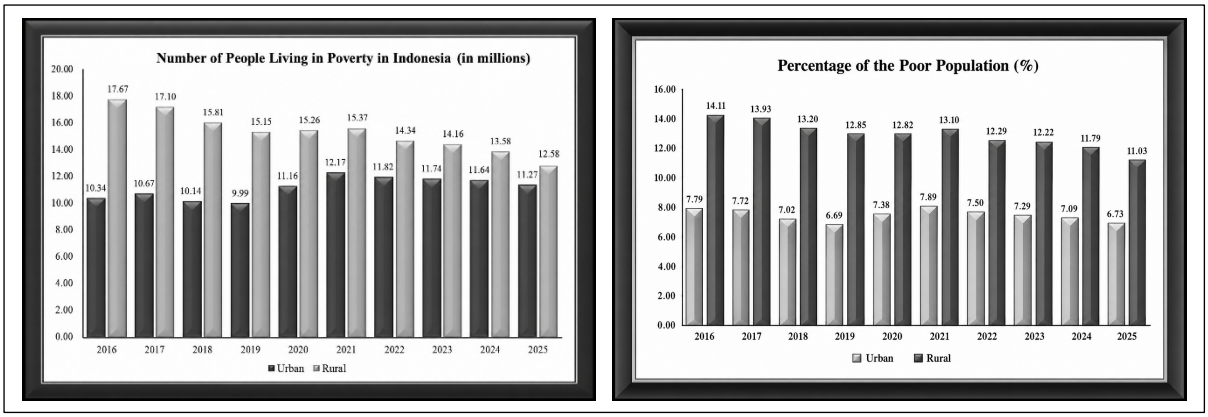


Source: Statistics Indonesia (BPS), processed by the author.
Figure 3. Trends in the Number and Percentage of Poor Population in Indonesia, 2016–2025

4.3 Urban–Rural Poverty Disparities

Figure 4 presents the number and percentage of poor people in urban and rural areas in Indonesia during the 2016–2025 period. The data show that the number of poor people in rural areas was consistently higher than in urban areas throughout the period. In 2016, the number of poor people in rural areas reached 17.67 million, while urban areas recorded 10.34 million. By 2025, the number of rural poor declined to 12.58 million, while the number of urban poor stood at 11.27 million. This indicates that although rural poverty decreased substantially over time, the number of poor people in rural areas remained higher than in urban areas.

A similar pattern is also observed in the poverty rate. The percentage of poor people in rural areas was consistently higher than that in urban areas. In 2016, the rural poverty rate was 14.11 percent, compared to 7.79 percent in urban areas. By 2025, the rural poverty rate declined to 11.03 percent, while the urban poverty rate decreased to 6.73 percent. These figures indicate that poverty reduction occurred in both urban and rural areas, but the rural poverty rate remained significantly higher. Overall, the urban-rural poverty gap showed a narrowing trend, particularly in terms of the number of poor people. However, the persistence of higher poverty levels in rural areas suggests that poverty in Indonesia still has a strong spatial dimension. Rural areas continue to face greater poverty challenges than urban areas, indicating the need for poverty reduction policies that are more responsive to rural conditions and regional disparities.

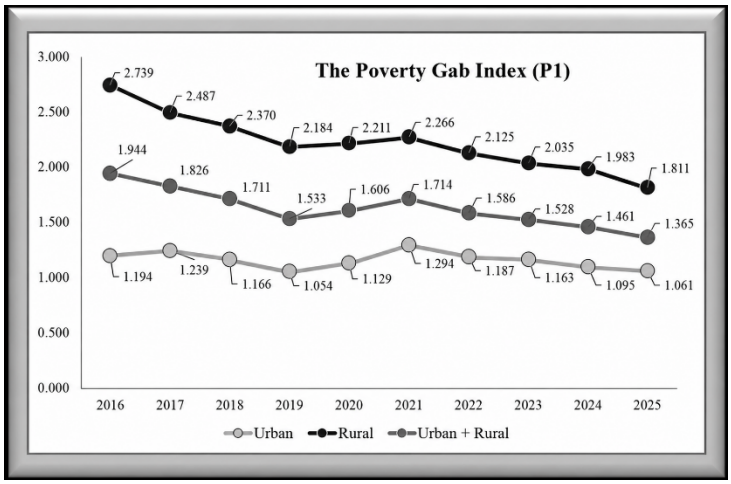


Source: Statistics Indonesia (BPS), processed by the author.
Figure 4. Number and Percentage of Poor People by Urban and Rural Areas in Indonesia, 2016–2025

4.4 Poverty Gap Index (P1)

Figure 5 presents the Poverty Gap Index (P1) in urban and rural areas in Indonesia during the 2016–2025 period. The Poverty Gap Index measures the depth of poverty, indicating how far the average expenditure of the poor is below the poverty line. A higher P1 value means that poor people are, on average, further below the poverty line. Overall, the Poverty Gap Index showed a declining trend during the period of analysis. At the national level, represented by the urban and rural aggregate, P1 decreased from 1.944 in 2016 to 1.365 in 2025. This indicates that the depth of poverty in Indonesia tended to decline over time, although some fluctuations occurred, particularly in 2020 and 2021.

The figure also shows that rural areas consistently recorded a higher Poverty Gap Index than urban areas. In 2016, the rural P1 was 2.739, while the urban P1 was 1.194. By 2025, the rural P1 declined to 1.811, while the urban P1 decreased to 1.061. Although both urban and rural areas experienced a decline in P1, the rural value remained higher throughout the period. This finding indicates that poverty in rural areas was deeper than in urban areas. In other words, poor people in rural areas had average expenditures that were further below the poverty line compared to poor people in urban areas. Therefore, poverty reduction policies should not only focus on reducing the number of poor people, but also on reducing the depth of poverty, particularly in rural areas.



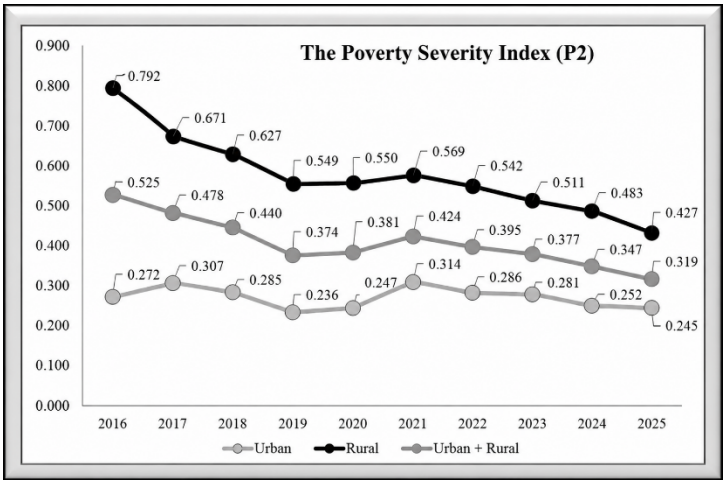
Source: Statistics Indonesia (BPS), processed by the author.
Figure 5. Poverty Gap Index in Urban and Rural Areas, 2016–2025

4.5 Poverty Severity Index (P2)

Figure 6 presents the Poverty Severity Index (P2) in urban and rural areas in Indonesia during the 2016–2025 period. The Poverty Severity Index measures the severity of poverty by capturing inequality among the poor. A higher P2 value indicates that poverty is not only deeper, but also more severe, as it reflects greater inequality in expenditure among poor households. Overall, the Poverty Severity Index showed a declining trend during the period of analysis. At the national level, represented by the urban and rural aggregate, P2 decreased from

0.525 in 2016 to 0.319 in 2025. This decline indicates that the severity of poverty in Indonesia tended to decrease over time, although the trend fluctuated slightly in 2020 and 2021.

The figure also shows that rural areas consistently recorded a higher Poverty Severity Index than urban areas. In 2016, the rural P2 value was 0.792, while the urban P2 value was 0.272. By 2025, the rural P2 declined to 0.427, while the urban P2 decreased to 0.245. Although both urban and rural areas experienced a reduction in poverty severity, the P2 value in rural areas remained higher throughout the period. These findings indicate that poverty in rural areas was not only deeper, as shown by the Poverty Gap Index, but also more severe than in urban areas. The consistently higher P2 value in rural areas suggests that poor households in rural communities experienced greater inequality in expenditure among the poor. Therefore, poverty reduction policies should pay greater attention to rural areas by addressing not only the incidence of poverty, but also the severity and inequality experienced by the poor.



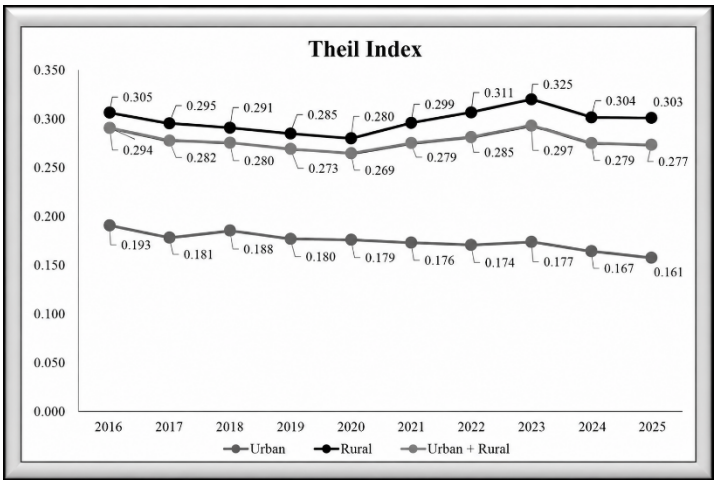
Source: Statistics Indonesia (BPS), processed by the author.
Figure 6. Poverty Severity Index in Urban and Rural Areas, 2016–2025

4.6 Theil Index of Urban–Rural Poverty Disparity

Figure 7 presents the Theil Index of urban-rural poverty disparity in Indonesia during the 2016–2025 period. The Theil Index is used to measure the level of inequality or disparity, where a higher index value indicates a greater level of disparity, while a lower value reflects a more equal distribution. The results show that the Theil Index in urban areas was consistently lower than in rural areas throughout the period. The urban Theil Index decreased from 0.193 in 2016 to 0.161 in 2025, indicating a declining disparity within urban poverty conditions. In contrast, the rural Theil Index remained relatively high, decreasing slightly from 0.305 in 2016 to 0.280 in 2020, before increasing to 0.325 in 2023. Although it declined again to 0.303 in 2025, the rural index remained much higher than the urban index.

At the aggregate level, the urban and rural Theil Index showed a fluctuating pattern. The index declined from 0.294 in 2016 to 0.269 in 2020, but increased again to 0.297 in 2023 before slightly decreasing to 0.277 in 2025. This pattern indicates that urban-rural poverty disparity did not decline consistently, but remained persistent over time. These findings strengthen the conclusion that poverty disparity in Indonesia has a strong spatial dimension. The consistently higher Theil Index in rural areas suggests that rural poverty conditions are more unequal and

more persistent than urban poverty conditions. Therefore, poverty reduction policies should not only focus on reducing the national poverty rate, but also on addressing spatial disparities between urban and rural areas through more inclusive and region-based policy interventions.



Source: Statistics Indonesia (BPS), processed by the author.
Figure 7. Theil Index of Urban–Rural Poverty Disparity, 2016–2025

5. Discussion

5.1 Persistence of Urban–Rural Poverty Disparities

The findings show that poverty in Indonesia declined at the national level during the 2016–2025 period. However, the decline did not eliminate the disparity between urban and rural areas. Rural areas consistently recorded higher poverty levels than urban areas, both in terms of the number of poor people and the poverty rate. In 2016, the rural poverty rate reached 14.11 percent, while the urban poverty rate was 7.79 percent. By 2025, both figures had declined, but the rural poverty rate remained higher at 11.03 percent compared to 6.73 percent in urban areas. This pattern indicates that urban-rural poverty disparity is persistent, although there has been progress in reducing poverty in both regions.

The persistence of rural poverty suggests that poverty in Indonesia has a strong spatial dimension. Rural communities generally face more limited access to productive employment, education, health services, infrastructure, technology, and markets than urban communities. These limitations reduce the ability of rural households to increase income and improve welfare. From the perspective of the Capability Approach, this condition reflects that poverty is not only related to income deprivation, but also to limited capabilities and opportunities to achieve a better quality of life (Sen, 1999).

The results also indicate that development outcomes have not been evenly distributed between urban and rural areas. Urban areas tend to benefit more from economic concentration, formal employment opportunities, public facilities, and better infrastructure. In contrast, rural areas are more dependent on agriculture and informal economic activities, which are often characterized by lower productivity and unstable income. This is consistent with Economic Development Theory, which emphasizes that development should not only be measured by economic growth, but also by its ability to reduce poverty, inequality, and unemployment across regions (Todaro & Smith, 2020).

Furthermore, the persistent gap between urban and rural poverty reflects regional inequality in development access. Spatial Poverty and Regional Inequality Theory explains that geographical location affects people's access to economic opportunities, public services, and development resources. In Indonesia, rural areas often face disadvantages related to distance from growth centers, limited market access, and weaker infrastructure connectivity. These conditions make poverty reduction in rural areas more challenging than in urban areas.

Overall, the persistence of urban-rural poverty disparities indicates that national poverty reduction has not fully translated into equal poverty reduction across regions. Although rural poverty has declined over time, the gap with urban poverty remains evident. Therefore, poverty reduction strategies should be more sensitive to regional characteristics. Policies aimed at reducing poverty need to address not only the number of poor people, but also the structural and spatial barriers that continue to limit rural communities' access to economic opportunities and basic services.

5.2 Poverty Depth and Severity in Rural Areas

The results of the Poverty Gap Index (P1) and Poverty Severity Index (P2) strengthen the evidence that poverty in rural areas is not only higher in incidence, but also deeper and more severe than in urban areas. The P1 indicator shows that the average expenditure of the poor in rural areas remained further below the poverty line compared to that of the urban poor. During the 2016–2025 period, rural P1 was consistently higher than urban P1, although both showed a declining trend. This indicates that poor households in rural areas require greater improvements in income or expenditure to reach the poverty line.

The Poverty Severity Index (P2) also shows a similar pattern. Rural areas consistently recorded higher P2 values than urban areas, indicating greater inequality among the poor in rural communities. In other words, poverty in rural areas is not only reflected in a larger number of poor people, but also in the more severe condition of those living below the poverty line. The higher P2 value suggests that some rural poor households experience much deeper deprivation than others, making poverty reduction in rural areas more complex.

This condition reflects the structural nature of rural poverty. Many rural households still depend on agriculture and informal employment, which are often characterized by low productivity, seasonal income, limited access to capital, and vulnerability to price fluctuations and climate risks. In addition, limited economic diversification in rural areas restricts household opportunities to obtain stable and higher-income employment outside the agricultural sector. These structural constraints make rural poverty more persistent and difficult to reduce.

Therefore, the findings from P1 and P2 indicate that poverty reduction policies should not only focus on reducing the poverty rate, but also on reducing the depth and severity of poverty. In rural areas, policy interventions need to prioritize increasing agricultural productivity, strengthening rural non-farm employment, improving access to markets and finance, and expanding skills development. Such policies are important to address the structural roots of rural poverty and to ensure that poverty reduction is more inclusive and sustainable.

5.3 Spatial Inequality and Regional Development

The Theil Index results further confirm that poverty disparities in Indonesia have a spatial dimension. The index shows that rural areas consistently recorded higher disparity values than urban areas during the 2016–2025 period. Although the aggregate Theil Index fluctuated over time, the gap between urban and rural areas remained evident. This indicates that poverty disparity did not decline consistently and that spatial inequality between urban and rural areas persisted throughout the period of analysis.

This finding is consistent with the theory of Spatial Poverty and Regional Inequality, which emphasizes that poverty is not evenly distributed across regions. Regional differences in economic opportunities, infrastructure, public services, and market access can shape the level and persistence of poverty. Kanbur and Venables (2005) argue that spatial inequality matters because regional location affects people's access to development opportunities. Similarly, the World Bank (2009) explains that economic development is strongly influenced by spatial factors such as density, distance, and division, which determine how regions are connected to centers of economic growth.

In the context of Indonesia, urban areas generally have greater advantages because they are closer to economic growth centers, labor markets, public facilities, education and health services, transportation networks, and digital infrastructure. These advantages provide urban communities with better opportunities to access formal employment, improve productivity, and increase household income. As a result, poverty in urban areas tends to be lower than in rural areas.

In contrast, rural areas often face disadvantages related to distance, weak connectivity, limited infrastructure, and restricted access to economic resources. Rural communities are frequently located far from major markets and growth centers, making it more difficult to access employment opportunities, sell agricultural products, obtain financial services, and benefit from public services. These spatial barriers contribute to the persistence of poverty in rural areas and help explain why rural poverty remains higher than urban poverty.

Therefore, poverty reduction in Indonesia cannot rely on a uniform policy approach. Since urban and rural poverty have different spatial characteristics, policy interventions need to be designed based on regional conditions. Rural poverty reduction requires stronger attention to infrastructure development, market connectivity, rural economic diversification, digital access, and public service delivery. Meanwhile, urban poverty policies should address issues such as informal employment, housing affordability, and the high cost of living. This confirms that reducing poverty requires not only national-level strategies, but also region-based policies that respond to the specific challenges faced by urban and rural communities.

5.4 Policy Implications

The findings of this study indicate that poverty reduction policies in Indonesia should be designed based on regional characteristics. Since poverty conditions differ between urban and rural areas, a uniform policy approach may not be sufficient to reduce urban-rural poverty disparities. Therefore, several policy implications can be proposed.

First, social protection programs need to be strengthened through a region-based approach. Programs such as the Family Hope Program (PKH), Non-Cash Food Assistance/Food Assistance Program (BPNT/Program Sembako), and the Smart Indonesia Program (PIP)

should be improved in terms of targeting accuracy, beneficiary coverage, and data integration. In rural areas, social assistance should not only aim to reduce household consumption burdens, but also support access to education, health services, and productive economic activities. This is important to ensure that poor households are not only protected from short-term vulnerability, but also supported to improve their long-term welfare.

Second, policies should focus on increasing rural economic productivity. Since rural poverty is closely related to agriculture, informal employment, and low productivity, policy interventions should promote agricultural productivity, rural product downstreaming, rural micro, small, and medium enterprises, access to financing, and the expansion of non-agricultural employment opportunities. Strengthening the rural economy is essential to reduce dependence on low-productivity activities and to create more stable sources of income for rural households.

Third, basic infrastructure and rural connectivity need to be improved. The development of roads, market access, irrigation, electricity, internet networks, and rural transportation is important to reduce geographical barriers faced by rural communities. Better infrastructure can strengthen the connection between rural areas and economic growth centers, reduce distribution costs, expand market access, and improve access to public services. This policy is particularly important because spatial barriers remain one of the main factors contributing to persistent rural poverty.

Fourth, improving human capital should become a central component of poverty reduction strategies. Long-term poverty reduction requires better access to education, health services, skills training, and digital literacy. These policies are needed to ensure that poor households do not merely depend on social assistance, but also have the capacity to improve productivity and participate in broader economic opportunities. Strengthening human capital is especially important in rural areas, where access to quality education, health services, and technology remains relatively limited.

Fifth, specific policies are also needed to address urban poverty. Although the poverty rate in urban areas is lower than in rural areas, poor urban households remain vulnerable to high living costs, informal employment, unstable income, and limited access to decent housing. Therefore, urban poverty policies should include protection for informal workers, affordable housing programs, skills development, and employment support. These policies are important to prevent vulnerable urban groups from falling deeper into poverty.

Overall, the policy implications of this study emphasize that poverty reduction in Indonesia should not only focus on reducing the national poverty rate, but also on narrowing urban-rural disparities. Inclusive and region-based poverty reduction strategies are needed to address the different characteristics of poverty in urban and rural areas. Strengthening social protection, improving rural productivity, expanding infrastructure and connectivity, enhancing human capital, and addressing urban vulnerability are key policy directions for reducing poverty more sustainably.

6. Conclusion, Implication, and Recommendation

This study concludes that poverty in Indonesia showed a declining trend during the 2016–2025 period, both in terms of the number of poor people and the poverty rate. However, the decline in national poverty has not fully eliminated disparities between urban and rural areas. Rural

areas consistently recorded higher poverty levels than urban areas, as shown by the poverty rate, number of poor people, Poverty Gap Index (P1), Poverty Severity Index (P2), and Theil Index. These findings indicate that rural poverty is not only more widespread, but also deeper, more severe, and spatially persistent.

The results imply that poverty reduction policies in Indonesia should be more contextual and region-based. National poverty reduction programs need to be strengthened by considering the different characteristics of urban and rural poverty. In rural areas, policy interventions should focus on strengthening social protection, improving agricultural and rural economic productivity, expanding non-agricultural employment opportunities, increasing access to education and health services, and improving infrastructure, connectivity, and digital access. Meanwhile, urban poverty policies should address the vulnerability of poor urban households related to high living costs, informal employment, unstable income, and limited access to decent housing.

Based on these findings, this study recommends that the government strengthen region-based poverty reduction strategies through better targeting of social protection programs, integration of poverty data, improvement of rural infrastructure, expansion of market access, and development of human capital. Programs such as PKH, BPNT/Program Sembako, and PIP should not only reduce household consumption burdens, but also support poor households in improving their long-term capabilities. Future research is recommended to use more advanced quantitative methods and provincial-level data to examine the determinants of urban-rural poverty disparities in greater detail.

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Determinants of Sustainability Reporting in Emerging Markets.

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Abstract

This study examines the effects of profitability and firm size on sustainability report disclosure with audit committee effectiveness as a moderating variable in the Indonesian energy sector. Motivated by inconsistent prior findings, this research addresses a significant gap by positioning audit committee effectiveness as a moderator. Using a quantitative causality design, this study analyzes secondary data from 41 energy companies listed on the Indonesia Stock Exchange from 2021 to 2024, yielding 164 observations. Panel data regression with the Fixed Effect Model is employed for hypothesis testing. The findings indicate that firm size has a positive and significant effect on sustainability report disclosure, whereas profitability has no significant effect. Audit committee effectiveness significantly moderates the relationship between profitability and sustainability disclosure; it weakens this relationship, suggesting that effective audit committees decouple disclosure decisions from financial performance. Conversely, audit committee effectiveness does not moderate the relationship between firm size and sustainability disclosure. This result indicates that the positive influence of firm size on disclosure remains strong regardless of audit committee quality. The study concludes that firm size is the primary determinant of sustainability report disclosure in the Indonesian energy sector. These findings offer theoretical contributions to stakeholder and agency theories and provide practical insights for regulators, companies, and investors in emerging markets.

Keyword: sustainability reporting; profitability; firm size; audit committee effectiveness; energy sector.

Sustainable Development of English Teaching Competencies of Non-English Background Teachers in Rural Indonesia: A Preliminary Study

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Abstract

The Minister of Primary and Secondary Education has designated English as a compulsory subject in all elementary schools across Indonesia, effective from the 2026/2027 academic year. In response to this strategic policy, every elementary school is required to have at least one teacher qualified to teach English. Data indicate that Indonesia is projected to face a shortage of 90,000 English teachers by 2026. To address this gap, the Ministry of Primary and Secondary Education has implemented a competency development program for Non-Graduate English Teachers as a strategic measure to mitigate the shortfall of qualified English educators in the country. This presentation aims to present the preliminary findings of a study assessing the foundational competencies of English teachers who are not graduates of English Education programs. These teachers have been appointed by the Ministry of Education to teach English at the elementary level in Indonesia. The study employed a qualitative descriptive methodology and was conducted in the Riau Islands Province, involving 150 teachers. Data were collected through documentation analysis from the Learning Management System platform and subsequently analyzed descriptively to classify the teachers' English competency levels. The findings reveal that the competency level of non-English Education graduate English teachers falls within the very low category. Accordingly, these results are expected to inform the Ministry of Education in designing sustainable professional development programs for non-graduate English teachers, especially in rural Indonesia. Such programs should effectively and efficiently leverage technological resources and engage all components of the educational ecosystem.

Keyword: competencies; English teacher, sustainable development

1. Introduction

The urgency of enhancing English proficiency at the elementary school level is rooted in the critical developmental window of children aged 6-12, during which the brain exhibits

exceptional plasticity in acquiring phonological patterns, vocabulary, and pronunciation without the inhibitions that typically emerge later in life. Establishing a strong foundation during this formative period fosters a positive disposition toward English, thereby mitigating the anxiety and perception of the language as an intimidating subject in junior and senior high school. In the contemporary digital and AI-driven era, this urgency is further amplified by the predominance of English as the primary medium for educational content, interactive games, instructional tutorials, and command-based interaction with artificial intelligence systems. Learners who develop early familiarity with English are consequently better positioned for autonomous learning, critical engagement with global knowledge sources, and optimal utilization of technological tools. Moreover, early exposure to English at the elementary level constitutes a strategic investment in future competitiveness, equipping students with the linguistic capital necessary for higher education, participation in international academic and non-academic competitions, and eventual integration into an increasingly interconnected global workforce. Thus, the principal objective of English instruction at the elementary level should not be immediate grammatical mastery, but rather the cultivation of learner confidence, intrinsic curiosity, and sustainable language-learning habits that serve as essential scaffolding for more advanced acquisition in subsequent educational stages.

To achieve the objectives outlined above, the enhancement of teacher competencies constitutes the fundamental foundation. The development of competencies among elementary school English teachers is particularly critical, given that the 6-12 age range represents the critical period for language acquisition; hence, the quality of instruction delivered by teachers directly determines the phonological, lexical, and attitudinal foundations that students will carry forward into subsequent educational stages. In Indonesia, a substantial proportion of elementary school teachers, especially in rural areas, are assigned to teach English outside their disciplinary specialization, resulting in limited linguistic proficiency and inadequate pedagogical content knowledge specific to Teaching English to Young Learners. Consequently, classroom practices remain predominantly teacher-centered, relying on lecture-based and grammar-translation methods rather than communicative approaches. Teachers who demonstrate proficiency in language, pedagogy, and digital literacy are capable of cultivating a psychologically safe and motivating learning environment that reduces students' affective filters and fosters positive engagement with English. Empirical studies conducted in rural contexts have demonstrated that targeted training programs focused on linguistic competence and communicative language teaching methodologies significantly enhance teachers' self-efficacy and increase the active use of English as the medium of instruction in classrooms. Therefore, sustainable and contextually grounded professional development for elementary school teachers emerges as a pivotal strategy for mitigating rural-urban educational disparities and preparing learners who are linguistically and technologically resilient in the face of rapid global and digital transformation.

Empirically, Indonesia ranks 80th out of 116 countries worldwide and 12th out of 23 countries in Asia, with an EF English Proficiency Index score of 468 equivalent to CEFR level B1, which denotes low proficiency. The situation is further exacerbated by teacher-level deficits consist of 80% of primary school teachers demonstrate English proficiency below the B1 threshold, thereby limiting their capacity to model accurate pronunciation, deliver communicative instruction, and scaffold student learning effectively. This underscores an urgent imperative to

strengthen English teacher competencies across the primary education sector. Compounding the proficiency gap is a severe shortage of qualified English teachers at the elementary level. Nationally, Indonesia faces a shortfall of 90,447 English teachers in primary schools. In the Riau Islands Province, the deficit reaches 995 teachers, intensifying regional disparities in access to quality English instruction. In direct response to this dual challenge of low proficiency and inadequate teacher supply, the Minister of Primary and Secondary Education has mandated English as a compulsory subject in all elementary schools nationwide, effective from the 2026/2027 academic year. Under this policy, every elementary school is required to have at least one teacher formally qualified to teach English, making the sustainable development of teacher competencies a non-negotiable priority for equitable and future-ready education.

The improvement of English language instruction in Indonesia, particularly in hinterland and remote regions, remains hindered by complex structural constraints. A pivotal challenge is the widespread practice of assigning English classes at the elementary level to non-specialist teachers or homeroom teachers who must teach multiple subjects due to limited personnel. This misalignment between teacher qualifications and subject demands directly compromises both linguistic competence and pedagogical content knowledge, thereby degrading the overall quality of instruction. Empirical evidence from Zein et al. 2020 and Lengkanawati 2005 further highlights that a significant proportion of primary and lower secondary teachers in underserved areas lack formal training in English and have minimal exposure to Teaching English to Young Learners methodologies. As a result, they struggle to implement age-appropriate, communicative, and developmentally responsive instructional strategies. This pedagogical gap prevents young learners from developing foundational language skills in ways that align with their cognitive and affective characteristics during the critical period of acquisition.

In rural Indonesia, these challenges are compounded. A study in Tanjung Jabung Timur, Jambi, found that English teachers face multiple structural barriers such limited infrastructure, inadequate learning facilities, scarce instructional resources, low language proficiency, unconducive teaching conditions, and minimal access to professional development opportunities. Similar findings were reported by Herizal et al. 2023 in South Sumatra, where rural English teachers identified six primary constraints which consists of inadequate infrastructure, limited learning facilities, insufficient instructional resources, low English proficiency, unsupportive teaching environments, and restricted access to teacher training and upskilling programs. The British Council 2025 further documented that prior to targeted training interventions, teachers in Batangtoru, North Sumatra, were largely unable to communicate in English and predominantly relied on teacher-centered, lecture-based methods rather than communicative language teaching. Collectively, these findings underscore that rural teachers contend with a convergence of material, pedagogical, and professional development deficits, which collectively impede the delivery of quality English instruction and perpetuate educational inequities between rural and urban contexts.

English instruction for young learners in Indonesia remains structurally constrained, as evidenced by studies from 2023–2025. The central issue lies in teacher-subject mismatch and inadequate TEYL training. Pebriantini et al. (2024) report that rural elementary schools face limited resources and insufficient specialized TEYL preparation, while Puspitasari et al. (2023) found only 14% of EYL teachers in Salatiga held English degrees; the remainder were

generalist teachers. The British Council (2025) further observed that pre-training, teachers in Batangtoru had minimal communicative competence and relied on lecture-based methods. The Merdeka Curriculum intensifies these demands by requiring differentiated, learner-centered, and technology-integrated pedagogy. However, Awaliyah (2023) and Nasution and Safithri Armin (2025) note uneven teacher readiness in interpreting CP, TP, ATP, and designing authentic assessments, exacerbated by poor internet access to the Merdeka Mengajar platform. Rural and 3T areas face compounded barriers: Patanduk et al. (2023) document severe infrastructure deficits and limited internet, while Pebriantini et al. (2024) and Fatimah and Jamilah (2024) highlight critically low student proficiency and challenges in teaching listening and speaking skills. Collectively, the literature reveals a widening urban-rural gap, rendering Merdeka Curriculum implementation in rural areas suboptimal and dependent on teachers' self-directed efforts (Nasution & Safithri Armin, 2025).

The issue of non-specialist teacher competence becomes even more critical under the Merdeka Curriculum, which mandates a more flexible, communicative, and technology-integrated instructional approach. Yet rural teachers remain constrained by limited access to formal training and consequently rely heavily on self-directed learning and open online resources. This reliance is problematic because the competencies demanded today extend beyond mere linguistic mastery. Effective English instruction now requires strong pedagogical content knowledge, digital literacy, and the ability to use AI-based tools through proficient prompting, thereby transforming technology into a pedagogical scaffold rather than a peripheral aid. The urgency of this competence gap is magnified at the elementary school level. The 6-12 age range constitutes the critical period for language acquisition, during which learners demonstrate native-like potential for grammar and phonology that declines sharply after puberty. Consequently, the quality of instruction delivered by elementary school teachers is determinative in establishing the long-term linguistic foundation, communicative confidence, and learning dispositions of students. In this context, the current mismatch between curriculum demands and rural teacher capacity poses a significant threat to equitable language education outcomes.

The problem of teacher-subject mismatch is not novel. Fauziyah & Uchtiawati 2017 assert that a substantial number of teachers continue to teach subjects outside their disciplinary expertise, a condition that impedes the effective implementation of government programs and compromises graduate quality. At the junior and senior secondary levels, Wahyuningsih et al. 2023 identify additional barriers faced by non-native English teachers: insufficient professional training, low academic literacy, inadequate school facilities, irrelevant instructional materials, low student motivation, and minimal exposure to English outside the classroom. Given this cumulative evidence, professional development for non-specialist English teachers in rural areas cannot be limited to one-off training events; it must be sustained, contextualized, and embedded within local realities. The British Council reports that communicative methodology training in Batangtoru successfully increased teachers' fluency and active use of English in the classroom, demonstrating the impact of targeted pedagogical intervention. Munawwarah 2021 further emphasizes that programs such as SM-3T must be aligned with teachers' perceptions and practical classroom experiences to generate lasting impact in remote regions. Complementing this, Khotimah et al. 2024 identify four critical elements for sustainability in 3T areas: teacher motivation, continuous professional development, adaptive retention

strategies, and alignment with local cultural contexts. Collectively, these findings underscore that effective competence development for rural English teachers requires systemic, long-term, and culturally responsive approaches rather than episodic capacity-building initiatives.

Based on the preceding discussion, the development of competencies for elementary school English teachers who are not graduates of English departments must be pursued in a sustained and systematic manner to address the structural issues outlined above. This study constitutes a preliminary investigation using documentary analysis to assess the competence level of elementary school English teachers selected by the Ministry of Primary and Secondary Education to participate in training programs. The findings of this study will serve as empirical justification and baseline evidence for subsequent research and development initiatives. To that end, this study is guided by the following research question: **"To what extent is the competence level of non-English-major elementary school English teachers selected by the Ministry of Primary and Secondary Education for training?"**

3. Material and Method

3.1. Types, Location, and Research Subject

This study employed a qualitative approach using a documentation study design. A documentation study is a qualitative data collection technique conducted by examining documents, records, archives, and other available data to obtain information relevant to the research problem (Sugiyono, 2025). This approach was selected because the study constitutes a preliminary investigation aimed at describing the initial competency levels of elementary school English teachers with non-English educational backgrounds in the Riau Islands Province, based on secondary data stored within the system. The research was conducted with official permission from the Head of the Teacher and Education Personnel Office of Riau Islands Province. The researcher served as a facilitator for the competency enhancement program for elementary school English teachers from non-English backgrounds, as stipulated in Assignment Letter No. 0275/B7.28/GT.00.02/2026. Data were not collected through direct observation or interviews; instead, they were derived from the analysis of pretest documents compiled by the Ministry of Primary and Secondary Education through its Learning Management System. The study was carried out in the Riau Islands Province, encompassing Batam City, Tanjung Pinang City, and Bintan Regency.

3.2. Sampling Technique

This study employed a purposive sampling technique. Purposive sampling is a non-probability sampling method in which subjects are selected based on specific criteria relevant to the research objectives (Sugiyono, 2025). The criteria established for subject selection were: 1) elementary school teachers assigned to teach English, 2) teachers with non-English educational backgrounds, and 3) teachers registered as participants in the competency enhancement program facilitated by the Teacher and Education Personnel Office of Riau Islands Province. A total of 150 teachers meeting these criteria were selected as subjects. This sampling technique was deemed appropriate for a documentation study as it ensures that the data obtained are directly relevant to the phenomenon under investigation, namely the initial competency levels of non-English background teachers prior to intervention. The research subjects consisted of 150 elementary school teachers from the aforementioned cities and

regency. The distribution of subjects is detailed as follows: 70 teachers from Batam City, 35 teachers from Tanjung Pinang City, and 35 teachers from Bintan Regency. The classification of research subjects is presented below.

Table 1. Distribution of Research Subjects

No	City/District Name	Class Code	Total	Percentage
1	Batam City	A1	35	25%
2	Batam City	A2	35	25%
3	Tanjung Pinang City	A1	35	25%
4	Bintan Regency	A1	35	25%
Total		4 Classes	150	100%

The distribution of research subjects indicates that the majority of participants, 46.7%, were from Batam City. Tanjung Pinang City and Bintan Regency each contributed 23.3% of the total subjects. This distribution reflects the concentration of elementary school English teachers with non-English backgrounds in urban areas, particularly Batam City, compared to other regions in Riau Islands Province.

3.3. Research Instrument

The primary research instrument in this documentation study was the pretest instrument administered through the Learning Management System of the Ministry of Primary and Secondary Education. The pretest was designed to measure two main dimensions of teacher competency: 1) English language proficiency, encompassing listening, speaking, reading, and writing skills, and 2) pedagogical content knowledge in Teaching English to Young Learners, including lesson planning, differentiated instruction, and authentic assessment. The instrument consisted of multiple-choice and constructed-response items aligned with the CEFR framework and TEYL pedagogical standards established by the British Council (2025). The validity and reliability of the pretest instrument had been previously established by the ministry, thus no further pilot testing was conducted by the researcher. The pretest scores served as documentary evidence to describe the baseline competency profile of the research subjects.

3.4. Research Data Source

The data source in this study consisted of secondary data derived from the pretest results assessing the competency of elementary school English teachers. These data were systematically extracted from the official Learning Management System of the Ministry of Primary and Secondary Education. The dataset was purposively focused on training participants appointed by the Head of the Teacher and Education Personnel Office of Riau Islands Province, specifically teachers with non-English educational backgrounds who were currently assigned to teach English at the elementary school level. The data indicators encompassed three main components: 1) pretest scores as the quantitative baseline, 2) language proficiency aspects covering receptive and productive skills, and 3) pedagogical aspects of Teaching English to Young Learners aligned with the Deep Learning approach. These

indicators functioned as the initial baseline parameters prior to the implementation of the six-month competency development program, thereby enabling a preliminary mapping of teachers' existing strengths and areas requiring intervention.

3.5. Data Analysis Techniques

Data analysis employed qualitative content analysis following the interactive model of Miles and Huberman, which comprises three concurrent stages: data reduction, data display, and conclusion drawing/verification (Sugiyono, 2025). In the data reduction stage, the raw pretest data extracted from the Learning Management System were processed by classifying teachers' scores into predefined competency level categories. This classification facilitated the identification of baseline patterns in teachers' language proficiency and TEYL pedagogical knowledge. In the data display stage, the reduced data were systematically presented through descriptive tables and narrative explanations to map the initial competency profile of elementary school English teachers with non-English backgrounds. Visual displays enabled the researcher to discern trends and disparities in competency levels across regions and individual indicators. The final stage, conclusion drawing and verification, involved interpreting the displayed data to determine the extent of teachers' initial competency levels. The conclusions drawn from this preliminary analysis served as empirical justification for the subsequent six-month competency development program. The competency level categories for elementary school English teachers are presented in Table 2.

Table 2. Competency Level Categories for Elementary School English Teachers

No	Pretest Score Range	Competency Level	Ability Description
1	86 – 100	Very High	Teachers demonstrate active and communicative English use, and apply TEYL strategies aligned with the characteristics of learners aged 6-12 years with minimal assistance.
2	71 – 85	High	Teachers possess adequate English proficiency and TEYL pedagogy, but require reinforcement in specific areas such as speaking skills or instructional media.
3	56 – 70	Moderate	Teachers have basic understanding of English and TEYL concepts, yet experience difficulties in implementing differentiated instruction, authentic assessment, and technology integration.
4	41 – 55	Low	Teachers exhibit limited English proficiency and understanding of TEYL methods. Instruction remains dominated by lecture/translation methods with minimal use of media.
5	0 – 40	Very Low	Teachers demonstrate very limited English proficiency and TEYL pedagogy. Intensive training and sustained mentoring are required.

Source: Adapted from Kemendikdasmen training guidelines and British Council TEYL competency rubric (2025).

4. Result

The findings of this study were derived from the pretest results of elementary school English teachers with non-English educational backgrounds who participated in the competency enhancement training program. These data were extracted from official documents of the Ministry of Primary and Secondary Education available on the Learning Management System. The pretest results of the training participants are presented below.

Table 3. Training Participant Pretest Results

No	Participants Code	The Name of City and Regency			
		Batam A-1	Batam A-2	TPI A-1	Binta A-1
1	PKGSD.MBI.1_001	73,4	53,35	90,05	25
2	PKGSD.MBI.1_002	73,4	76,6	29,7	82,5
3	PKGSD.MBI.1_003	67,5	0	73,35	67,5
4	PKGSD.MBI.1_004	65	69,95	73,35	73,35
5	PKGSD.MBI.1_005	30	73,35	0	70
6	PKGSD.MBI.1_006	50	73,35	73,35	82,5
7	PKGSD.MBI.1_007	70	73,4	52,5	62,5
8	PKGSD.MBI.1_008	73,4	73,4	52,5	60
9	PKGSD.MBI.1_009	73,4	76,7	60	77,5
10	PKGSD.MBI.1_010	77,5	73,35	73,35	0
11	PKGSD.MBI.1_011	72,5	93,3	0	0
12	PKGSD.MBI.1_012	65	73,4	0	73,35
13	PKGSD.MBI.1_013	90	73,4	76,75	77,5
14	PKGSD.MBI.1_014	47,5	49,85	73,35	70
15	PKGSD.MBI.1_015	90	6,6	73,35	73,35
16	PKGSD.MBI.1_016	73,4	53,25	52,5	75
17	PKGSD.MBI.1_017	73,4	76,55	52,5	73,35
18	PKGSD.MBI.1_018	72,5	86,65	73,4	52,5
19	PKGSD.MBI.1_019	73,4	80	83,4	77,5
20	PKGSD.MBI.1_020	72,5	73,4	76,7	97,5
21	PKGSD.MBI.1_021	65	73,4	80,05	0
22	PKGSD.MBI.1_022	87,5	79,95	69,9	0
23	PKGSD.MBI.1_023	75	70,05	73,35	57,5
24	PKGSD.MBI.1_024	73,4	83,3	59,85	35
25	PKGSD.MBI.1_025	0	70,1	50,05	80
26	PKGSD.MBI.1_026	87,5	56,55	86,65	73,35
27	PKGSD.MBI.1_027	80	63,25	79,95	52,5
28	PKGSD.MBI.1_028	55	69,95	0	52,5
29	PKGSD.MBI.1_029	72,5	86,75	76,7	73,35
30	PKGSD.MBI.1_030	87,5	73,4	90,05	72,5
31	PKGSD.MBI.1_031	30	73,4	73,35	52,5
32	PKGSD.MBI.1_032	73,4	73,4	52,5	52,5
33	PKGSD.MBI.1_033	73,4	59,85	52,5	52,5
34	PKGSD.MBI.1_034	67,5	59,85	0	0
35	PKGSD.MBI.1_035	65	73,35	73,35	80

The data presented above represent the pretest results of elementary school English teachers with non-English educational backgrounds who participated in the competency enhancement training program in Riau Islands Province. For a more detailed description, Table 4.3 presents the total scores obtained by the participants, the mean scores, highest scores, lowest scores, and medians for each district/city. Thus, the information displayed in this table provides a clearer illustration of the teachers' competency levels in terms of 1) language proficiency aspects covering both receptive and productive skills, and 2) pedagogical aspects of Teaching English to Young Learners aligned with the Deep Learning approach.

Table 4. The Criteria of Training Participant Pretest Results

No	Criteria	The Name of City / Regency			
		Batam A-1	**Batam A-2**	**TPI A-1**	**Bintan A-1**
1	Total Score	2376,5	2376,4	2058,35	2005,1
2	Average	67,9	67,89	58,81	57,28
3	Highest Score	90	93,2	90,05	97,5
4	Lowest Score	0	0	0	0
5	Median	72,5	73,4	73,35	67,5

The research data were subsequently converted into interval categories to classify the competency levels of elementary school English teachers with non-English academic backgrounds across districts and cities in Riau Islands Province. Teachers' scores were classified into five competency intervals consist of 86-100 categorized as Very High, 71-85 as High, 56-70 as Moderate, 41-55 as Low, and 0-40 as Very Low. The distribution of teachers according to these competency intervals for each district and city in Riau Islands Province is presented below.

Table 5. The Distribution of Teachers Competency Intervals

No	Competency Level	Intervals	Percentage of Teachers Competency Intervals			
			Batam A-1	**Batam A-2**	**TPI A-1**	**Bintan A-1**
1	Very High	86 – 100	12,5%	8,6%	8,6%	8,6%
2	High	71 – 85	46,9%	48,6%	45,7%	40%
3	Moderate	56 – 70	25%	22,9%	14,3%	20%
4	Low	41 – 55	6,3%	8,6%	17,1%	20%
5	Very Low	0 – 40	9,4%	11,4%	14,3%	11,4%

Table above presents the distribution of teachers' competency levels across four aspects: Language Proficiency, Pedagogical Knowledge, TEYL-DL, and Total Score. The data show that the High level was the dominant category in all aspects, ranging from 40% to 48.6%. Language Proficiency had the highest proportion of teachers at High to Very High levels, while TEYL-DL and Total Score showed a greater concentration of teachers at Low to Very Low levels. This indicates variation in baseline competence, with stronger linguistic skills but weaker pedagogical and TEYL-DL understanding among participants. For clearer visualization, the data in this table will be presented in the form of a bar diagram in the

following section. The diagram illustrates the percentage distribution of each competency level across the four aspects to facilitate comparative analysis of teachers' initial competence.

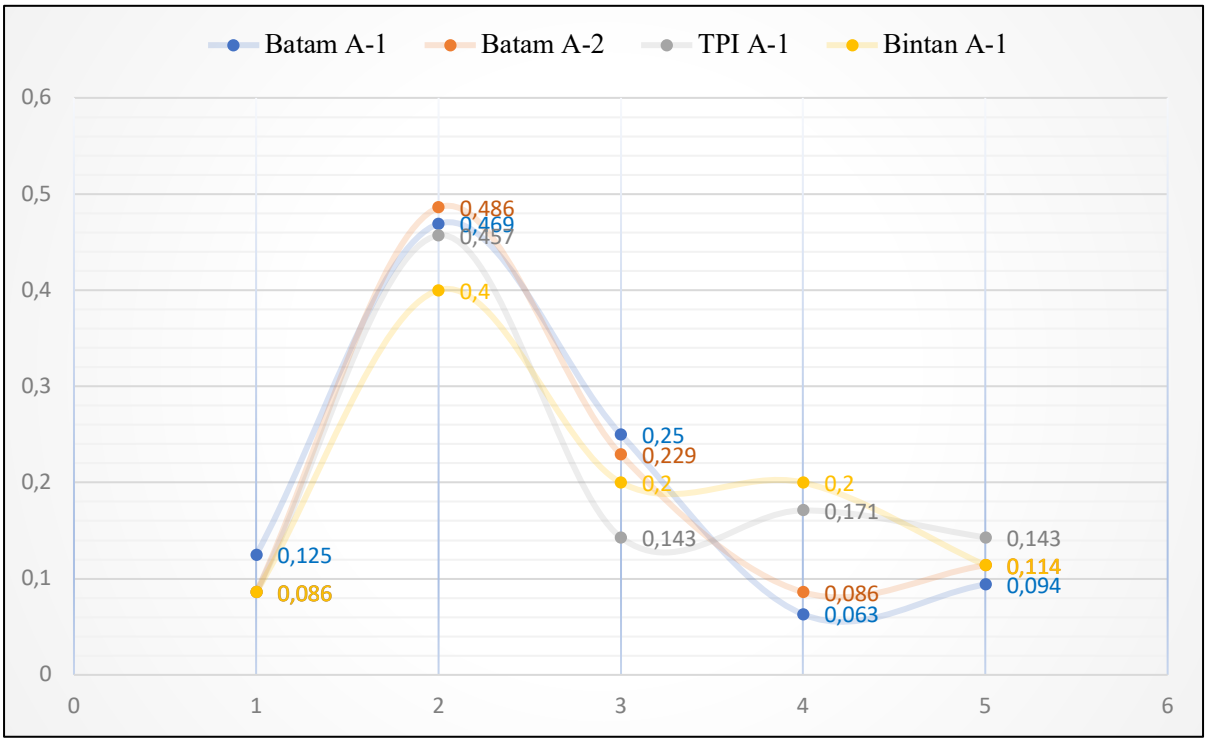


Figure 1. Percentage Distribution of Competency Levels by Aspect at Pretest

Figure 1 above illustrates the percentage distribution of teachers across five competency levels Very High, High, Moderate, Low, and Very Low for Language Proficiency, Pedagogical Knowledge, TEYL-DL, and Total Score prior to the training program.

5. Discussion

Pretest data showed wide variation in teachers' baseline competencies across four indicators. Total scores reached 2,376.5 with a mean of 67.9 and median of 72.5. Scores ranged from 0 to 90, showing major ability gaps. Language Proficiency scored highest with a mean of 67.89 and max of 93.2. Pedagogy was lower with a mean of 58.81 and max of 90.05. TEYL-Deep Learning scored lowest with a mean of 57.28, despite the highest individual score of 97.5. Zero scores in all areas showed many teachers struggled, especially with pedagogy and TEYL-DL. The gap between mean and median in pedagogy and TEYL-DL indicated negative skewness. Few high scorers raised the median while most teachers scored low. Overall, language skills were stronger than teaching and TEYL-DL skills. Low averages in pedagogy and TEYL-DL highlight the urgent need for targeted support through the sustainable program to improve learner-centered, tech-integrated, and differentiated instruction for students.

Pretest results for Batam A-1 showed most elementary English teachers had adequate baseline skills before training. Around 46.9% were in the High category, and 59.4% scored High to Very High, meaning over half were above the passing grade of 71. Still, 15.7% were at Low to Very Low levels, including one teacher with 0 and two with 30. The mean was 67.2 while the median was 73.4, showing negative skewness. Many teachers scored around 73.4, but very low scores point to ongoing gaps. This highlights the need for targeted support, especially for

teachers in remote areas with limited training access. Pedagogical knowledge in Batam A-2 was mixed among non-English background teachers. The High category was largest at 48.6%, and 57.2% scored High to Very High, showing most had basic teaching and classroom management skills before training. However, 20% were at Low to Very Low, including four below 40 and one with 0. These low scores reveal weak understanding of basic teaching concepts, especially among non-education graduates. The mean of 68.8 was below the median of 73.4 due to a few low scores. Overall, most teachers had enough basic knowledge to begin, but some still need focused help with fundamental skills. This gap explains why the training program is important to equalize teacher competence.

TEYL-DL results in Tanjung Pinang varied among teachers. The High level was most common at 45.7%, and 54.3% scored High to Very High, meaning over half had basic knowledge of teaching English to young learners through Deep Learning before training. However, 31.4% were at Low to Very Low, including five teachers with 0. These low scores show many lacked basics like age-appropriate teaching, differentiation, and Deep Learning. The mean of 62.9 was below the median of 73.35 due to a few very low scores. Overall, most teachers had some basic TEYL-DL knowledge, but nearly one-third still lacked it. This shows the need for training focused on student-centered lessons for young learners. Total pretest scores in Bintan showed most teachers had moderate to high baseline competence. The High category was largest at 40%, and 48.6% scored High to Very High, meaning almost half had adequate knowledge before training. Still, 31.4% were at Low to Very Low, including four with 0. These low scores reveal serious gaps in language, pedagogy, and TEYL-DL. The mean of 64.2 was below the median of 73.35 because of several very low scores. In short, many teachers had sufficient basic skills, but about one-third still needed support. This confirms the importance of the program to improve all teachers' skills and reduce performance gaps.

Comparative analysis across four competency areas shows a clear hierarchy in teachers' baseline knowledge. Language Proficiency had the best results, with 59.4% of teachers at High to Very High levels, suggesting most already had adequate English skills from formal and informal exposure. In contrast, teaching-related areas were more uneven. Pedagogical Knowledge and TEYL-DL had 57.2% and 54.3% at High to Very High, but Total Score dropped to 48.6%, showing integrated skills lagged behind separate domains. The share of low performers also increased from 15.7% in Language Proficiency to 20% in Pedagogical Knowledge, and 31.4% in TEYL-DL and Total Score. Very Low scores peaked at 14.3% in TEYL-DL, pointing to major gaps in age-appropriate teaching, differentiation, and Deep Learning. This suggests language skills were fairly strong, but applying them in effective classroom practice remained weak, especially for non-English background teachers.

Pretest data showed wide variation across four indicators. Language Proficiency scored highest with a mean of 67.89 and 59.4% at High to Very High, matching prior studies on Indonesian teachers' receptive English skills. Meanwhile, Pedagogical Knowledge and TEYL-DL had lower means of 58.81 and 57.28, with 20% to 31.4% at Low to Very Low. Zero scores in these areas revealed basic gaps in teaching methods and Deep Learning, consistent with research on remote-area teachers lacking learner-centered training. The data were negatively skewed, with means below medians, meaning a few high scorers raised the averages while many stayed at basic levels. Weak TEYL-DL performance is critical because Deep Learning focuses on critical thinking, collaboration, and problem-solving skills that short workshops rarely cover.

Prior studies have examined English teachers' language skills and general pedagogy, but few measured baseline TEYL-DL competence among non-English background teachers in remote areas like Batam, Tanjung Pinang, and Bintan. This study goes further by combining four aspects: language, pedagogy, TEYL-DL, and total score, giving a fuller diagnostic picture than single-aspect research. Finding that 31.4% of teachers scored Low to Very Low in TEYL-DL before training highlights a gap rarely reported in literature. These results have two key implications. First, the six-month program should use an asymmetrical focus: maintain teachers' language strengths while adding more time and support for pedagogy and TEYL-DL. Second, the wide gap between high and low performers calls for differentiated training. Low-scoring teachers need intensive remedial help and mentoring to build basic skills, while high-scoring teachers can focus on advanced tasks like lesson design and reflection. Without targeted support, gaps between teachers will persist and prevent equal competency growth for all elementary English teachers in remote areas.

6. Conclusion, Implication, and Recommendation

Pretest results showed that elementary English teachers in Batam, Tanjung Pinang, and Bintan started the program with uneven competencies. Language Proficiency was strongest, with a mean of 67.89 and 59.4% at High to Very High levels, showing adequate linguistic skills before training. In contrast, Pedagogical Knowledge and TEYL-DL scored lower, with means of 58.81 and 57.28, and 20% to 31.4% of teachers at Low to Very Low levels. Zero scores and negatively skewed data across all areas revealed persistent gaps in age-appropriate methods, differentiated instruction, and Deep Learning. The share of low performers rose from Language Proficiency to Total Score, confirming that integrated teaching skills lag behind language ability. This aligns with past research on limited pedagogical training for non-English background teachers in remote Indonesia. This study adds new evidence by measuring baseline TEYL-DL competence, which prior studies rarely addressed, and by identifying teachers who need remedial support. The findings highlight the need for a differentiated six-month program that builds on language strengths while giving intensive support to pedagogy and TEYL-DL. Without targeted training, gaps between high and low performers will remain, limiting fair implementation of learner-centered, tech-integrated teaching for students aged 6-12.

These results show that training must shift from generic models to an asymmetrical, differentiated design that strengthens pedagogy and TEYL-DL while maintaining language skills. Teachers with low scores need intensive mentoring, as suggested by Darling-Hammond et al. for effective professional development. Future research should use longitudinal studies to track if the six-month program creates lasting TEYL-DL improvements, especially for low-level teachers. Qualitative methods like interviews and classroom observation are also needed to explore barriers behind low TEYL-DL performance, such as limited technology access or weak institutional support.

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Sustainable Productive Zakat Governance for MSME Empowerment in Indonesia

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Abstract

Productive zakat governance continues to face various institutional challenges, including weak monitoring systems, fragmented empowerment programs, and the absence of optimal sustainability mechanisms for *mustahik* beneficiaries. In the context of MSMEs, these conditions limit the ability of productive zakat programs to generate sustainable economic transformation. This study aims to develop a Sustainable Productive Zakat Governance framework through a comparative analysis between Umar ibn al-Khattab's governance model and contemporary Indonesian zakat institutions in MSME empowerment. The study employs a qualitative approach using comparative institutional analysis and thematic content analysis of classical Islamic sources, zakat regulations, institutional reports, and academic literature on Islamic social finance. The findings reveal that sustainable productive zakat governance requires the integration of accountability, institutional adequacy, empowerment mechanisms, sustainability orientation, and graduation pathways within an interconnected governance framework. The study further highlights that graduation pathways should be positioned as the primary governance outcome of productive zakat in promoting MSME resilience and transforming *mustahik* toward economic independence. The study implies the importance of strengthening governance systems, continuous monitoring, and long-term empowerment indicators in modern productive zakat management.

Keywords: sustainable productive zakat; zakat governance; Islamic social finance; MSME empowerment; graduation pathway

1. Introduction

MSMEs play an important role in inclusive development through employment creation and economic participation in both developing and developed countries (Endris & Kassegn, 2022). However, MSMEs continue to face structural challenges, including limited access to financing, weak managerial capacity, and high economic vulnerability, which constrain business sustainability (Endris & Kassegn, 2022). In this context, Islamic social finance, particularly zakat, is increasingly recognized as a relevant instrument for supporting inclusive development through redistribution and social protection mechanisms (Dirie et al., 2024;

Robbana et al., 2023). Previous studies indicate that zakat contributes to welfare improvement and the reduction of socio-economic vulnerability among Muslim communities (Robbana et al., 2023; Herianingrum et al., 2024). Therefore, the development of sustainable productive zakat governance has become increasingly important in strengthening MSME empowerment and long-term socio-economic resilience.

Sustainable productive zakat governance can be understood as an institutional arrangement that shifts zakat from short-term assistance toward accountable and sustainability-oriented economic empowerment (Sawmar & Mohammed, 2021; Napitupulu et al., 2024). The Islamic social finance literature emphasizes that accountability, institutional capacity, and distribution effectiveness are critical factors in determining the socio-economic impact of zakat institutions (Napitupulu et al., 2024). In productive zakat programs, empowerment outcomes are influenced not only by business capital distribution, but also by the institution's ability to provide mentoring and capacity-building support for *mustahik* enterprises (Mawardi et al., 2023; Widiastuti et al., 2021). This perspective is consistent with Umar ibn al-Khattab's governance principles, which emphasized *amanah* (trustworthiness), distributive justice, and the reduction of economic dependency within society (Ishaq & Ridwan, 2023).

Despite the growing recognition of productive zakat for economic empowerment, governance practices within Islamic social finance remain fragmented and insufficiently integrated into sustainable empowerment frameworks (Napitupulu et al., 2024). In Indonesia, variations in efficiency among zakat institutions indicate uneven governance capacity and operational effectiveness (Ryandono et al., 2023). Furthermore, the effectiveness of zakat distribution is strongly influenced by governance quality, fraud prevention mechanisms, and technological support, suggesting that productive zakat programs without adequate monitoring systems are unlikely to generate sustainable business development for *mustahik* beneficiaries (Wahyuni-TD et al., 2021; Syed Yusuf et al., 2024).

Previous studies have examined productive zakat, zakat governance, and Islamic social finance integration. However, most studies still discuss governance, sustainability, and empowerment separately and rarely connect classical Islamic governance with contemporary productive zakat governance in the context of MSME empowerment. In addition, limited attention has been given to positioning the *mustahik* graduation pathway as a governance outcome of zakat institutions. Therefore, this study develops a Sustainable Productive Zakat Governance framework through comparative institutional analysis between Umar ibn al-Khattab's governance principles and contemporary Indonesian zakat institution practices to identify governance principles relevant to strengthening productive zakat-based MSME empowerment.

2. Literature Review

2.1 Institutional Governance in *Islamic Social Finance*

In Islamic social finance, institutional governance determines distribution effectiveness, public legitimacy, and the sustainability of socio-economic impacts. Governance in zakat institutions extends beyond administrative compliance and includes accountability, institutional capacity, and the ability to maintain public trust (Scott, 2014; Sawmar & Mohammed, 2021). The literature indicates that modern zakat governance has shifted from a charity-based distribution approach toward more sustainability-oriented economic empowerment models (Widiastuti et al., 2022). In classical Islamic governance, Umar ibn al-

Khattab emphasized *amanah* (trustworthiness), distributive justice, and *al-kifayah* to reduce economic dependency within society (Ishaq & Ridwan, 2023). These principles demonstrate that classical Islamic governance remains relevant to strengthening contemporary productive zakat governance.

2.2 Productive Zakat and MSME Empowerment

Productive zakat has evolved as an Islamic social finance approach that directs zakat not only toward consumptive assistance, but also toward supporting productive economic activities and the development of *mustahik*-based MSMEs (Mawardi et al., 2023). In this context, zakat is positioned as an instrument that supports more sustainable economic transformation among *mustahik* beneficiaries.

Previous studies indicate that productive zakat can improve *mustahik* income and welfare when supported by effective institutional governance. Widiastuti et al. (2021) found that business growth serves as an important mediator between productive zakat programs and *mustahik* welfare improvement. Nevertheless, various studies reveal that program monitoring and impact evaluation remain major challenges in productive zakat implementation (Napitupulu et al., 2024). These challenges become more complex within the MSME context, as small business actors frequently face limited capital access, low managerial capacity, and high economic vulnerability (Endris & Kassegn, 2022).

2.3 Accountability, Sustainability, and Graduation Mechanism

Accountability represents a core dimension of zakat institutional governance because it is closely related to institutional legitimacy and public trust. In the context of Islamic social finance, accountability is understood not only as financial reporting obligations, but also as social responsibility in ensuring the effectiveness of *mustahik* empowerment programs (Ikhwandha & Hudayati, 2019). Sawmar & Mohammed (2021) argue that effective zakat governance requires the integration of transparency, accountability, and social performance to sustain institutional legitimacy.

In addition to accountability, sustainability orientation has become increasingly important in contemporary productive zakat development. Current studies emphasize that productive zakat should support long-term economic empowerment through capacity building and business assistance for *mustahik* beneficiaries (Dirie et al., 2024). In this context, the graduation mechanism has emerged as an approach that encourages the transformation of *mustahik* from dependency toward economic independence

However, previous studies largely discuss accountability, sustainability, and empowerment separately. Therefore, this study proposes a Sustainable Productive Zakat Governance framework through comparative institutional analysis between Umar ibn al-Khattab's governance principles and contemporary Indonesian zakat institution practices to identify governance principles relevant to strengthening productive zakat-based MSME empowerment.

2.4 Research Conceptual Model

This study proposes Sustainable Productive Zakat Governance as a governance framework that integrates accountability, institutional adequacy, empowerment mechanisms, sustainability orientation, and graduation pathways in supporting the transformation of

mustahik beneficiaries toward economic independence. Through comparative institutional analysis, the study examines how classical Islamic governance principles may strengthen contemporary productive zakat governance for sustainable MSME empowerment.

3. Methodology

3.1 Research Design

This study employs a qualitative research design using a comparative institutional analysis approach to examine productive zakat governance principles during the era of Umar ibn al-Khattab and their relevance to contemporary Indonesian zakat institution practices. This approach is applied to understand how classical Islamic governance principles may contribute to the development of sustainable MSME empowerment within the framework of Islamic social finance (Creswell & Poth, 2018)

The comparative institutional perspective enables the study to identify similarities, differences, and contextual adaptations between classical Islamic zakat governance and contemporary institutional practices.

3.2 Data Sources and Selection Criteria

This study utilizes secondary qualitative data derived from classical Islamic sources, regulatory documents, institutional reports, and academic literature related to productive zakat, Islamic governance, and MSME empowerment. Classical Islamic sources include the Qur'an, Hadith, and historical literature concerning governance during the era of Umar ibn al-Khattab, while contemporary sources include Indonesian zakat regulations, zakat institutional reports, policy documents, and indexed academic publications.

Sources were selected based on their relevance to productive zakat governance, publication credibility, and conceptual contribution to empowerment and sustainability issues (Bowen, 2009).

3.3 Comparative Institutional Analytical Framework

This study applies comparative institutional analysis to examine productive zakat governance across two institutional contexts, namely the governance model during the era of Umar ibn al-Khattab and the productive zakat practices of contemporary Indonesian zakat institutions. This approach is employed to understand how governance principles evolve across different historical and institutional contexts while maintaining similar normative objectives (Scott, 2014).

The analysis focuses on five primary dimensions: accountability, adequacy-based distribution, empowerment orientation, sustainability strategy, and graduation mechanism. These dimensions were identified from dominant themes within the literature on classical Islamic governance and contemporary zakat studies. Table 1 presents the comparative analytical framework used in this study.

Table 1. Comparative Analytical Framework

Analytical Dimension	Umar ibn al-Khattab's Governance Model	Contemporary Indonesian Zakat Institutions
Accountability	Direct supervision and public accountability of *amil*	Institutional reporting and regulatory compliance
Distribution Principle	Adequacy-based and needs-oriented assistance	Productive capital allocation and MSME support
Empowerment Orientation	Economic self-sufficiency and poverty exit	Entrepreneurial empowerment and business development
Sustainability Strategy	Long-term welfare improvement	MSME resilience and continuity programs
Graduation Mechanism	Transition from recipient to economically independent individual	Partial mentoring and limited graduation framework

The framework is used to identify governance principles relevant to strengthening sustainable productive zakat management within the context of contemporary Islamic social finance.

3.4 Data Analysis Technique

The data were analyzed using thematic content analysis to identify and interpret themes related to productive zakat governance and sustainable MSME empowerment (Braun & Clarke, 2006). The analytical process involved data reduction, thematic categorization, interpretative comparison, and conceptual synthesis.

The main themes analyzed included accountability, empowerment orientation, adequacy-based distribution, sustainability strategy, and graduation mechanism. Furthermore, comparative interpretation was conducted between classical Islamic zakat governance and contemporary institutional practices to develop the Sustainable Productive Zakat Governance framework.

3.5 Trustworthiness and Analytical Rigor

To enhance trustworthiness, this study applies source triangulation through the integration of classical Islamic texts, institutional documents, regulatory frameworks, and contemporary academic literature (Lincoln & Guba, 1985). Analytical consistency is maintained through the use of the same analytical dimensions throughout the comparative institutional analysis process.

3.6 Conceptual Orientation of Sustainable Productive Zakat Governance

This study views productive zakat as an Islamic social finance governance mechanism that supports economic empowerment and social sustainability. From this perspective, productive zakat is understood as an institutional instrument that connects accountability, empowerment, sustainability, and graduation pathways within the transformation process of *mustahik* beneficiaries toward economic independence. The conceptual relationships among these dimensions are summarized in Table 2.

Table 2. Conceptual Relationships of Sustainable Productive Zakat Governance

Islamic Principle	Institutional Application	Expected Outcome
Al-kifayah	Productive MSME assistance	Economic resilience
Tamkin	Entrepreneurial support	Business sustainability
Amanah	Governance and monitoring	Public trust
Maslahah	Inclusive zakat programs	Social welfare
Graduation pathway	Sustainable empowerment	Reduced dependency

4. Results

4.1 Comparative Governance Analysis

The comparative analysis demonstrates that zakat governance during the era of Umar ibn al-Khattab strongly emphasized public accountability, adequacy-based distribution, and the reduction of *mustahik* economic dependency. Umar positioned zakat administrators (*amil*) as custodians of public trust who were directly supervised to prevent misuse of authority and maintain public confidence. In this context, zakat distribution was not merely intended to address short-term needs, but also to ensure the attainment of *al-kifayah* or adequate livelihood for beneficiaries (Ishaq & Ridwan, 2023). This indicates that classical Islamic zakat governance already incorporated dimensions of sustainability and socio-economic empowerment.

Contemporary Indonesian zakat institutions demonstrate stronger procedural accountability through regulatory frameworks, institutional audits, digitalized reporting systems, and governance standardization. Systems such as SiMBA enhance transparency and national monitoring of zakat distribution, while public audits and reporting mechanisms function as important instruments for maintaining institutional legitimacy. Nevertheless, compared to Umar ibn al-Khattab's governance model, which relied more heavily on relational governance and direct supervision, contemporary governance practices tend to be more administrative and compliance-oriented. This difference reflects a transition from socially embedded governance toward formal institutional governance systems.

Despite these contextual differences, the analysis reveals similar normative orientations between the two governance models, particularly regarding the protection of vulnerable groups, welfare enhancement, and the reduction of socio-economic vulnerability. In the modern context, these principles are translated into productive zakat programs that integrate business capital assistance, enterprise strengthening, and economic empowerment for *mustahik* beneficiaries. Therefore, the relevance of Umar ibn al-Khattab's governance does not lie in historical replication, but rather in governance principles that may be adapted to strengthen contemporary productive zakat governance.

Table 3. Comparative Synthesis of Governance Models

Dimension	Umar ibn al-Khattab's Model	Indonesian Zakat Practices	Institutional Implications
Legitimacy	*Amanah*, justice, and moral oversight	Compliance, audits, and transparency	Governance should remain ethical, not merely administrative

Distribution	Needs- and welfare-based	Program- and regulation-based	Standardization should allow contextual adaptation
Administrators	Public trust and anti-rent seeking	Internal control and WBS	Anti-fraud should become a core governance element
Productive orientation	Reducing dependency	Capital, training, and mentoring	Empowerment requires gradual development
Sustainability	Adaptive decisions based on *maslahah*	Monitoring, evaluation, and reporting	Sustainability requires SOPs and institutional learning
Outcome	Welfare and independence	Resilience and graduation	Outcomes should emphasize transformation, not only distribution

4.2 Accountability and Institutional Trust

Accountability constitutes a crucial dimension of productive zakat governance because it is directly related to institutional legitimacy and public trust. Within the perspective of Islamic social finance, accountability encompasses not only administrative compliance and financial reporting, but also social responsibility in ensuring the effectiveness of *mustahik* empowerment programs (Sawmar & Mohammed, 2021). Therefore, effective zakat governance requires the integration of transparency, accountability, and social performance.

Indonesian zakat institutions demonstrate stronger procedural accountability through audits, digital reporting systems, and institutional monitoring mechanisms. The development of technologies such as SiMBA enhances the traceability of zakat distribution and supports the standardization of national zakat reporting. In addition, strengthened fraud prevention mechanisms and institutional supervision have become important components in maintaining institutional credibility (Wahyuni-TD et al., 2021). These developments indicate that modern governance increasingly positions technology and transparency as key instruments for sustaining public trust.

Nevertheless, the synthesis findings indicate that procedural accountability has not always been accompanied by stronger substantive accountability in *mustahik* empowerment. Most institutional performance indicators still focus on the amount of funds collected and distributed rather than on the sustainability of *mustahik* economic outcomes. In this context, public trust is influenced not only by reporting transparency, but also by the ability of zakat institutions to generate tangible and sustainable socio-economic transformation.

4.3 Productive Zakat and MSME Empowerment

From a regulatory perspective, productive zakat in Indonesia now possesses a clearer foundation for economic empowerment. Ministry of Religious Affairs Regulation (PMA) No. 16 of 2025 emphasizes that productive zakat utilization includes business capital assistance, production facilities, training, and capacity building for *mustahik* enterprises. This indicates that productive zakat is no longer understood merely as fund distribution, but as an institutional intervention supporting sustainable business development. This finding aligns with previous

studies showing that business growth plays an important role in improving *mustahik* welfare (Mawardi et al., 2023; Widiastuti et al., 2021).

The practices of Indonesian zakat institutions also demonstrate a shift toward more integrated empowerment approaches. BAZNAS, Dompet Dhuafa, and Rumah Zakat provide not only business capital assistance, but also entrepreneurial training, mentoring, monitoring, and marketing support. These approaches indicate that productive zakat-based MSME empowerment is increasingly directed toward strengthening business capacity and the economic sustainability of *mustahik* beneficiaries.

However, thematic synthesis findings reveal that the primary challenges faced by *mustahik* MSMEs extend beyond capital limitations to include weak access to formal finance, low managerial capacity, and high economic vulnerability. Under such conditions, productive zakat programs that stop at disbursement risk creating new forms of dependency. This finding is consistent with the integrated Islamic social finance model that positions the gradual transformation of *mustahik*—from rescue to resilience—as part of governance design rather than merely a program outcome (Widiastuti et al., 2022; Hudaefi, 2025). Therefore, the effectiveness of MSME empowerment should be understood as the result of interactions among business assistance, capacity building, financial literacy, and institutional capability in adapting interventions to *mustahik* needs.

4.4 Sustainability Orientation and Graduation Mechanism

The findings indicate that sustainability orientation in productive zakat is closely related to the ability of zakat institutions to strengthen business resilience and reduce *mustahik* dependency. In this context, the effectiveness of productive zakat should be assessed not only through fund distribution, but also through long-term economic transformation among beneficiaries.

The graduation mechanism becomes important because it positions empowerment as a gradual process toward economic independence. This approach is consistent with the principle of *al-kifayah* in Umar ibn al-Khattab's governance model, which emphasized sufficiency and the reduction of socio-economic vulnerability. In the contemporary context, graduation is reflected through stronger business capacity and the gradual transition of *mustahik* beneficiaries toward economic independence (Uddin & Hossain, 2025).

Nevertheless, the findings indicate that many zakat institutions still face limitations in developing systematic graduation frameworks. Long-term monitoring, sustainability indicators, and evaluations of *mustahik* transformation have not yet been fully integrated into institutional governance systems. These findings position graduation mechanisms as a primary governance outcome of sustainable productive zakat.

5. Discussion

5.1 Institutional Challenges and Governance Gaps

Although regulatory frameworks and institutional innovations continue to evolve, the synthesis findings reveal several major gaps in productive zakat governance. The Islamic social finance literature still tends to portray governance dimensions such as accountability, efficiency, performance, and awareness separately, resulting in limited integration among governance dimensions at the implementation level. In addition, the efficiency of Indonesian

zakat institutions varies across management clusters, indicating unequal institutional capacities. Technology and digital governance have also proven important for distribution effectiveness, yet the quality of information transparency and digital accountability remains uneven. On the other hand, anti-fraud practices and reporting systems continue to improve, although standardization of internal controls and reporting discipline among zakat administrators remains inconsistent. Therefore, the primary challenge of productive zakat governance lies not in the absence of norms, but in the unequal institutional capacity to operationalize those norms.

Table 4. Institutional Challenges and Their Manifestations

Challenge	Manifestation in Practice	Consequences for Productive Zakat
Program fragmentation	Capital assistance, training, mentoring, and reporting are not always organized as an integrated intervention chain	Productive assistance tends to revert to short-term distribution
Limited monitoring	Reporting focuses more on program outputs than on the business development of *mustahik* beneficiaries	Graduation outcomes are difficult to substantively verify
Unequal institutional capacity	Differences in human resource quality, efficiency, and coordination capacity across institutions/clusters	The quality of MSME empowerment becomes inconsistent
Governance inconsistency	Financial accountability is more advanced than impact accountability; fairness mechanisms remain weak	Procedural trust increases, but transformational trust is not always achieved
Technological limitations and data interoperability	Digitalization continues to develop, but not all channels provide detailed distribution and impact information	Detailed transparency and adaptive monitoring remain suboptimal

Critically, these gaps indicate the existence of three major institutional tensions. First, *compliance versus empowerment*, referring to conditions in which zakat institutions are required to fulfill administrative and reporting obligations while simultaneously facing resource limitations in providing sustainable business assistance. Second, *standardization versus adaptation*, where national systems require standardized indicators and procedures, whereas *mustahik* business needs are often contextual and dynamic. Third, *digital governance versus relational governance*, in which data and reporting systems such as SiMBA are essential for transparency and control, yet remain unable to replace the role of field facilitators in understanding the real dynamics of *mustahik* enterprises. The implication of these tensions is the need to shift institutional performance indicators from a dominant focus on distribution metrics toward a combination of distribution, business learning, sustainability, and *mustahik* graduation mechanisms.

5.2 Integrative Framework of Sustainable Productive Zakat Governance

Based on the overall findings, this study proposes a Sustainable Productive Zakat Governance framework consisting of five interrelated dimensions: accountability, institutional adequacy, empowerment mechanism, sustainability orientation, and graduation pathway. Accountability establishes institutional trust and legitimacy; institutional adequacy ensures sufficient human resources, standard operating procedures, data systems, and coordination mechanisms; empowerment mechanisms translate zakat into business capital, training, mentoring, and market access; sustainability orientation ensures that programs maintain monitoring, evaluation, and adaptive capacity; while the graduation pathway serves as the outcome horizon that assesses whether *mustahik* beneficiaries progress toward resilience and economic independence. Therefore, the substantive novelty of this study lies in repositioning graduation as a governance outcome rather than merely an economic outcome.

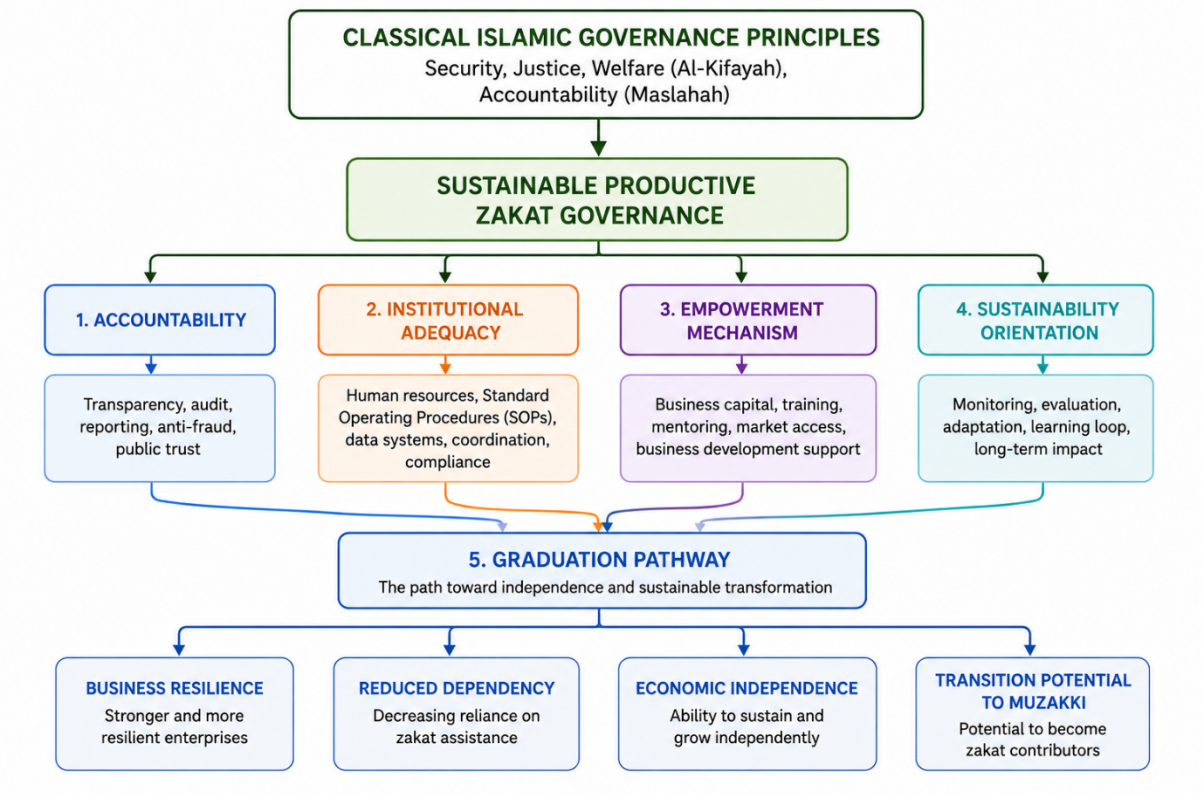


Figure 1. Sustainable Productive Zakat Governance Framework

6. Conclusion, Implications, and Recommendations

This study demonstrates that sustainable productive zakat governance depends not merely on fund distribution, but more importantly on the ability of zakat institutions to establish integrated, adaptive, and long-term economic empowerment mechanisms. Through comparative institutional analysis, the study finds that Umar ibn al-Khattab's governance principles—such as *amanah*, *al-kifayah*, policy flexibility, and the orientation toward reducing economic dependency—remain relevant within the context of contemporary productive zakat management. Nevertheless, Indonesian zakat institutions continue to face challenges related to program fragmentation, limited monitoring systems, and underdeveloped *mustahik* graduation mechanisms.

This study conceptualizes a Sustainable Productive Zakat Governance framework consisting of accountability, institutional adequacy, empowerment mechanisms, sustainability orientation, and graduation pathways. The primary contribution of this study lies in positioning the graduation mechanism as a governance outcome of sustainable productive zakat rather than merely a microeconomic outcome. Therefore, the success of productive zakat should be assessed based on the institution's ability to transform *mustahik* beneficiaries toward economic independence and long-term business resilience.

Theoretically, this study extends the Islamic social finance governance literature by integrating classical Islamic governance principles with contemporary productive zakat governance within a sustainable empowerment framework. Practically, zakat institutions should strengthen mentoring systems, adaptive monitoring, graduation-based indicators, and collaborative governance to improve the sustainability and transformational impact of productive zakat programs. Future studies are encouraged to conduct empirical multi-case institutional analyses to examine the implementation of the Sustainable Productive Zakat Governance framework across different institutional contexts.

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The Mediating Role of Job Crafting in the Relationship between Social Support and Subjective Well Being among Family Business Owners

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ABSTRACT

This study examines the mediating role of job crafting in the relationship between social support and subjective well-being among family business owners and managers. Using a quantitative survey approach, data were collected from 384 family business owners and/or managers in the Special Region of Yogyakarta, Indonesia, and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings reveal that social support has a positive and significant effect on job crafting and subjective well-being, while job crafting also positively influences subjective well-being. Furthermore, job crafting partially mediates the relationship between social support and subjective well-being, indicating that proactive work redesign behavior serves as an important mechanism through which social support enhances well-being among family business owners and managers. This study contributes to the entrepreneurship and well-being literature by highlighting the importance of social support and proactive work behavior in improving subjective well-being in the context of family businesses.

Keywords: job crafting, social support, subjective well-being, family business

1. Introduction

The issue of subjective well-being in family businesses generally stems from role conflict, where the boundary between family time and work is blurred. This problem includes a lack of time for social/family life, high work stress, as well as a high potential for negative emotions such as sadness or anger due to interpersonal conflicts. Individual well-being becomes a crucial issue in the global context. Data (World Happiness Report, 2023) shows that happiness levels and subjective well-being have declined in various countries. This phenomenon not only affects the general population but also family business owners who face dual pressures: economic challenges and psychological burdens. The Research (Stephan U. R., 2023) shows that 72% of business owners report experiencing stress, with 30% of them experiencing symptoms of anxiety or depression. Subjective well-being has become an increasingly important issue in entrepreneurship and organizational studies because business owners frequently face high levels of economic pressure, uncertainty, and work–family conflict (Stephan, 2023). In the context of family businesses, owners and managers often experience overlapping professional and family roles, which may reduce psychological well-being and life satisfaction. Previous studies have shown that subjective well-being is associated with positive emotional experiences, life satisfaction, and psychological functioning (Diener, 1984; Deci & Ryan, 2000). Maintaining well-being is therefore essential for sustaining individual performance and business continuity.

This condition emphasizes the urgency of understanding the factors that influence a person's subjective well-being, particularly in the context of owners and/or managers of family businesses. The positive psychology approach shifts the paradigm of psychological research from focusing on disorders and weaknesses to strengths and human well-being. One of the central concepts in positive psychology is subjective well-being (SWB), which reflects an individual's subjective evaluation of their life, encompassing life satisfaction, positive affect, and negative affect (Diener E. , 1984); (Deci, 2000). In the context of entrepreneurship, SWB becomes an important issue because business actors face high pressures, economic risks, and significant social demands. However, on the other hand, they also have opportunities to find meaning, autonomy, and satisfaction through their business activities (Stephan U. R., 2023).

Research findings (Andreja Brajša-Žganec L. K.-L., 2017) indicate that subjective well-being is partially influenced by social support, but only in the dimension of perceived social support, which significantly affects subjective well-being. There are differences in research findings (Karen L Siedlecki, 2014) which state that social support fully influences subjective well-being. Meanwhile, (Zewen Huang, 2021) (Gülaçti, 2010); (Diener E. , 1984) stated that there is no effect or there is a negative effect of social support on subjective well-being.

(Audenaert M. G., 2019; Audenaert M. G.-M., 2020) in the research showed that social support contributes to job crafting. (Yun, 2024) in his study indicated that the direct effect of social support on job crafting is positive and significant. A supportive work environment increases individuals' confidence to innovate and adapt to job demands. Support, whether from family or colleagues, enhances a sense of security and engagement, motivating employees to redesign their work to be more meaningful. Although it can be reciprocal, research shows that social/family support acts as a driving factor that encourages job crafting behavior. One factor that can contribute to achieving job crafting is the presence of social support (Kholifah Umi Sholihah, 2024), from family.

The research (Sturges, 2012); (Vanesa Aprilia Gozali, 2024) states that if a person is able to apply job crafting, they will be able to meet the demands of both work and family, as well as other aspects of personal life. The application of job crafting helps individuals become more active in their work, enabling them to handle various job demands, take on responsibilities effectively, manage multiple tasks at the workplace, and resolve issues in family life. The research of (Signore, 2023) (Lotta Harju, 2021) mention that job crafting plays an important role in enhancing individual well-being. The result of research (Andreja Brajša-Žganec L. K.-L., 2017), in a study of 1,000 adults in Croatia, found that individuals with higher social support reported greater subjective well-being.

2. Literature Review

2.1. Subjective Well-being

Subjective well-being is a condition in which a person feels happiness in their life and is free from unpleasant feelings. (Johan Wiklund, 2019; Kathryn Page, 2009) explains that subjective well-being is the degree to which a person evaluates the quality of their life as desirable and experiences pleasant emotions. (Diener E. , 1984); (Eddington, 2005)

states that subjective well-being is an individual's subjective evaluation of their quality of life. According to (Maziana Zakaria, 2014), subjective well-being is part of employee well-being, which consists of subjective well-being, workplace well-being, and psychological well-being. There are several antecedents of subjective well-being (Philippe Orsini, 2024) including internal and external variables. Internal variables include: forgiveness, personality, self-esteem (Ariati, 2010) and spirituality. Meanwhile, external variables consist of social support (Jane E. Dutton, 2017).

SWB measurement using (Diener E. T., 2020; Eddington, 2005) employs two scales, namely the Satisfaction with Life Scale (SWLS), which measures cognitive aspects and consists of 5 indicator items. These items include (a) life matching personal standards/expectations; (b) very good life conditions; (c) overall life satisfaction; (d) achievement of important things in life; and (e) retrospective evaluation of life.

2.2. Job Crafting

Research (Gavin Slemp, 2014) defines job crafting as the way someone actively participates in their work by making physical or cognitive changes. Job crafting is informal, focusing on positive changes. A person takes initiative based on interests, values, and achieving satisfaction. Job crafting represents an individual's wisdom from work experience to meet needs and desires. In the context of modern work, job crafting is seen as a critical pathway to well-being (Berg, 2010). Job crafting is described as the active role someone takes in initiating changes to the physical, cognitive, or social aspects of their job (Gavin Slemp, 2014). Job crafting can be seen as a specific form of proactive behavior where employees initiate changes in job demands and job resources to make their work more meaningful, engaging, and satisfying (Demerouti, 2014).

Job crafting in this study was measured using the (Arnold B. Bakker, 2019) measurement, namely: (a) increasing structural job resources, in the form of increasing resources, being more autonomous, and responsible. Indicator (b) decreasing hindering job demands, where a person will reduce the number of their tasks both physically and psychologically, avoid complicated decisions, or ignore people who may affect them emotionally; (c) increasing social job resources. This relates to efforts to improve performance, for example, obtaining advice and feedback from external parties, subordinates, and coworkers, thereby requiring social support.

2.3. Social Support

Research (Watson, 1984; Lijun Song, 2023) states that social support is a form of individual need related to other people, where interactions that run well through the support received will generate confidence, motivation, and feelings of being valued, comfort, attention, appreciation, or tangible help received by an individual from others (family, friends, or groups) that make them feel loved, appreciated, and worthwhile. Social support is information and feedback from others that shows that a person is loved and cared for, respected, and honored, as well as being involved in reciprocal networks of communication and obligations (Lijun Song, 2023). Research on social support includes aspects of emotional support, instrumental support, informational support, and appraisal support, and has a positive correlation with happiness. (Ting-Peng Liang, 2011) explains that social support has a significant direct effect on subjective well-being. Meanwhile

(Cohen, 2004) defines social support as a social network that provides emotional, informational, and instrumental resources.

The social support indicators in this study use the measurement (Cutrona, 1996) which include: (a) attachment, which is support for a person to gain emotional closeness. This closeness can provide a sense of security and comfort to an individual. Indicator, (b) social integration. This is support that allows a person to have a certain feeling within a group. This feeling enables an individual to share attention, interests, and engage in recreational activities together. Then, (c) reassurance of worth, in the form of recognition and appreciation of one's abilities. This support comes from the family environment or the individual's workplace. Indicator (d) reliable alliance, support that guarantees there are other individuals who can be relied upon for help when facing something. This support usually comes from family or close people. Next, (e) guidance, in the form of support that enables an individual to obtain the information, advice, and counsel needed to face a problem. Indicator (f) opportunity for maturance, which is support in the form of a feeling that the individual feels needed by others or by a group.

3. Material and Methods

3.1. Design Study

This study employed a quantitative associative research design to examine the effect of social support on subjective well-being with job crafting as a mediating variable. The study focused on owners and/or managers of family businesses located in the Special Region of Yogyakarta, Indonesia. Since the exact population size of family business owners in the region was not officially available, the sample size was determined using the Lemeshow formula (Sekaran & Bougie, 2020). Based on the calculation, 384 respondents were selected as research samples.

Primary data were collected using a structured questionnaire distributed online and offline. All variables were measured using a five-point Likert scale ranging from strongly disagree to strongly agree. Subjective well-being was measured using five indicators, social support using four indicators, and job crafting using three indicators. The measurement items were adapted from previous validated studies to ensure content validity and reliability.

3.2.Data Analysis

The collected data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.1 software. The analysis consisted of two stages: outer model evaluation and inner model evaluation. The outer model assessment was conducted to examine convergent validity, discriminant validity, and composite reliability of the measurement model. Meanwhile, the inner model evaluation was performed to test the structural relationships among variables and examine the mediating effect of job crafting.

Hypothesis testing was conducted using the bootstrapping procedure. A relationship was considered significant if the t-statistic value exceeded 1.96 and the p-value was lower than 0.05 (Hair J. F., 2018)(Hair et al., 2019). Furthermore, mediation analysis was performed to determine whether job crafting acts as a full mediator, partial mediator, or non-mediator in the relationship between social support and subjective well-being.

4. Results

4.1. Respondent Profile.

The respondents of this study show that the majority are male, totaling 202 people (52.6%), while the rest are female. The respondents' ages are dominated by those over 37 years old, totaling 190 people (49.6%). Most respondents reported managing a family business for 1-3 years, totaling 246 people (64%), with 62.1% owning the business themselves, and the rest managing someone else's family business. The majority of owners are from the 2nd generation (53.2%), followed by 1st-generation owners (33.8%), and the rest are from generations beyond the 3rd.

4.2. Descriptive Statistics.

The results of the descriptive statistics obtained the mean of each variable indicator as follows: social support has means of 3.95; 3.89; 3.86; and 3.94, with the lowest mean on the social integration indicator. This indicator reflects support that allows a person to have certain feelings within a group, feelings that enable an individual to share attention, interests, and engage in recreational activities together. Meanwhile, job crafting has successive means of 4.09; 4.15; and 3.89, with the lowest mean in increasing social job resources. This indicator relates to improving the performance of business owners, for example: advice and feedback from external parties, subordinates, and coworkers. As for SWB, the indicator means are 4.11; 4.20; 4.11; 4.05; and 4.16, with the lowest indicator in achieving important things in life.

4.3. Outer Model Evaluation

The validity test in this study was measured using PLS through convergent validity and discriminant validity, which were assessed based on the loading factor, that is, the correlation between item scores and construct scores used as a measurement tool between scores. According to (Hair J. F., 2018) a validity test is considered valid if it meets the rule of thumb requirement of producing a loading factor value >0.7.

a. Convergent Validity. An indicator is considered to meet convergent validity with a high level of validity when the outer loadings value > 0.70 (Chin, 1995; Hair J. F., 2018). The correlation results between the SWB variable indicators with 5 indicators have outer loadings of 0.899; 0.865; 0.896; 0.933, and 0.819, so all indicators are valid. The SWB4 indicator is the indicator with the highest reflection at 0.933. The evaluation results for the social support variable with 4 indicators have outer loadings of 0.904; 0.923; 0.905; and 0.941, meaning all social support indicators meet convergent validity. The SS4 indicator is the indicator with the highest reflection at 0.941. The evaluation results for job crafting with 3 indicators have outer loadings: 0.835; 0.934; 0.916, meaning it meets convergent validity with the JC2 indicator having the highest reflection at 0.934. The results of the convergent validity are shown in Figure 1.

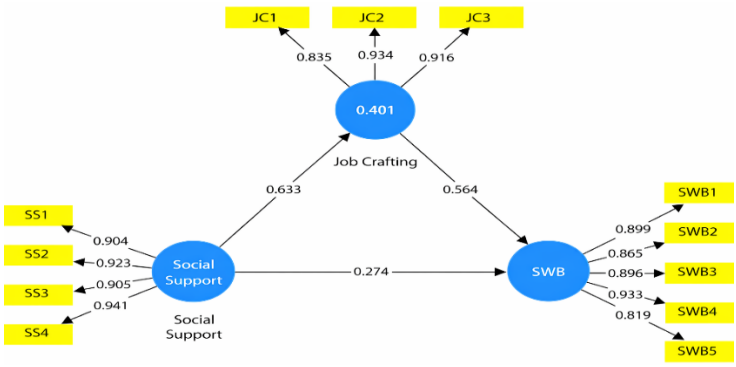


Figure 1. Convergent Validity Results

b. Discriminant Validity. Discriminant validity is used to measure a construct's ability to distinguish itself from other constructs in the research model by comparing the square root of the AVE with the correlations between constructs or through cross-loading values, where each indicator must have the highest loading value on the construct being measured. The test results show that the AVE of each variable is greater than the correlation value between that variable and other variables. Successively, according to the Fornell-Larcker Criterion: social support: 0.859; job crafting: 0.807; SWB: 0.798. It is concluded that the variables of social support, job crafting, and SWB meet the criteria for discriminant validity.

c. Composite Reliability. Composite reliability (CR) is used to measure the level of internal consistency of indicators in forming latent constructs. A CR value ≥ 0.70 indicates that the construct has good reliability. Test results show CR for social support = 0.933; job crafting = 0.914; and SWB = 0.925, so all of these variables have CR values > 0.70. Therefore, all variables in this study are reliable.

4.4. Inner Model Evaluation.

The inner model or structural model test is used to evaluate the relationships between latent variables in research.

a. Coefficient of Determination (R^2). The R^2 value indicates the proportion of variance in the endogenous variable that can be explained by the exogenous variables in the research model. The R^2 value of social support on job crafting is 0.643, which indicates that social support can explain 64.3% of the variation in job crafting. This suggests that social support has a substantial contribution in promoting job crafting behavior, while the remaining 35.7% is influenced by other variables outside the research model. The R^2 value of social support and job crafting on SWB is 43.1%, meaning that 43.1% of the variation in SWB can be explained by social support and job crafting.

b. Predictive Relevance (Q^2). The Q^2 calculation results indicate that the variability in the data that can be explained by the model is 0.584, or in other words, 58.4% of the information contained in the data can be explained by the model. This model falls into the category of a strong model (> 0.35).

4.5. Hypothesis Test Results.

a. Direct Effects.

The test results show that social support has a positive and significant effect on the SWB variable, with a t-statistics value greater than the critical value (6.698 > 1.96), and p-values of 0.000 (<0.050). The social support variable has a positive and significant effect on SWB, with a t-statistics value greater than the critical value (3.425 > 1.96), and p-values <0.050. The positive coefficient indicates that high social support can enhance SWB. Furthermore, job crafting has a positive and significant effect on SWB, with a t-statistics value greater than the critical value (3.444 > 1.96), and p-values <0.05. The positive coefficient indicates that an increase in job crafting can significantly improve SWB (Table 1).

Table 1. Direct Effects

Path	Path Coeff	t.stat	p.values	Results
SS → JC	0.544	6.698	0.000	Significant
SS→ SWB	0.384	3.425	0.001	Significant
JC→ SWB	0.345	3.444	0.001	Significant

b. Indirect Effects

The indirect effect of the social support variable on SWB through Job Crafting is significant, because the direct effect of the SS variable on JC and JC on SWB is significant with a p-value < 0.050, meaning that Job Crafting acts as a mediating variable for the effect of the social support variable on subjective well-being.

Table 2. Indirect Effects

Path	Path Coefficient	t. statistic	p-values	Result
SS → JC → SWB	0.187	2.568	0.011	Significant supported

5. Discussion

5.1. Social support has a positive and significant effect on job crafting

Based on the hypothesis testing conducted, it was found that social support has a positive and significant effect on Job Crafting. This means that the higher the social support around the family business, the better the job crafting of the owner or manager will be in achieving their desired career. This is in line with research conducted (Audenaert M. G.-M., 2020; Ye Z, 2020) which proves that social support affects Job Crafting.

5.2. Social support has a positive and significant effect on subjective well-being

The results of this study indicate that social support affects subjective well-being. These findings are in line with the research (Huang, 2022 on social support from peers,

lecturers, and family, which enhances students' subjective well-being. Research (OliveiraM.Palma-MoreiraA.Au-Yong-OliveiraM, 2025; Eric Emerson, 2025; Farriol-Baroni, González-García, A., Postigo-Zegarra, & Pérez-Ruiz, 2021; Huang, 2022)

5.3. Job crafting has a positive and significant effect on subjective well-being

Job crafting has a positive and significant effect on subjective well-being. The findings indicate that highly engaged employees tend to experience better well-being, driven by feelings of meaning, satisfaction, and positive emotional states at work. These results align with findings (Harju, 2016; Kim, 2018; Sergio Peral, 2016).

5.4. Job crafting as a mediator of the effect of social support on subjective well-being

Job crafting mediates the influence of social support on subjective well-being; this hypothesis is accepted. The findings indicate that job crafting can function as a mediating mechanism in the relationship between social support and subjective well-being. This suggests that high social support directly enhances subjective well-being, consistent with the findings of (Enrique Robledo, 2019; Tatenda Shaleen Marange, 2025).

6. Conclusion

Based on the results of research conducted using the Structural Equation Modeling–Partial Least Squares (SEM-PLS) method, several conclusions can be drawn as follows. **H1 is supported** because social support has a positive effect on job crafting. This indicates that a higher level of social support for owners/managers will result in a better level of job crafting. **H2 is supported** because social support has a positive and significant effect on subjective well-being. This indicates that a higher level of social support for business owners will increase the level of subjective well-being. **H3 is supported** because job crafting has a positive and significant effect on subjective well-being. This indicates that a high level of social support can enhance the subjective well-being of family owners**. H4 is supported**, as job crafting is able to mediate the influence of social support on subjective well-being. Thus, social support can improve subjective well-being through job crafting.

In the context of family businesses, social support from family relationships or the work environment has been shown to encourage individuals to engage in proactive job crafting, which ultimately enhances subjective well-being. This condition highlights the role of job crafting as a mediating mechanism that explains how a supportive social environment can improve the psychological well-being of family business owners or managers. These findings align with the concept of social support from (House, 1981), job crafting theory (Wrzesniewski, 2001), as well as subjective well-being theory (Diener E. , 1984), supported by research (Tims, 2012; Bakker, 2017) indicating that social support as a job resource increases work initiative and individual well-being.

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Rethinking the Governance–Performance Nexus: Does CSR Disclosure Truly Matter in the Indonesian Property Sector?

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Abstract

This study examines the relationship between corporate governance, corporate social responsibility (CSR) disclosure, and firm performance in property and real estate companies listed on the Indonesia Stock Exchange during the 2022–2024 period. Specifically, this study examines whether CSR disclosure acts as a mediating mechanism linking corporate governance and firm performance. The study uses panel data from 57 companies with a total of 171 firm-year observations. The analysis is conducted using a Fixed Effects Model (FEM), which is further tested through several robustness tests using Return on Equity (ROE) as an alternative proxy for firm performance and a lagged regression model to mitigate potential reverse causality. The results of the study indicate that board of directors has a significant negative effect on firm performance, while the audit committee does not show a significant effect. Furthermore, board of directors and audit committee do not significantly influence CSR disclosure. The results also show that CSR disclosure does not significantly influence firm performance. Thus, CSR disclosure is not proven to mediate the relationship between corporate governance and firm performance. These findings suggest that in the context of the Indonesian property sector, CSR disclosure functions more as a legitimacy mechanism than a performance mechanism. The results of the study extend the corporate governance and CSR literature by demonstrating that the effectiveness of CSR as a transmission mechanism is context-dependent and is strongly influenced by industry characteristics and the institutional context of emerging markets.

Keywords: corporate governance; CSR disclosure; corporate performance; legitimacy mechanisms; emerging markets; property and real estate sector.

1. Introduction

Attention to corporate governance, corporate social responsibility (CSR), and firm performance has increased significantly in the business and finance literature. This shift reflects a paradigm shift from a profitability-focused approach to one that integrates governance, transparency, and equity. From an agency theory perspective, corporate governance serves as a control mechanism to mitigate conflicts of interest between management and shareholders, thereby improving firm efficiency and performance (Singh, 2025; Velte, 2025). Meanwhile, stakeholder theory, legitimacy theory, and signaling theory explain that disclosing non-financial information, including CSR, can enhance social legitimacy, transparency, and investor confidence in a company (Bachtiar et al., 2025; Khatri et al., 2025).

The importance of corporate governance and CSR disclosure is becoming increasingly relevant in the property and real estate sector in Indonesia. This sector is characterized by capital intensiveness, long-term investment cycles, and high dependence on external financing, making its performance highly sensitive to the quality of corporate management, information transparency, and investor confidence (Nasution et al, 2020; Utami & Hascaryani, 2025). In recent years, the Indonesian property sector has faced challenges in the form of slowing economic growth, high demand for long-term project financing, and increasing demands from investors, regulators, and stakeholders for more transparent and sustainable business practices (Nustini & Nurrahman, 2025; Ministry of Finance of the Republic of Indonesia, 2025).
On the other hand, attention to responsible practices is also increasing in the property industry. Property development and management activities are directly linked to land use, energy consumption, environmental impact, and social responsibility of surrounding communities, thus this sector faces relatively high levels of sustainability pressure (UNEP, 2023; World Green Building Council, 2023). Therefore, property companies are required not only to deliver strong firm performance but also to demonstrate their commitment to responsible business practices through CSR disclosure. CSR disclosure is expected to increase transparency, strengthen social legitimacy, and enhance investor and stakeholder trust (Guo & Oh, 2024; Khatri et al., 2025).

Figure 1.

Development of Average CSR Disclosure

Property and Real Estate Companies in Indonesia 2022–2024



Source: Data processed from the Indonesian Stock Exchange

Figure 1 shows that the average level of CSR disclosure among property and real estate companies in Indonesia increased during the 2022–2024 period. The average CSR index increased from approximately 23.5% in 2022 to 28.4% in 2024. This trend indicates that companies are increasingly disclosing social and environmental activities as part of efforts to increase transparency and legitimacy among stakeholders. However, this increase in CSR coverage does not necessarily translate into improved Firm Performance. Therefore, the

effectiveness of CSR as a mechanism linking corporate governance and Firm Performance requires further empirical testing.

Although corporate governance and CSR are theoretically viewed as capable of improving Firm Performance, available empirical evidence still shows mixed results. Several studies have found that effective corporate governance can improve performance through increased management oversight, transparency, and accountability (Singh, 2025; Velte, 2025). Other studies have also shown that disclosing CSR can strengthen a company's reputation and increase firm value (Guo & Oh, 2024; Wu et al., 2022). However, other studies have found that the effects of corporate governance and CSR on Firm Performance are not always significant and are highly dependent on the institutional context, industry characteristics, and the quality of corporate governance implementation (Bachtiar et al., 2025; Khatri et al., 2025; Parra-Domínguez et al., 2026).

The inconsistency of these empirical findings indicates that the relationship between corporate governance, CSR disclosure, and firm performance remains incompletely understood. This research builds on three key gaps in the literature. First, there are still inconsistent empirical findings regarding the influence of corporate governance and CSR on firm performance. Second, most previous research focuses on the direct relationship between corporate governance, CSR, and firm performance, while research that positions CSR as a mediating mechanism is relatively limited and produces inconclusive evidence (Gherghina, 2024; Salvi et al., 2025; Zervoudi et al., 2025). Third, most empirical evidence still comes from the manufacturing sector or across industries in developed countries, while research on the property sector in developing countries, particularly Indonesia, is relatively limited.

Based on these insights, this study is expected to make three main contributions to the literature. First, it expands the corporate governance and CSR literature by explicitly examining the mediating role CSR plays in the relationship between corporate governance and firm performance. Second, it provides new empirical evidence from the Indonesian property sector, which has received relatively little attention in the international literature. Third, it explores whether CSR functions primarily as a mechanism for creating economic value or more as a legitimation mechanism in the context of emerging markets. Therefore, this study is expected to enrich the corporate governance and CSR literature and provide a more comprehensive understanding of the effectiveness of CSR as a mechanism linking corporate governance and firm performance.

2. Literature Review and Hypothesis Development

2.1. Corporate Governance and Corporate Performance

From an agency theory perspective, corporate governance serves as a monitoring mechanism to mitigate conflicts of interest between management and shareholders. By increasing transparency, accountability, and oversight effectiveness, governance mechanisms such as boards of directors and audit committees are expected to improve Firm Performance (Singh, 2025; Kajumbula & Makoni, 2025; Velte, 2025).

However, the relationship between corporate governance and Firm Performance is not always consistent. A larger board of directors can improve oversight capacity and decision-making quality, but it also has the potential to create coordination problems and reduce efficiency.

Similarly, the effectiveness of an audit committee is determined not only by its existence but also by its independence, competence, and the quality of its implementation. In the context of emerging markets, the influence of corporate governance on performance is also influenced by institutional quality and external pressures, so it does not always have a direct impact on company profitability (Apriliyani et al., 2025; Bagh et al., 2025; Hordofa et al., 2025; Khatri et al., 2025).

Based on this description, the research hypothesis proposed is as follows:

H1: The Board of Directors influences Firm Performance.

H2: The Audit Committee has an impact on Firm Performance.

2.2. Corporate Governance and CSR Disclosure

From the perspective of stakeholder theory and legitimacy theory, companies are required to meet the social and environmental expectations of stakeholders. Corporate governance plays a crucial role in promoting corporate transparency through CSR disclosure. An effective board of directors and audit committee are expected to increase the accountability and credibility of information communicated to the public (Khatri et al., 2025; Richmayati et al., 2025; Velte, 2025).

Empirical research shows that companies with better governance tend to have higher levels of CSR disclosure due to the drive to increase transparency and accountability to stakeholders. However, CSR disclosure is also influenced by external factors such as regulations, market pressures, and corporate strategy, so governance is not the sole determinant (Handayati et al., 2025; Purnamasari et al., 2024; Tripopsakul, 2025). Therefore, the relationship between corporate governance and CSR disclosure is important because CSR disclosure is seen as one mechanism that can translate the effectiveness of corporate governance into improved Firm Performance.

Based on this description, the research hypothesis proposed is as follows:

H3: The Board of Directors has an influence on CSR Disclosure.

H4: The Audit Committee has an influence on CSR Disclosure.

2.3 CSR Disclosure and Firm Performance

From the perspective of stakeholder theory and legitimacy theory, disclosing CSR can enhance a company's reputation, strengthen relationships with stakeholders, and increase investor confidence in the company's prospects. Through increased transparency and accountability, CSR disclosure also has the potential to reduce information asymmetry and strengthen a company's social legitimacy (Destriana et al., 2024; Khatri, Einar, et al., 2025; Wu et al., 2022). However, the relationship between CSR and corporate performance still shows mixed results. Some studies find that CSR disclosure can increase firm value and reduce corporate risk, while others show that the economic benefits of CSR are not always visible in the short term due to implementation costs and differences in industry characteristics (Bachtiar et al., 2025; Guo & Oh, 2024; Hordofa et al., 2025; Wu et al., 2022). A systematic review by Parra-Domínguez et al. (2026) shows that the relationship is highly dependent on the country context, industry sector, and measurement method used.

Based on this description, the research hypothesis proposed is as follows:

H5: CSR disclosure has an impact on Firm Performance.

2.4 CSR as a Mediating Variable

In previous literature, CSR is often viewed as a mechanism that bridges the relationship between corporate governance and Firm Performance. Effective corporate governance is expected to encourage increased transparency and accountability through CSR disclosure. Such disclosure can strengthen a company's reputation, increase stakeholder trust, reduce information asymmetry, and enhance a company's social legitimacy, ultimately contributing to improved Firm Performance (Hordofa, 2023; Khatri et al., 2025; Parra-Domínguez et al., 2026; Wu et al., 2022).

Contextually, CSR disclosure can be viewed as a transmission mechanism linking corporate governance effectiveness to firm value creation. However, empirical evidence regarding the mediating role of CSR still shows inconsistent results. Some studies find that CSR can mediate the relationship between corporate governance and firm performance, while other studies indicate that this effect is insignificant and highly dependent on the institutional context, industry characteristics, and the level of stakeholder pressure (Chancharat et al., 2026; Gherghina, 2024; Hordofa et al., 2025; Salvi et al., 2025; Zervoudi et al., 2025).

In the context of Indonesia as an emerging market, the relationship between governance, CSR, and corporate performance tends to be more complex due to the influence of institutional quality and the dynamics of external pressures. Furthermore, the property sector is characterized by capital intensity, long-term investment cycles, and high dependence on external financing, making the need for corporate transparency and legitimacy even more crucial (Fayad et al., 2022; Surya et al., 2026; Tripopsakul, 2025). Therefore, examining the mediating role of CSR in the property sector is relevant to broaden our understanding of the mechanisms linking corporate governance and performance.

Based on this description, the research hypothesis proposed is as follows:

H6: CSR disclosure mediates the relationship between board of directors and firm performance.

H7: CSR disclosure mediates the relationship between audit committee and firm performance.

3. Research methodology

3.1 Research Design

This research is an explanatory study using a quantitative approach with secondary data. The objective is to examine the influence of corporate governance on Firm Performance, both directly and indirectly through corporate social responsibility (CSR) disclosure. The analysis was conducted using panel data because it can simultaneously combine cross-sectional and time-series dimensions, resulting in more efficient estimates and controlling for unobserved heterogeneity at the firm level (Baltagi, 2021).

3.2 Population and Sample

The study population includes all property and real estate companies listed on the Indonesia Stock Exchange (IDX). This sector was chosen because of its capital-intensive characteristics,

long-term investment cycles, and high dependence on external financing, making information transparency and corporate governance important factors for investors.

The research sample was determined using a purposive sampling method with the following criteria: (1) property and real estate sector companies listed on the IDX during the 2022–2024 period; (2) publishing complete annual reports during the research period; and (3) having complete data related to all research variables. Based on these criteria, 57 companies were selected as research samples. With an observation period of three years, a total of 171 company-year observations were used.

3.3 Definition of Operational Variables

Firm Performance as the dependent variable is measured using Return on Assets (ROA), which is the ratio of net profit to total assets that describes the company's ability to generate profits from its resources. Corporate governance as the independent variable is proxied using the number of boards of directors (DD) and the number of audit committees (KA). CSR disclosure as a mediating variable is measured using the CSR Disclosure Index based on the Global Reporting Initiative (GRI) guidelines, which is calculated from the proportion of CSR items disclosed by companies in their annual reports or sustainability reports.

This study also uses firm size (LnTA), debt-to-asset ratio (DAR), and debt-to-equity ratio (DER) as control variables. Firm size is controlled because larger firms tend to have greater resources to disclose CSR and thus generate better performance. Meanwhile, DAR and DER are used to control for the influence of a firm's funding structure on performance and information disclosure.

3.4 Research Model

To test the direct relationship between corporate governance, CSR disclosure, and Firm Performance, the following regression model is used:

$$FP_it = \beta_0 + \beta_1 CSR_it + \beta_2 KA_it + \beta_3 DD_it + \beta_4 LnTA_it + \beta_5 DAR_it + \beta_6 DER_it + \varepsilon_it$$

To test the influence of corporate governance on CSR disclosure, the following model is used:

$$CSR_it = \beta_0 + \beta_1 KA_it + \beta_2 DD_it + \beta_3 LnTA_it + \beta_4 DAR_it + \beta_5 DER_it + \varepsilon_it$$

Mediation testing was conducted through a stepwise panel regression approach by revealing the significance of the relationship between corporate governance and CSR Disclosure, CSR Disclosure and Firm Performance, as well as the indirect influence of corporate governance on Firm Performance through CSR Disclosure.

3.5 Data Analysis Techniques

Data analysis was performed using panel data regression. Model selection was performed using the Chow and Hausman tests. These tests determine the most appropriate model among the Common Effects Model, Fixed Effects Model, and Random Effects Model. The test results indicate that the Fixed Effects Model (FEM) is the most appropriate model to use.

The use of FEM allows for control of firm-specific characteristics that are not directly observable but remain relatively constant throughout the study period. To increase the reliability of the research results, robustness testing was conducted using alternative model specifications and testing for potential heteroscedasticity and autocorrelation issues (Baltagi, 2021; Wooldridge, 2010).

4. Research Results and Discussion

4.1 Descriptive Statistics

Table 1. Descriptive Statistics

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. sum ROA CSR KA DD lnTA DER DAR
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Variable	Obs	Mean	Std. dev.	Min	Max
ROA	171	.0106045	.0614835	-.1869483	.3481923
CSR	171	.2575728	.1676514	.0449438	.8089888
KA	171	4.74269	1.892211	1	12
DD	171	14.76023	9.92121	1	54
lnTA	171	25.97584	4.18488	13.93377	31.96206
DER	171	.7332423	1.233991	-7.27869	7.306102
DAR	171	.3808599	.2370394	.0091959	1.540599

Descriptive statistics are used to provide an initial overview of the characteristics of the research data before testing hypotheses using panel data regression. This study uses 171 company-year observations from 57 property and real estate companies listed on the Indonesia Stock Exchange during the 2022–2024 period. This number of observations is considered sufficient to examine the relationship between corporate governance, CSR disclosure, and firm performance. Table 1 presents descriptive statistics for all study variables.

The average return on assets (ROA) indicates that the profitability of the property companies in the sample is relatively low. This finding aligns with the characteristics of the property sector, which is capital-intensive, has a long-term investment cycle, and requires significant financing, which makes profit-generating capacity tend to fluctuate in the short term.

The average CSR disclosure index of 0.2576 indicates that companies disclosed approximately 25.76% of the total CSR items used as the benchmark. This finding suggests that CSR coverage in the property sector remains relatively limited and not yet fully uniform across companies, although CSR coverage in this sector has shown an increasing trend over the study period.

For corporate governance variables, the average number of audit committee members was 4.73 and the average number of board members was 14.76, indicating that most companies in the sample have relatively robust governance structures. However, variations between companies indicate differences in the governance practices implemented by each company.

In the control variables, the average firm size (LnTA) of 25.97 indicates that the study sample is dominated by companies with relatively large asset scales. Meanwhile, the average Debt-to-Equity Ratio (DER) of 0.73 and Debt-to-Asset Ratio (DAR) of 0.38 indicate that the property companies in the sample have a relatively high level of leverage. This condition aligns with

the characteristics of the property industry, which generally relies on external financing to support development and expansion projects in emerging markets (Fayad et al., 2022).
Overall, descriptive statistics indicate variations in the characteristics of the companies in the study sample, including profitability, CSR distribution, corporate governance, and funding structure. This variation provides an adequate basis for conducting panel regression analysis in the next stage.

4.2 Panel Model Selection

Before conducting the regression, testing was conducted to determine the most appropriate panel model. The testing was conducted using the Chow Test and the Hausman Test. The test was used to select the best model among the Common Effects Model (CEM), the Fixed Effects Model (FEM), and the Random Effects Model (REM). The test results showed that the probability values of the Chow Test and the Hausman Test were less than the 5% significance level, thus the Fixed Effects Model (FEM) was selected as the most appropriate estimation model.
The selection of FEM indicates a correlation between firm-specific characteristics and the independent variables in the model. Therefore, the use of FEM allows this study to control for unobserved heterogeneity that remains constant over time, such as management characteristics, organizational culture, and firm strategy, which cannot be directly measured (Baltagi, 2021; Singh, 2025).

Table 2. Panel Model Selection Results

Testing	Statistics	P value	Decision
Chow Test	4.36	0.000	Fixed effects
Hausman test	$\chi^2 = 29.94$	0.000	Fixed Effects

4.3 Main Regression Results

The estimation results using the Fixed Effects Model (FEM) are presented in Table 3. Overall, the regression results indicate that most corporate governance mechanisms have no significant effect on CSR disclosure or Firm Performance. However, board of directors has a significant negative effect on Firm Performance.

Table 3.

Summary of Hypothesis Testing Results

Hypothesis	**Variable Relationship**	**Coefficient**	**p-value**	**Results**
H1	Board of Directors → Firm performance	-0.00277	0.011	Supported (negative)

H2	Audit Committee → Firm performance	-0.00018	0.975	Not supported
H3	Board of Directors → CSR Disclosure	-0.00004	0.978	Not supported
H4	Audit Committee → CSR Disclosure	0.0024	0.803	Not supported
H5	CSR Disclosure → Firm performance	-0.0758	0.361	Not supported
H6	CSR disclosure mediates the relationship between Board of Directors → Firm performance	-	–	Not supported
H7	CSR disclosure mediates the relationship between Audit Committee → Firm performance	-	–	Not supported

Table 3 presents the results of the Fixed Effects Model (FEM) estimation to examine the influence of corporate governance and CSR on Firm Performance. In general, the results indicate that corporate governance mechanisms do not produce a uniform effect on Firm Performance. The board of directors has a significant negative effect on Firm Performance, while the audit committee does not show a significant effect. In addition to the main variables, the Debt-to-Asset Ratio (DAR) shows a significant negative effect on Firm Performance, indicating that higher leverage levels tend to reduce the profitability of property companies. This finding is consistent with the characteristics of the property industry, which is highly dependent on external financing.

4.4 Robustness Tests

To ensure that the research results are not influenced by specific model specifications, two robustness tests were conducted. The first test used Return on Equity (ROE) as an alternative proxy for Firm Performance, while the second used a lagged regression model to mitigate the potential for reverse causality between CSR disclosure and Firm Performance.

4.5 Replacing Performance Indicators with ROE

In the first test, the Firm Performance indicator was changed from Return on Assets (ROA) to Return on Equity (ROE). The estimation results showed a pattern relatively consistent with the main model. CSR disclosure remained insignificant on Firm Performance, as did most of the relationships tested in the model. This finding suggests that the study's results are independent of the choice of specific profitability proxies. Therefore, the lack of a significant effect of CSR on Firm Performance is a relatively stable finding, despite the use of different profitability measures.

4.6 Lagged Regression Model

The second test uses a lagged regression model, using lagged CSR disclosure as a predictor of subsequent firm performance as a predictor of Firm Performance in the following period. This

approach is used to reduce the potential for reverse causality, namely the possibility that companies with better performance have a greater ability to undertake and disclose CSR activities.

Lagged regression results indicate that CSR disclosure in the previous period remains insignificant on Firm Performance in the subsequent period. This finding is consistent with the main model and indicates that the relationship between CSR disclosure and Firm Performance is not affected by reverse causality. Therefore, the study results provide stronger evidence that CSR implementation in the Indonesian property sector has not yet played a major role in determining company profitability.

Overall, the second robustness test showed results consistent with the main model, thus increasing the reliability and validity of the research findings.

5. Theoretical Discussion

The findings of this study have several important implications for the literature on corporate governance, CSR disclosure, and firm performance, particularly in the context of the property sector in emerging markets. In general, the results indicate that the relationship between corporate governance, CSR disclosure, and firm performance is not linear and cannot be universally generalized. Of the seven hypotheses proposed, only the influence of the board on firm performance proved significant, but in a negative direction. Meanwhile, the audit committee did not significantly influence firm performance, corporate governance did not significantly influence CSR disclosure, CSR disclosure did not significantly influence firm performance, and CSR disclosure did not mediate the relationship between corporate governance and firm performance.

5.1 The influence of the board of directors and audit committee on Firm Performance.

The results of the study indicate that the board of directors has a significant negative effect on Firm Performance. This finding suggests that a larger board size does not always improve oversight effectiveness or decision-making quality. In the property sector, which has complex project structures, large funding requirements, and long-term investment cycles, a larger board size can create coordination problems, slow down the decision-making process, and reduce managerial efficiency. Thus, this finding supports the view that corporate governance effectiveness is not solely determined by the size of the governance structure, but rather depends on the quality, competence, independence, and effectiveness of the board's oversight function. These results align with recent literature emphasizing that the relationship between corporate governance and Firm Performance is contextual and influenced by the quality of governance implementation, particularly in emerging markets (Singh, 2025; Bagh et al., 2025; Khatri et al., 2025).

The study also found that the audit committee had no significant effect on Firm Performance. This finding suggests that the presence or number of audit committee members is insufficient to explain variations in company firm performance. Theoretically, audit committees are expected to improve the quality of financial reporting, strengthen internal control, and reduce information asymmetry. However, the results of this study indicate that audit committee effectiveness cannot be measured solely by its size or formal existence. Audit committees can only contribute to Firm Performance if supported by independence, financial expertise,

meeting frequency, and substantive oversight capabilities. Thus, this finding strengthens the argument that formal governance mechanisms are a necessary but not sufficient condition for improving Firm Performance (Velte, 2025; Khatri et al., 2025).

5.2 The Influence of the Board of Directors and Audit Committee on CSR Disclosure.

In the Indonesian property sector, CSR disclosure is also influenced by concerns regarding land use, the environmental impact of development, and the company's relationship with the surrounding communities. Therefore, CSR disclosure decisions are not solely driven by internal governance mechanisms.

The results of the study indicate that the board of directors and audit committee do not significantly influence CSR disclosure. This finding suggests that the level of CSR disclosure in Indonesian property companies is not entirely determined by the size of internal corporate governance mechanisms. From the perspective of stakeholder theory and legitimacy theory, CSR disclosure can be influenced by external pressures such as regulations, investor expectations, societal demands, and the company's need to maintain social legitimacy. Therefore, the insignificant influence of the board of directors and audit committee on CSR disclosure indicates that CSR disclosure in the property sector is more shaped by external institutional pressures than by the company's formal governance structure. This finding is in line with the literature stating that the quality of non-financial disclosure depends not only on internal governance mechanisms, but also on stakeholder engagement, assurance, regulatory pressure, and the institutional context in which the company operates (Khatri et al., 2025; Velte, 2025; Chancharat et al., 2026).

5.3 The influence of CSR disclosure on Firm Performance.

The results of the study indicate that CSR disclosure has no significant effect on Firm Performance. This finding suggests that increasing CSR expansion has not been able to improve the profitability of property companies in the short term. Theoretically, CSR disclosure can strengthen a company's reputation, increase stakeholder trust, and reduce information asymmetry. However, in the property sector, which is capital intensive, has a long investment cycle, and is heavily influenced by financing structures, the economic benefits of CSR disclosure are not always immediately reflected in Return on Assets. Thus, this finding supports the view that the relationship between CSR and Firm Performance is highly dependent on the industry context, measurement time horizon, and institutional conditions. This result is consistent with the systematic observation of Parra-Domínguez et al. (2026), which shows that the relationship between CSR and firm performance in emerging markets is still inconclusive and highly dependent on the characteristics of the research context.

5.4 Mediating CSR Disclosure on the Relationship between Corporate Governance and Firm Performance

The most important finding in this study is that CSR does not mediate the relationship between corporate governance and firm performance. This result indicates that CSR disclosure has not yet functioned as a transmission mechanism that translates the effectiveness of corporate governance into improved firm performance. This mediation failure can be explained by two conditions. First, corporate governance does not significantly influence CSR disclosure, so the

initial mediation path is not formed. Second, CSR disclosure also does not significantly influence firm performance, so the final mediation path also does not receive empirical support. Thus, statistically and contextually, CSR disclosure cannot be positioned as an economic channel related to corporate governance and firm performance in the context of this study.

These findings challenge the assumptions of some literature that view CSR as a value creation mechanism through enhancing reputation, investor trust, and stakeholder relations. In the context of the Indonesian property sector, CSR disclosure appears to function more as a legitimation mechanism than as a performance improvement mechanism. Companies may increase CSR disclosure to meet the expectations of regulators, investors, and the public, but such increases may not necessarily generate measurable economic benefits in the short term.

Thus, this study reinforces the view that CSR disclosure can be symbolic or legitimating, particularly when the transmission mechanism is aimed more at gaining social acceptance than at creating substantive economic value (Gherghina, 2024; Zervoudi et al., 2025). These findings provide empirical evidence that the notion of CSR as a transmission mechanism does not always hold true in the property sector in emerging markets. Thus, this study extends previous literature by showing that the primary function of CSR disclosure can shift from being an economic value creation mechanism to a social legitimacy mechanism, depending on the industry characteristics and the institutional context in which the company operates.

6. Conclusion

Contextually, the results of this study indicate that the relationship between corporate governance, CSR disclosure, and Firm Performance is context-dependent. In the property sector, Firm Performance is more influenced by structural factors such as capital intensity, leverage, project cycles, and market conditions than by CSR disclosure alone. Therefore, the effectiveness of CSR disclosure as an economic mechanism depends heavily on the extent to which such disclosure reflects substantive practices, rather than merely providing legitimacy demands. These findings also indicate that in emerging markets, institutional pressures and the quality of governance implementation play important roles in determining whether CSR can genuinely function as a value-creation mechanism.

This study found that the influence of corporate governance on Firm Performance is not uniform. The board of directors had a significant negative effect on Firm Performance, while the audit committee showed no significant effect. This finding suggests that the size of a corporate governance structure does not necessarily reflect the true effectiveness of oversight.

Overall, this study contributes by demonstrating that CSR disclosure does not always function as a transmission mechanism in the governance-performance relationship. In the context of Indonesian property companies, CSR is more appropriately understood as a legitimation mechanism rather than a performance mechanism. These findings extend the corporate governance and CSR literature by demonstrating that governance effectiveness and idiosyncrasies depend not only on the existence of formal structures, but also on the quality of implementation, institutional pressures, industry characteristics, and the duration of generated economic benefits.

6.1 Research limitations and further research agenda

Study has several limitations that should be considered when interpreting the results. First, the study focused solely on property and real estate companies listed on the Indonesia Stock Exchange for the 2022–2024 period. Therefore, the results may not be generalizable to other industrial sectors, which have varying operational characteristics, levels of regulation, and regulatory pressures. Second, the measurement of corporate governance in this study is limited to the size of the board of directors and audit committee, thus not fully representing the overall quality of corporate governance. Other aspects such as board independence, audit committee member competence, institutional ownership, and oversight quality have not been incorporated into the research model. Third, the measurement of CSR disclosure focuses on the level of information presentation based on the reporting index, thus not being able to capture the quality of CSR program implementation or the actual impact of the program.

Furthermore, the coefficient of determination indicates that the model's ability to explain variations in Firm Performance is still relatively limited. These results suggest that Firm Performance is influenced by various factors beyond the research model, including business strategy, company risk, macroeconomic conditions, ownership structure, industry characteristics, and broader institutional factors. This finding aligns with the literature demonstrating that Firm Performance is a multidimensional phenomenon influenced by a combination of internal and external factors (Parra-Domínguez et al., 2026; Wu et al., 2022).

Based on these limitations, future research could develop a more comprehensive model by incorporating broader dimensions of corporate governance, more substantive indicators of CSR quality, and strategic and institutional factors that potentially influence Firm Performance. Furthermore, future research could expand the sample to other industrial sectors or conduct cross-country comparisons to test the consistency of the findings across different contexts. Given that this study found that CSR disclosure functions more as a legitimation mechanism than a transmission mechanism, future research could also explore the conditions under which CSR generates more tangible economic benefits, such as the quality of infrastructure implementation, stakeholder pressure, institutional quality, and a longer measurement time horizon.

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Empirical Study of General Insurance Performance in Indonesia Based on Financial Indicators: Explanatory Sequential Mixed Methods Approach

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Abstract

This study aims to examine the performance of general insurance companies in Indonesia based on financial indicators. The data used is secondary data sourced from the balance sheet reports of all general insurance companies in Indonesia from January 2024 to December 2024. Observed variables include gross premiums, net claims, investment income, loss ratio, expense ratio, combined ratio, and return on equity (ROE). The method used is an explanatory sequential mixed methods design. Quantitative analysis was conducted using a cluster Empirical Study of General Insurance Performance in Indonesia Based on Financial Indicators: Explanatory Sequential Mixed Methods Approach analysis approach to group and analyze the characteristics of 72 general insurance companies in Indonesia. The qualitative stage was conducted by benchmarking against Allianz, which has been recognized as one of the best insurance companies in the world for seven consecutive years. The research results show that the financial characteristics of general insurance companies in Indonesia can be grouped into three clusters. **Cluster 1** reflects the best-performing companies, comprising six companies with superior financial performance. This cluster can serve as a reference or benchmark for regulators and investors in decision-making. **Cluster 2** consists of two companies with low efficiency and negative profitability. Companies in this group are categorized as having weak financial performance and high risk. **Cluster 3** is the largest group, encompassing 64 companies. This cluster reflects the general condition of the insurance industry, characterized by relatively stable performance without extreme tendencies. Qualitative analysis shows that, overall, the financial indicators of insurance companies in Indonesia still lag significantly behind those of Allianz, the top-tier insurance company headquartered in Germany

Keywords: general insurance performance; financial indicator; clustering; sequential mixed methods

Green Human Resource Management and Industrial Sustainability in Batam

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Abstract

The growth of the manufacturing industry in Batam City has encouraged companies to implement sustainable business strategies oriented toward environmental responsibility and human resource management. Research on Green Human Resource Management (GHRM) in the industrial sector of Batam remains limited, particularly in examining the relationship between green human resource practices and industrial sustainability. This study aims to analyze the effect of Green Human Resource Management on industrial sustainability in Batam City. The GHRM practices examined include green recruitment, environmental training, green performance appraisal, and employee involvement in environmental management. The population of this study consisted of 1,500 employees working in manufacturing and electronic industrial companies in Batam. A total of 150 respondents were selected using purposive sampling techniques. This research employed a quantitative approach using survey methods through questionnaires. Data analysis was conducted using Partial Least Square–Structural Equation Modeling (PLS-SEM) with the assistance of SmartPLS 4.0 software. The results indicate that Green Human Resource Management has a positive and significant effect on industrial sustainability, with a path coefficient value of 0.68 and a significance level of $p < 0.05$. Environmental training emerged as the most dominant dimension in improving employees' environmental awareness and operational efficiency. The implementation of GHRM also contributes to energy efficiency, industrial waste reduction, and strengthening the competitiveness of companies in Batam's industrial sector. This study provides practical implications for companies in formulating sustainable human resource management policies and contributes to the literature on GHRM implementation in developing industrial areas.

Keyword: green human resource management; industrial sustainability; environmental training; operational efficiency; competitive advantage

1. Introduction

The manufacturing industry in Batam City has seen significant growth over the past decade. Batam City is one of Indonesia's strategic industrial areas due to its proximity to Singapore and Malaysia, supported by a free trade zone and international ports. This industrial growth has significantly contributed to the regional economy, but has also created various environmental challenges, such as increased industrial waste, air pollution, and the use of fossil fuels. high energy, and exploitation source Power nature.

Batam is one of the area industry strategic in Indonesia which is experiencing growth industry manufacturing and electronics are sufficient rapidly. However, the growth industry it also increases pressure to aspect environment, including improvement waste industry, consumption energy and emissions Carbon. Statistical data for Batam City 2025 shows that activity industry and transfer function land give impact to decline quality environment and mangrove areas in Batam.

In face challenge in this context, companies are required to implement the concept of sustainable development through environmentally friendly business practices. One approach that is gaining ground in the industrial world is Green Human Resource Management (GHRM). GHRM is the integration of environmental aspects into human resource management practices that aims to improve awareness and behavior friendly environment employee in organization.

In a number of years lastly, the implementation Environmental, Social, and Governance (ESG) becomes attention main company global industry. Survey Mandiri Institute in 2024 shows that 87% of companies in Indonesia are starting implement ESG principles as part from corporate strategy sustainable. However thus, some big company Still face challenge in ESG implementation, especially related costs, fulfillment ESG indicators, and the lack of understanding organization to sustainability management.

GHRM practices include recruitment processes-based environment (green recruitment), environmental training (environmental training), green performance assessment (green performance) appraisal), and employee involvement in the company's sustainability program. The implementation of GHRM is believed to be able to increase efficiency operational company at a time support achievement objective sustainability industry.

Study previously shows that companies that implement GHRM practices have better capabilities in reducing production waste, increasing energy efficiency, and strengthening the company's reputation in the eyes of stakeholders. However, research on the implementation of GHRM in the region Indonesian industry, in particular Batam, still relatively limited.

Study about implementation Green Human Resource Management in the sector manufacturing in Indonesia is still relatively limited, especially in the area industry-based export like Batam. Most of study previously more focuses on the impact of ESG on mark company and performance finance, while study about role GHRM practices towards sustainability industry Still Not yet Lots done.

Based on phenomenon This study aims to analyze the influence of Green Human Resource Management on industrial sustainability in Batam City. This study is expected to provide theoretical contributions to the development of green human resource management studies and provide recommendations. practical for company industry in Batam.

Therefore that, research This become important for give understanding empirical about How practice Green Human Resource Management can support sustainability industry through improvement efficiency operational, reduction waste, and strengthening Power competition companies in the area industry Batam.

2. Literature Review

2.1 Green Human Resource Management (GHRM)

Green Human Resource Management (GHRM) is approach management source Power human beings who integrate aspect environment to in all over activity organization. According to Renwick et al. (2013), GHRM aims create power work that has awareness environment as well as support creation sustainable organization. GHRM implementation does not only focused on improving productivity employees, but also on the formation of behavior friendly work environment.

In a number of year Lastly, GHRM practices become an important strategy. company in support *sustainability* and improving performance organization. Research by Aftab et al.

(2023) shows that that GHRM practices have an impact significant to *environmental performance* through improvement innovation green and awareness environment employees. Besides that, Amjad et al. (2021) found that GHRM implementation is capable increase *sustainability* company through improvement behavior Work green and efficient operational organization.

GHRM practices include some main dimensions are:

1. *Green Recruitment*
   Recruitment that takes into account the environmental concerns of prospective employees.
2. *Environmental Training*
   Training that aims to improve employees' environmental skills and awareness.
3. *Green Performance Appraisal*
   Performance assessment based on environmental indicators.
4. *Employee Involvement*
   Employee involvement in programs and policies environment company.

From the perspective *Resource Based View* (RBV), source Power human beings who have competence environment can become asset strategic difficult company imitated by competitors. Therefore that, the company that implements GHRM practices have opportunity bigger in create superiority competitive sustainable through efficiency operational and improvement performance environment.

2.2 Sustainability Industry

Sustainability industry is ability company For operate activity business in a way sustainable with still notice aspect economic, social, and environmental. Concept This known with term *Triple Bottom Line* introduced by John Elkington, namely balance between profit, people and the inner planet activity company.

Industry sustainable No only focused on achievement profit financial, but also pay attention to impact environment and responsibility answer social company. Implementation *sustainability* in the sector industry become the more important along increasing global demands on implementation principle *Environmental, Social, and Governance* (ESG).

Manufacturing companies that implement the principle of sustainability tends to own efficiency more energy good, reduction waste industry, as well as improvement reputation company in the eyes of stakeholders. In addition that, sustainability also contributes to improvement Power competition company in face competition global industry.

2.3 The Relationship between GHRM and Industrial Sustainability

Implementation *Green Human Resource Management* believed capable support sustainability industry through improvement behavior Work friendly environment and efficiency operational company. GHRM practices help organization in build culture Work green that supports subtraction waste, efficiency energy, and improved environmental performance.

Research by Kim et al. (2022) shows that environmental training and employee involvement have an influence significant to behavior friendly environment employees and the company's environmental performance. In addition that, Yusoff et al. (2023) found that GHRM practices are capable increase *organizational sustainability* through improvement *employee green behavior.*

Theory *Resource Based View* explain that source Power human beings who have competence environment can become superiority competitive company. Therefore that, the organization that implements GHRM practices in general effective estimated capable reach level

sustainability more industry tall through efficiency operational, reduction waste, and improvement Power competition company.
Although study regarding GHRM has Lots conducted in various countries, studies empirical about implementation of GHRM in the region industry manufacturing in Indonesia, in particular Batam as area industry international, still relatively limited. Research This aim For fill the research gap with analyze the influence of Green Human Resource Management on sustainability industry in Batam City.

2.4. Framework Thinking

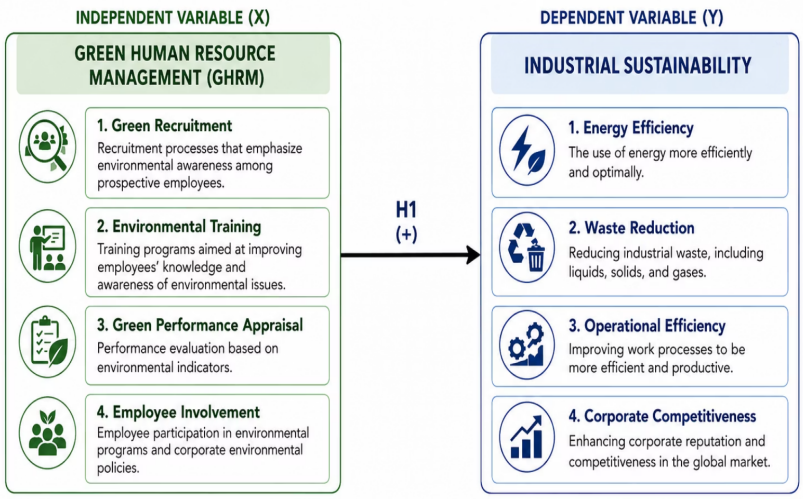


Figure 1. Research Model

Source: Developed by the author based on Renwick et al. (2013) and Zaid et al. (2018).
Based on previous theories and research, the hypothesis of this research is:
H1: *Green Human Resource Management* has a positive and significant impact on industrial sustainability in Batam City.

3. Material and Method

3.1 Design Study

Study This use approach quantitative with method survey. Unit of analysis study is individual, namely employee company manufacturing and industry electronics in Batam City. Data collection was carried out through distribution questionnaire in a way live and online during period January – March 2026.

3.2 Population and Sample

population was 1,500 employees of manufacturing and electronics companies in the Batam industrial area. sample as many as 150 respondents assessed has fulfil minimum criteria for PLS-SEM analysis. According to Hair et al. (2021), the number minimum sample in PLS- SEM can be determined use the 10-times rule, namely ten times the amount indicator or track structural the biggest in the research model.

Taking technique sample use *purposive sampling* with criteria respondents is employee permanent, have a minimum work period of one years, and involved in activity operational company. Amount sample as many as 150 respondents assessed has fulfil minimum criteria for PLS-SEM analysis based on 10-times rule Hair et al. (2021).

3.3 Instruments Study

Instrument study arranged based on adaptation indicator from study relevant previous with draft *Green Human Resource Management* and sustainability industry. Measurement variables use Likert scale 1–5, starting from very to very agree to strongly agree, with indicator as following:

Green Human Resource Management Variable (X)

- *Green recruitment*
- *Environmental training*
- *Green performance appraisal*
- *Employee involvement*

Industrial Sustainability Variable (Y)

- Energy efficiency
- Waste reduction
- Operational efficiency
- Power competition company

Tabel 1. Operational Variables

Variables	Indicator	Source
Green Human Resource Management	*Green recruitment, environmental training, green performance appraisal, employee involvement*	Renwick et al. (2013)
Sustainability Industry	Efficiency energy, reduction waste, efficiency operational, power competition company	Triple Bottom Line

Data collection was carried out through distribution questionnaire in a way directly and online to employee company manufacturing and industry electronics in Batam City during period January – March 2026.

3.4 Data Analysis Techniques

Data analysis was performed use method *Partial Least Square–Structural Equation Modeling* (PLS-SEM) with help application SmartPLS 4.0. Stages analysis covering evaluation *outer* model and *inner* model. Evaluation *outer* model is done through testing *convergent* validity, discriminant validity, and composite reliability. Temporary that, evaluation of the inner model is carried out through testing coefficient determination (R-square), *path coefficient, and bootstrapping* for test significance hypothesis study.

4. Results

4.1 Respondent Characteristics

Table 2 shows the characteristics of the research respondents.

1.5.1. **Table 2.** Characteristics Respondents

Characteristics	Category	Frequency	Percentage
Type Sex	Man	92	61.3%
	Woman	58	38.7%
Age	20–30 Years	64	42.7%
	31–40 Years	55	36.7%
	>40 Years	31	20.6%
Years of service	1–5 Years	72	48.0%
	6–10 Years	50	33.3%
	>10 Years	28	18.7%

Source: Processed primary data researchers (2026).

The results show that majority respondents were men with 1–5 years of service.

4.2 Validity Test Convergent

1.5.2. **Table 3.** Outer Loading

Indicator	Loading Factor
GR1	0.812
GR2	0.845
ET1	0.891
ET2	0.903
GPA1	0.821
GPA2	0.854
EI1	0.834
EI2	0.872
KI1	0.883
KI2	0.891

Source: Processed data researcher (2026).

Test results *convergent validity* show that all over indicator own mark *outer loading* above 0.70. This show that all over indicator capable represent construct study in a way Good so that worthy used in the research model.

4.3 Reliability Test

1.5.3. **Table 4.** Cronbach Alpha and Composite Reliability

Variables	Cronbach Alpha	Composite Reliability	Information
GHRM	0.921	0.938	Reliable
Sustainability Industry	0.903	0.927	Reliable

Source: SmartPLS 4.0 output, processed data researchers (2026).

The Cronbach Alpha and *Composite Reliability* values for all variables are above 0.70, so they are declared reliable.

4.4 Fornell-Larcker Criterion Test

1.5.4. **Table 5.** Fornell-Larcker Criterion

Variables	GHRM	Industrial Sustainability
GHRM	0.887	
Sustainability Industry	0.682	0.901

Source: SmartPLS 4.0 output, processed data researchers (2026).
The results show that all over variables fulfil *discriminant validity.*

4.5 Structural Results of the Model

After done testing validity and reliability construct, stage furthermore is structural model evaluation using method *Partial Least Square–Structural Equation Modeling* (PLS-SEM). Structural model is used For see connection between latent variables in study as well as test influence *Green Human Resource Management* to sustainability industry in Batam City.

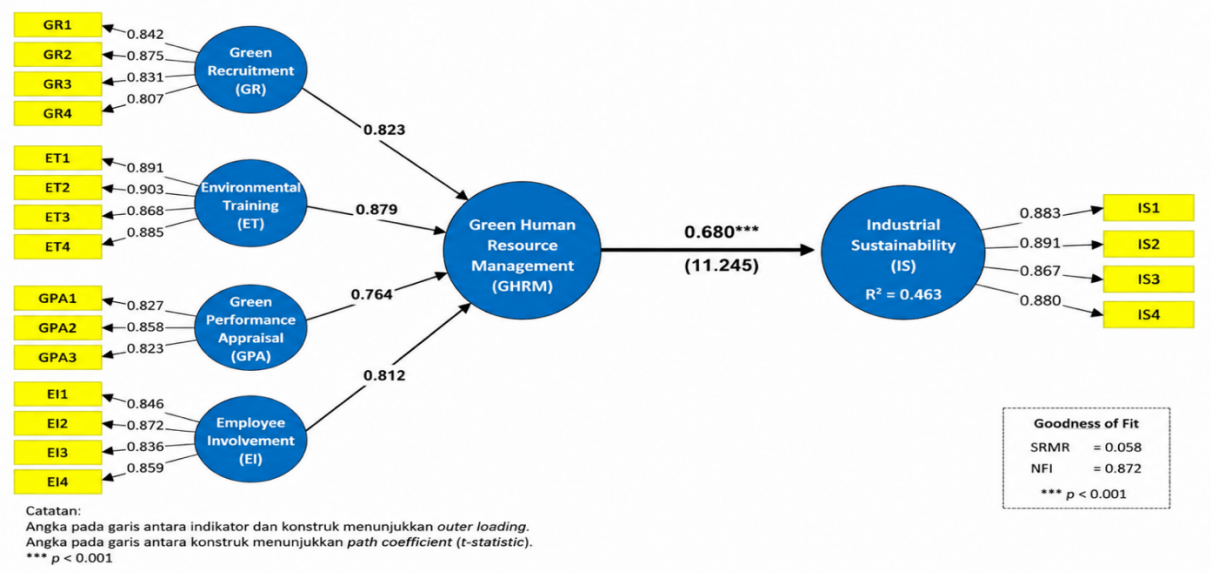


Figure 2. Results of the Research Model

Figure 2 shows structural results of the research model use SmartPLS 4.0. Test results show that *Green Human Resource Management* own influence positive to sustainability industry with mark *path coefficient* of 0.680. In addition that, the R-square value of 0.463 shows that variables *Green Human Resource Management* capable explain variation sustainability industry by 46.3%, while the rest influenced by other variables outside the research model.

The outer loading results for each indicator also show value above 0.70, so that all over indicator declared valid in represent construct research. With Thus, the research model assessed own ability quite predictive Good in explain connection between *Green Human Resource Management* and sustainability industry in Batam City.

4.6. R-Square Test

Table 6. R-Square

Variables	R Square	Category
Sustainability Industry	0.463	Moderate

Source: SmartPLS 4.0 output, processed data researchers (2026).

The R-square value of 0.463 indicates that *Green Human Resource Management* capable explain variation sustainability industry by 46.3%, while the rest influenced by other variables outside the research model. This value show ability predictive model in category moderate.

4.7 Hypothesis Testing

Table 7. Path Coefficient

Variable Relationship	Coefficient	T-Statistic	P-Value	Information
GHRM → Sustainability Industry	0.680	11,245	0,000	Significant

Source : SmartPLS 4.0 output, processed data researchers (2026).

Test results show that *Green Human Resource Management* influential positive and significant to sustainability industry. Testing hypothesis done use technique *bootstrapping* on applications SmartPLS 4.0 for now significance connection between variables study.

5. Discussion

The research results show that *Green Human Resource Management* has a positive and significant influence on industrial sustainability in Batam City. This finding reinforces *the*

Resource-Based View theory, which states that human resources are the most important factor. is asset strategic company in create superiority competitive sustainable.
Dimensions *environmental training* become the most dominant factor in the implementation of GHRM. Environmental training can increase employee awareness of the importance of energy efficiency, waste reduction, and environmentally friendly work behavior. Employees who receive environmental training regularly periodically show concern more tall to policy *sustainability* company.
Besides In addition, green performance appraisals also play an important role in improving employee green behavior. Companies that include environmental indicators in their asessments performance tend own level compliance a better environment Good.
Findings study This This is in line with previous research which states that implementing GHRM can improve a company's operational efficiency and strengthen industrial competitiveness. Companies that consistently implement environmental policies gain benefits in the form of subtraction cost operational, improvement reputation company, and loyalty customer.
In the area industry In Batam, GHRM implementation is becoming increasingly important due to the increasing global pressure on the manufacturing industry to implement *Environmental, Social, and Governance* (ESG) principles. Therefore, companies need to integrate sustainability aspects into their human resource policies.

6. Conclusions, Implications, and Recommendations

6.1 Conclusion

Study This prove that *Green Human Resource Management* has a positive and significant impact on industrial sustainability in Batam City. GHRM practices include green *recruitment, environmental training, green performance appraisals*, and *employee involvement.* capable increase efficiency operational as well as support sustainability company.
Environmental training becomes The most dominant dimension in shaping employees' environmentally friendly behavior. GHRM implementation also helps companies reduce industrial waste and increase their competitiveness.

6.2 Implications

This research provides practical implications for industrial companies to:

1. Integrating environmental aspects into HR policies.
2. Improve environmental training for employees.
3. Develop a sustainability-based performance assessment system.
4. Push participation employee in environmental programs.

6.3 Recommendations

Further research is recommended to:

1. Adding mediating variables such as *green organizational culture.*
2. Using a larger sample size.
3. Comparing GHRM implementation across industrial sectors.
4. Using longitudinal methods to see long-term impacts.

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Potential of Economic Growth Through MSME Development in Ciburuy Village, Cigombong District, Bogor Regency

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Abstract

The development of Micro, Small, and Medium Enterprises (MSMEs) is a key strategy for increasing community-based economic growth. This study aims to analyze the potential for economic growth through MSME development in Ciburuy Village, Cigombong District, Bogor Regency. The method used is a qualitative descriptive approach supported by secondary quantitative data. The results indicate that MSMEs in Ciburuy Village have significant potential in the culinary, crafts, and trade sectors, but still face various obstacles such as limited access to capital, low digital literacy, and limited market access. Strengthening the capacity of MSMEs through training, business digitalization, and government policy support are key factors in driving local economic growth.

Keywords: MSMEs, local economy, business development, Ciburuy Village

Environmental Management Accounting and Strategic Resilience: Roles of Information Systems and Organizational Culture

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Abstract

This study aims to investigate how Strategic Resilience of Small and Medium Enterprises (SMEs) in Indonesia can be improved by using Environmental Management Accounting (EMA), and Information Systems and Organizational Culture as moderating variables. In this case, 120 SME in Indonesia was selected as the sample, and the primary data obtained by completing questionnaires online, with a quantitative survey design. Partial Least Squares Structural Equation Modeling (PLS-SEM) was used to analyze the data. The results show that the environmental accounting activities positively affect the Strategic Resilience, which means that through environmental accounting practices, organizations can become more adaptable and sustainable. Information Systems also play a positive role in Strategic Resilience by accelerating strategic decision-making and its accuracy. The moderating function of Information Systems in the EMA-Strategic Resilience relationship was not supported, however. Conversely, Organizational Culture has a significant influence on the connection between EMA and Strategic Resilience, indicating that cultures that are adaptive and sustainable improve the success of EMA implementation. The study also confirms that the model has a good explanatory and predictive power. This research is a conceptual contribution to the environmental management accounting literature, adding a multi-faceted approach that brings together EMA, Information Systems, Organizational Culture, and Strategic Resilience. The results also have practical implications for the SMEs to employ appropriate adaptive and sustainable business strategies to cope with the changing business context and sustainability issues.

Keyword: Environmental Management Accounting; Information Systems; Organizational Culture; Strategic Resilience; SMEs

1. Introduction

The world is a very dynamic place and there are a lot of uncertainties in the business world that have seen companies under a lot of pressure to survive, adapt and remain competitive (Duchek, 2020). Organizations have been forced to value sustainability of business operations over short-term profit due to technological and consumer behavior change, global economic crisis and increasing demand for sustainable business operations. This has become one of the most important strategic skills that businesses need to have in order to predict

change, deal with crises and adapt the operation of their businesses on an ongoing basis (Duchek, 2020; Duchek et al., 2020). Organizations can become more resilient and grow even in the face of uncertain and fast-changing business contexts through strategic resilience.

As digital transformation is accelerating, global competition is heating up and the demands for implementing corporate sustainability practices are rising, the need for strategic resilience efforts is also growing in Indonesia. In Indonesia, the use of digital technology and ESG (Environmental, Social, and Governance) principles in companies is growing increasingly in business strategy to keep competitiveness and preserve company sustainability in the context of increasingly dynamic business environments. This can be seen in various studies regarding the implementation of digital transformation and the ESG movement in companies in Indonesia, including those listed on the Indonesia Stock Exchange (IDX) and companies that operate in environmentally sensitive industries (Aushaf Indra Luhfhi et al., 2025; Basri & Sunaryati, 2025; Pramesthy et al., 2025; Serly et al., 2025). Such conditions demand that companies should create resource management systems and business strategies to be adaptable and capable of change in the business environment in a quick and efficient way. If companies fail to adjust the business strategies to external environmental changes, they are likely to lose competitiveness and even end up with going out of business.

The suggestion that could be adopted as a possible solution to support the sustainability and strategic resilience of companies is implementing Environmental Management Accounting (EMA). EMA is an accounting system that supplies data associated with various environmental expenses, energy use, waste management, resource efficiency, and corporate environmental impacts that assist in managerial and strategic decision-making (Huynh & Nguyen, 2024; Putri et al., 2026). By using EMA, companies can more precisely estimate environmental costs, leading to more efficient operations, better cost management, and sustainability. (Khondakar et al., 2026) By involving environmental aspects in business planning, EMA can help companies optimize the use of resources, expand their competencies in coping with the growing complexity of their business environment.

EMA has been slowly emerging in Indonesia, especially in the manufacturing, mining, energy and other industries that have high environmental impact. Nevertheless, there are still several challenges in the implementation of EMA in Indonesia namely managerial awareness of the importance of environmental accounting, lack of managerial information technology capabilities, lack of integration of environmental data and organizational culture that is not fully conducive to environmental accounting (Agustia, 2020; Khondakar et al., 2026b; Sari et al., 2020). The studies conducted so far have demonstrated the impact of Environmental Management Accounting (EMA) on organizational performance and corporate sustainability, but the results have been mixed. In general. Agustia, (2020) concluded that the impact of EMA on organizational performance is indirect by way of organizational innovation as a mediator. Different from that, Afazis and Handayani (2020) found that the implementation of EMA doesn't significantly influence the environmental or financial performance. However, other studies have shown that the EMA can enhance the operational efficiency and organizational sustainability by better management of resources.

The inconclusive research results suggest that there is a gap in the research on the effectiveness of Environmental Management Accounting (EMA) towards improving strategic resilience in the company. However, there are some studies reporting positive impact of EMA on corporate

sustainability and competitiveness and others reporting insignificant impact. These conditions indicate that the role of strategic resilience in relation to EMA could be mediated by other factors that can increase or decrease the effectiveness of EMA at the organizational level. Information Systems is one of the key variables expected to boost this relationship. Information systems are significant tools in delivering fast, accurate, relevant and integrated information for supporting the strategic decision making of a company (Ardianti et al., 2023; Latasa et al., 2017). Information systems are tools that assist companies to manage environmental data in the context of Environmental Management Accounting (EMA), measure environmental costs and support sustainability strategies. The combination of information systems and EMA allows companies to get real-time environmental information and thus enhance strategic decision making and adaptability of the company to the changes in the business.

There is still limited research that investigates the moderating effect of Information Systems between Environmental Management Accounting (EMA) and strategic resilience, especially in the context of Indonesia (Hasan et al., 2024). Previous research has mainly focused on the direct impact of information systems on organizational performance, rather than on information systems as a contextual or moderating factor that enhances the effectiveness of EMA to improve strategic resilience (Gozali & Januarti, 2024). However, in practice, implementation of EMA is largely dependent on the quality and integration of the information systems used by organizations (Alvarez, 2026). Information systems that are poorly integrated can also have a detrimental effect on the access to environmental information, the precision of data, and the organization's capacity to provide support for optimal strategic decision making. There are also other factors besides information systems that affect the implementation of a company's strategy, such as organizational culture.

Organizational culture is defined by collective values, norms and behaviors which shape organizational behavior when it comes to change, innovation and sustainability efforts—this in turn can impact the success of strategic implementation. An adaptive and innovation-oriented culture increases the effectiveness of Environmental Management Accounting (EMA) and the use of information systems to support and improve organizational strategic resilience. A different type of culture, based on resistance and bureaucracy, on the other hand, can impede the effective use of information systems and undermine strategies oriented towards sustainability in organizations (Kwiotkowska, 2024; Wiese et al., 2026). Implementing digital transformation and sustainable business practices is still a large hurdle when it comes to organizational culture. In Indonesia, hierarchical, rigid works culture with limited support of technological innovation and strategic environmental management (Hasan et al., 2024). are still prevalent among many companies. These conditions make the implementation of Environmental Management Accounting (EMA) and information systems less effective, which consequently leads to inadequate organizational capacity to adjust to new business conditions. Hence, it is felt that organizational culture is one of the important variables that should be explored as a moderating variable in the relationship between EMA and strategic resilience.

The importance of this study is several. The first is the pressure for companies in Indonesia to improve strategic resilience, which is growing due to the economic uncertainty in the global economy, the emergence of digital transformation and escalating environmental sustainability requirements. Second, the previous research about the relationship between Environmental Management Accounting (EMA) and organizational performance and sustainability evokes

contradictory findings, suggesting that there are a number of factors that need to be explored to further strengthen this relationship. Thirdly, research that considers the relationship between EMA with Information Systems, Organizational Culture, and Strategic Resilience simultaneously is still limited, especially in the context of companies in Indonesia. Fourth, a number of previous studies have been conducted regarding financial performance or overall organizational performance, but research on strategic resilience from the viewpoint of environmental management accounting is still limited.

This study has several important novelties given these conditions. First, it combines Environmental Management Accounting (EMA), Information Systems, Organizational Culture, and Strategic Resilience into one research model, which has not yet been analyzed in one comprehensive way in previous studies. Second, in this study, the relationship between EMA and strategic resilience is enhanced by the role of the other two constructs: Information Systems and Organizational Culture, which serve the function of a moderator. Third, this study is being conducted with respect to the Indonesian companies, resulting in new empirical evidence concerning the implementation of EMA in the context of developing country. Third, the study broadens the definition of EMA research, which has largely been focused on financial performance, into the organizational level toward strategic resilience in responding to business uncertainty, digital transformation, and environmental sustainability demands. Based on the above, this research is hoped to add theoretical value to the development of environmental management accounting literature, organizational resilience literature, and organizational adaptability literature, in addition to giving various implications for business sustainability for companies in Indonesia in promoting adaptability and sustainability of business practices through the application of EMA, IS, and adaptive organizational culture.

2. Literature Review

Resource-Based View (RBV) Theory

According to the Resource Based View (RBV) theory, which was first proposed by *Barney, (1991)* and further developed by Wernerfelt, (1984) the firm's sustainable competitive advantage is the result of the unique bundle of valuable, rare, inimitable and non-substitutable (VRIN) internal resources and capabilities of the firm. In the accounting literature, RBV has been extensively used as a theoretical framework to understand how the use of MA in organizations can lead to unique capabilities, which cannot be easily imitated by competitors (Journeault et al., 2021). EMA is regarded as strategic information resources which can assist organizations to systematically identify, measure, and manage environmental costs and turn environmental compliance from a cost burden into a source of competitive advantage (Huynh & Nguyen, 2024)

The RBV approach is a knowledge-based tool to help firms build better environmental decision-making skills and processes, seeing EMA as a resource. Previous Scopus literature has shown that firms that have a systematic approach to implementing EMA tend to have a better operational efficiency and utilization of resources than those firms that do not implement EMA (Christ & Burritt, 2017). The connection to high quality information systems also results in a resource advantage since it allows the real-time monitoring, analysis, and reporting of environmental data, which increases organisational responsiveness to environmental and market uncertainties (Albelda, 2011). As an organizational capability, RBV theory proposes

that the implementation of EMA could be a unique strength of an organization, especially for SMEs in Indonesia, which would enhance strategic resilience, if combined with adaptive organizational culture and a strong information system infrastructure (Journeault et al., 2021)
Additionally, the RBV theory captures the moderating effect of organizational culture on the EMA strategic resilience relationship. Organizational culture is a socially complex and path dependent resource that is difficult for competitors to duplicate in a similar fashion (Barney, 1986). The effectiveness of the implementation of EMA is heightened when there is an innovation-oriented and sustainability-focused organizational culture, which facilitates the development of an internal environment for environmental learning, constant improvement, and adaptation of strategic responses (Kwiotkowska, 2024). In this theoretical context, it is suggested that the relationship between EMA and strategic resilience in the current study would be strengthened by the moderating role of organizational culture.
From the RBV perspective, Environmental Management Accounting (EMA) is considered a strategic capability that enables SMEs to manage environmental and operational information effectively. EMA helps SMEs identify environmental costs, improve resource efficiency, reduce waste, and support sustainable business practices. Through better environmental information management, SMEs can make more effective strategic decisions and improve their adaptability to environmental and market changes (Appannan et al., 2023). In SMEs, where resources are often limited, the ability to utilize EMA effectively becomes an important internal capability for maintaining business continuity and resilience. Firms that successfully implement EMA are more likely to anticipate risks, respond to uncertainty, and sustain their operational performance during challenging conditions (Swalih et al., 2024).
H1: Environmental Management Accounting positively affects Strategic Resilience in SMEs.

According to RBV, Information Systems (IS) are strategic technological resources that enhance organizational efficiency, communication, and decision-making quality. In SMEs, information systems facilitate faster access to information, improve coordination, and support timely managerial responses to environmental uncertainty (Swalih et al., 2024). Effective information systems enable SMEs to monitor operational activities, analyze business trends, and respond more quickly to external disruptions. These technological capabilities enhance organizational flexibility and adaptive capacity, which are essential components of strategic resilience. Thus, SMEs with stronger information systems are expected to demonstrate higher levels of strategic resilience.
H2: Information Systems positively affect Strategic Resilience in SMEs.

RBV emphasizes that organizational performance can be enhanced through the integration of complementary resources and capabilities. In SMEs, Information Systems serve as a supporting capability that strengthens the effectiveness of EMA implementation (Zhen et al., 2024). The successful implementation of EMA requires accurate, timely, and integrated information, which can be facilitated by effective information systems. SMEs with strong information systems can process environmental data more efficiently, improve monitoring activities, and utilize EMA information more effectively in strategic planning and decision-making processes (Huynh & Nguyen, 2024). As a result, information systems are expected to enhance the contribution of EMA toward improving strategic resilience in SMEs.

H3: Information Systems strengthen the effect of Environmental Management Accounting on Strategic Resilience in SMEs.

Within the RBV framework, Organizational Culture is regarded as an intangible strategic resource that shapes employee behavior, organizational values, and managerial practices. In SMEs, a supportive organizational culture encourages adaptability, innovation, collaboration, and sustainability-oriented behavior (Zhen & Rahman, 2024). A strong organizational culture can improve the effectiveness of EMA implementation by promoting awareness and commitment toward environmental management practices. SMEs with adaptive and sustainability-oriented cultures are more likely to utilize environmental information effectively in strategic decision-making and problem-solving processes (Zatini et al., 2025). Therefore, organizational culture is expected to strengthen the relationship between EMA and strategic resilience in SMEs.
H4: Organizational Culture strengthens the effect of Environmental Management Accounting on Strategic Resilience in SMEs.

3. Material and Method

This study is quantitative in nature with a survey design (Creswell et al., 2016). The research was carried out in Small and Medium Enterprises (SMEs) in Indonesia, in which the primary data used were obtained through a questionnaire distribution method. In this study, the population is defined as all the SME operators who actively engaged in business activities. The sampling method used a non-probability sampling technique and purposive sampling method were used, whereby the respondents were selected based on the specific criteria that were relevant to the objectives of the study. The criteria for respondents were top management of SMEs. Success was achieved in surveying 120 respondents.

3.1 Design Study

To guarantee the minimum sample size the software program G*Power 3.1.9.7 was used. In the case of two predictor variables (Memon et al., 2019), the minimum number of respondents to be sampled was determined to be 68. The study was able to carry out the minimum 126 respondents successfully. The data was collected using an on-line questionnaire through social media and networks of SME communities, such as Google Forms. All items were rated on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), to allow the respondents to rate them.

3.2 Data Analysis

In this study, two exogenous variables, namely EMA, and an endogenous variable, Strategic Resilience, are analyzed along with moderating variables, namely IS and OC. Descriptive statistical analysis was performed before inferential analysis to understand the general characteristics of the data with minimum, maximum, mean and standard deviation values. The data were then analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) method with the support of software SmartPLS Hair, (2021). The analysis was carried out in two phases: One that involved an examination of the outer model (construct validity and reliability), and the other, an examination of the inner model (testing of

relationships between variables). Bootstrapping technique was used to test a hypothesis by analyzing t-statistic and p-value. In addition, model evaluation was conducted based on the R-square value to determine the level of explanation of the dependent variable and the SRMR to determine the overall goodness of fit of the model.

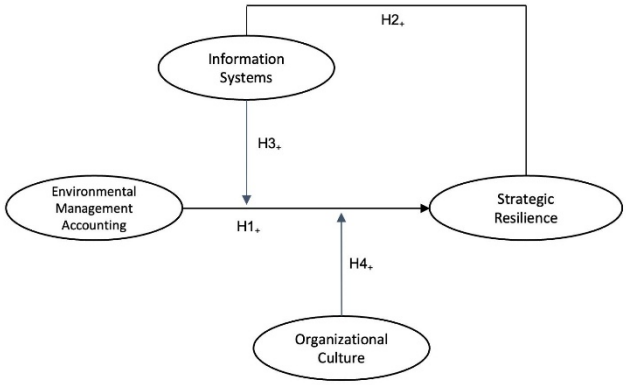


Figure 1. Research Model

4. Result

Table 1. Demographic Respondent

Characteristic	Description	Number	Percentage (%)
SMEs	Trade	90	75
	Service	22	18
	Manufacturing	8	7
	Total	120	100
Length of time the UKM has been operating	< 5 years	51	43
	5 - 10 years	54	45
	10 – 15 years	10	8
	>15 years	5	4
	Total	120	100
Location	Kalimantan	19	16
	Sumatra	15	13
	Java	74	62
	Nusa Tenggara Timur	4	3
	Maluku Utara	6	5
	Sulawesi Selatan	1	1
	Papua Barat	1	1
	Total	120	100
Sales Results/Year	< 300 Million	87	73
	300Juta – 2 Billion	30	25
	2– 15 Billion	2	2
	15– 50 Billion	1	1
	Total	120	100
Gender	Man	39	33
	Woman	81	68
	Total	120	100

Characteristic	Description	Number	Percentage (%)
Age	20 – 35 years	80	67
	36 - 50 years	34	28
	>50 years	6	5
	Total	120	100
Last education	Senior High School	55	46
	Bachelor	58	48
	Master's degree	7	6
	Total	120	100
Positions in SMEs	SMEs owners	107	89
	Management	13	11
	Total	120	100

Table 1 showed that the majority of respondents 75% were SMEs mainly in the trade sector, and most of the SMEs 88% had been in business for less than 10 years. The majority of the respondents were in Java 62%, and classified as micro enterprises with annual turnover less than IDR 300 million 73%. The results reveal that most of the sample firms in the study are growing and developing SMEs.

The respondents included predominantly females 68% and in the age group 20 to 35 years 67% which falls in the productive age group. From the educational standpoint, the majority of the respondents were either having a bachelor's degree 48% or a senior high school qualification 46%. Furthermore, most of them possessed more than two years of experience in SMEs, and they were primarily business owners 89%. This suggests that the data were from people who had significant experience and roles in business decision making for SMEs.

Table 2. Outer Loading Test Results

Item	Outer loadings
Environmental Management Accounting (AVE = 0.652: CR = 0.960: CA = 0.955)	
EMA3	0.751
EMA4	0.809
EMA5	0.794
EMA6	0.870
EMA7	0.770
EMA8	0.840
EMA9	0.844
EMA10	0.851
EMA11	0.771
EMA12	0.808
EMA13	0.816
EMA14	0.780
EMA15	0.781
Information System (AVE = 0.706: CR = 0.956: CA = 0.947)	
IS1	0.788
IS2	0.864
IS3	0.857
IS4	0.869

IS5	0.748
IS6	0.869
IS7	0.852
IS8	0.885
IS10	0.818
Organization Culture (AVE = 0.663: CR = 0.932: CA = 0.915)	
OC2	0.778
OC3	0.810
OC4	0.815
OC5	0.847
OC6	0.824
OC7	0.846
OC8	0.777
Strategic Resilience (AVE = 0.665: CR = 0.908: CA = 0.873)	
SR1	0.782
SR2	0.710
SR3	0.853
SR4	0.863
SR5	0.858
IS x EMA -> IS x EMA	1.000
OC x EMA -> OC x EMA	1.000

Source: PLS Output (2026)

The outer loading range is between 0.710 and 0.885 with the minimum value being greater than the recommended value of 0.70 Hair, (2021), for all constructs in Table 2. All five items (EMA1, EMA2, IS9, IS11, and OC1) were dropped before the final assessment as they did not have enough loadings, thus increasing the quality of the measurement model. The loading values for the interaction constructs (IS × EMA and OC × EMA) were also perfect (1.000), showing that the moderating constructs were also high. Moreover, all constructs have high AVE values (0.652 to 0.706) and CR values (0.908 to 0.960), which are higher than the recommended level, and CA values (0.873 to 0.955) have been within the recommended level. The results of this study demonstrated that the measurement model is valid and reliable, which would support the analysis of the structural model.

Table 3. Fornell Lacker Criterion

	EMA	**IS**	**OC**	**SR**
EMA	0.807			
IS	0.763	0.840		
OC	0.757	0.831	0.814	
SR	0.803	0.776	0.759	0.815

Source: PLS Output (2026)

The results of discriminant validity test from all constructs according to the Fornell-Larcker criterion in Table 3 shows that all constructs meet the requirement of discriminant validity. Hair, (2021) suggests that the square root of the AVE of each construct should be larger than the correlations of each other constructs. The results show that the square root AVE

values for EMA, IS, OC, and SR are 0.807, 0.840, 0.814, and 0.815, respectively. These values are also higher than the correlations between constructs, which means that each construct accounts for its own indicators more than for other constructs in the research model. As a result, it can be inferred that all the variables in this study have got good level of discriminant validity and suitable for further analysis.

Table 4. Structural Model Assessment Result

Relationship	**Hypothesis**	**T Statistics**	**Effect Size (f^2)**	**p-value**	**Conclusion**
Environmental Management Accounting -> Strategic Resilience	H1	4.232*	0.273	0.000	Supported
Information System -> Strategic Resilience	H2	2.419*	0.061	0.008	Supported
Information System X Environmental Management Accounting -> Strategic Resilience	H3	0.732***	0.006	0.232	Not supported moderating effect
Organization Culture X Environmental Management Accounting -> Strategic Resilience	H4	1.989**	0.052	0.023	Supported moderating effect
SRMR	0.072				
R^2 Strategic Resilience (SR)	0.737				

Note * = $p < 0.05$, Supported
** = Supported Moderating Effect
*** = Not Supported Moderating Effect
SRMR= Standardized Root Mean Square Residual.

Source: PLS Output (2026)

As can be seen from the results in table 4, EMA has positive and significant effect on SR (T = 4.232; p = 0.000) and small effect size (f^2 = 0.273). This discovery validates the idea that EMA increases an organization's capacity to deal with uncertainty and business challenges. However, there is also a positive and significant relationship between Information System (IS) and SR (T = 2.419; p = 0.008), but with a relatively small effect (f^2 = 0.061), so that information systems still have a positive and significant contribution to increasing the strategic resilience of an organization (Hair et al., 2019)

Interaction between IS and EMA is not significant in the case of SR (T = 0.732; p = 0.232) as the moderating hypothesis is not supported. By contrast, the relationship between EMA and SR is significantly moderated by Organizational Culture (OC) (T = 1.989; p = 0.023), indicating that the effectiveness of EMA implementation to enhance strategic resilience is significantly enhanced by a strong organizational culture. The research model is generally good in quality with SRMR value of 0.072 (< 0.10) (Hair, 2014) signifying an acceptable model fit. Additionally, the R^2 value of 0.737 indicates that the model has a high level of variance explanation with EMA, IS and moderating variables having 73.7% of the variance explained by the model, which demonstrates that the level of the model's ability to explain and predict is quite high (Ghozali, 2019; Hair, 2014)

Table 5. Prediction Results

	Q^2predict	PLS-SEM_RMSE	PLS-SEM_MAE	LM_RMSE	LM_MAE
SR1	0.534	0.362	0.235	0.450	0.294
SR2	0.259	0.623	0.356	0.713	0.457
SR3	0.538	0.383	0.239	0.555	0.336
SR4	0.432	0.457	0.276	0.599	0.388
SR5	0.491	0.446	0.255	0.577	0.374

Source: PLS Output (2026)

Table 5 shows that the research model has good predictive capability because the value of Q2predict is positive ranging from 0.259 – 0.538. The values of Q^2 (Hair et al., 2019). above zero result from the fact that the PLS-SEM model is relevant for the endogenous construct. Moreover, the RMSE and MAE values of the PLS-SEM model are lower than those of the Linear Model (LM) throughout, which means that the prediction errors are kept low. The results support good predictive accuracy of the model in explaining Strategic Resilience. As per (Shmueli et al., 2019) the findings suggest that the model developed in the research is not only strong explanatory power but is also strong in predictive power.

5. Discussion

This study's empirical results give theoretical and practical implications about the relationship between Environmental Management Accounting (EMA), Information Systems (IS), Organizational Culture (OC) and Strategic Resilience (SR) in the Indonesian SMEs. Each hypothesis result is expanded upon and placed in the context of the academic literature.

The first finding supports that EMA has a positive and significant direct impact on strategic resilience. The result is in line with the Resource Based View (RBV) that suggests that EMA is a valuable organizational capability incorporating knowledge as a resource that facilitates the informed environmental and strategic decision making by firms. By systematically monitoring the cost of the environment, the efficiency of the resources and analysing the waste, EMA can provide SME managers with information to aid in proactive reaction to uncertainty and environmental changes. This discovery is consistent with past research that indicates that EMA contributes to organizational adaptability and sustainability in emerging economies. It also builds on previous research which highlights the benefits of EMA adoption in relation to better environmental decision-making, operational efficiency, and competitive advantage in the long-term. Based on the result, it can be concluded that EMA is not only statistically important but also practically relevant to strengthen SMEs strategic resilience in Indonesia.

The second finding is that Information Systems have a direct and positive impact on strategic resilience. This implies that IS is significant in contributing to the resilience of SMEs because information can be collected, processed, and disseminated more efficiently to make adaptive decision to strengthen the SME resilience. The result is in line with previous studies that have shown that IS contributes to the responsiveness and agility of organizations in SMEs. The relatively weak relationship, though, might be attributed to the level of maturity of the relationship of many Indonesian SMEs, which is still based on digital technologies in a basic manner. This finding further supports the importance of the quality and integration of an

organization's information systems, as a key determinant of the effectiveness of accounting information, including environmental accounting information Albelda, (2011).

The third finding reveals that IS does not significantly moderate the relationship between EMA and strategic resilience. This outcome is significant and can be explained by using the Contingency Theory. IS can still be used as a tool for operation in the context of the Indonesian SME community, which is still not a strategic platform that can improve EMA practices. Within this study, most SMEs were micro companies and had relatively simple information infrastructures, and a low level of digital maturity, which restrict the potential of IS to support the strategic contribution of EMA. The present study corroborates past arguments on the moderating effect of technology in management accounting systems that rely on organizational readiness and degree of technological integration. Thus, the lack of a significant moderating effect is not a contradiction to the underlaying theory but rather a contextual constraint that exists in the Indonesian SME context.

The fourth and most theoretically significant finding is that Organizational Culture significantly moderates between EMA and strategic resilience. This finding suggests that having an adaptive and sustainability-focused culture improves the effectiveness of EMA in building organizational resilience. The results align with previous research focusing on how open cultures, innovative cultures, and environmental commitment enhances the strategic importance of sustainability management. The findings from a Contingency Theory point-of-view validate the impact of EMA on strategic resilience, which depends upon organizational context, specifically cultural circumstances in the organization. EMA practices are better integrated into organizational processes and translated into resilient strategic actions in Indonesian SMEs that encourage collective responsibility and environmental awareness, as well as adaptive learning. This discovery adds to the growing body of literature emphasising the role of socio-cultural issues in explaining the effectiveness of management accounting practices (Hiebl, 2018).

The following theoretical contributions are important for this study to the management accounting and organizational resilience literature: First, this study combines RBV theory and Contingency Theory in a single research model, thus, contributing a new theory to the understanding of how EMA creates strategic value as a function of organizational context. Theoretical conversation in environmental management accounting research is dominated with single-theory explanations, which is enriched with this dual theoretical lens. Second, this study broadens the focus of EMA research from its primary emphasis on financial and environmental performance outcomes to the focus on strategic resilience, which is theoretically different and practically important organizational outcome, and has received less attention in previous EMA literature. Third, the findings of this study provide empirical evidence that socio-cultural factors play an important role in affecting the effectiveness of EMA, which contributes to the Contingency Theory in the field of sustainability accounting.

Practically, this research gives actionable advice to the owners, managers as well as the policy makers of SMEs in Indonesia. The results highlight the strategic role of EMA for SME managers as a management tool and not a compliance requirement. To consider the adoption of EMA as a business investment in the capability of the organization to provide greater strategic resilience. Managers are encouraged to implement systematic environmental cost tracking systems, to incorporate environmental cost aspects into strategic planning processes,

and to train staff to be familiar with environmental accounting principles. In terms of organizational culture, this study emphasizes the need to deliberately infuse the adaptive, sustainability-focused cultural values into the strategy of SME leaders to foster environmental learning, cross-functional cooperation and openness to strategic change. Implementing EMA without first changing the culture will have less of a strategic impact. The results indicate that Indonesia SMEs need special capacity-building programs for the development of their competency that involve the development of digital literacy of an SME, especially an SME in the environmentally sensitive sector, as well as learning for IS EMA competency development for the development agency and the policymaker.

6. Conclusion, Implication, and Recommendation

This study contributes to sustainability management accounting literature because of its findings that Environmental Management Accounting (EMA) is a strategic competence which can be used to improve the resilience capability of Indonesian SMEs in business uncertainty. The results underscore the value of EMA as a tool for enhancing the adaptive decision-making of firms, increasing the efficiency of their use of resources and maintaining their competitiveness in the long term through adding environmental information to their strategic processes. The findings indicate that although the Information Systems have positive impacts on adaptability of organizations, they fail to strengthen the EMA–resilience relationship, which means that digital maturity is still a major constraint among emerging economy SMEs. Organizational Culture, on the other hand, proved to be an important contextual enabler, suggesting that adaptive and sustainability-oriented cultural values are key to turning environmental accounting processes into strategic actions that lead to resilience. This paper builds upon previous studies by combining the RBV and CT approaches to understand how internal capabilities and the organizational context interact to influence the resilience outcomes in developing-country SMEs. The study also has implications for managers and policy makers of SMEs as it looks to cultural change and readiness within organizations to achieve the highest possible strategic gains in investments in environmental accounting. Despite the limitations of the present cross-sectional study and its focus on a small number of countries, the findings serve as the basis for further research on longitudinal changes, the use of advanced digital infrastructures, and the wider institutional processes and factors that drive the impact of EMA in emerging markets.

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Activity-Based Costing for Homestay Pricing Under Expected Utility Theory

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Abstract

This study aims to analyze the implementation of Activity-Based Costing (ABC) in determining room rates at a homestay business and to examine its relevance to Expected Utility Theory proposed by Eugene F. Fama. The research was conducted using a case study approach at a homestay in Banyuwangi, Indonesia, whose identity was anonymized as "Homestay X" for confidentiality purposes. Data were collected through observation, interviews, and documentation of operational costs. The analysis identified several operational activities affecting room costs, including housekeeping, laundry, electricity usage, room maintenance, and reservation administration. The findings indicate that the application of ABC provides more accurate and realistic room pricing because costs are allocated based on actual activity consumption. The study also found that the room rates previously applied by the homestay were lower than the actual operational costs, leading to undercosting conditions that could reduce long-term profitability. Through the ABC approach, the recommended room rates became slightly higher but reflected operational resource consumption more appropriately. Furthermore, the findings support Expected Utility Theory, which explains that business decision-makers tend to choose pricing strategies that maximize expected benefits while minimizing uncertainty and operational risks. Therefore, the implementation of ABC not only improves pricing accuracy but also supports sustainable decision-making in the hospitality industry.

Keyword: activity-based costing; homestay pricing; expected utility; hospitality accounting; room rate strategy

1. Introduction

The rapid growth of the tourism sector in Indonesia has encouraged the development of accommodation businesses, including homestays. Increasing competition in the hospitality industry requires homestay owners to establish appropriate pricing strategies in order to maintain profitability and long-term business sustainability. However, many small-scale accommodation businesses still determine room rates using simple estimations without considering detailed operational activities and resource consumption (Kotler & Keller, 2016; Horngren et al., 2018).Inaccurate pricing decisions may result in undercosting, a condition in

which room rates are lower than the actual operational costs incurred by the business. In the long term, undercosting can reduce profitability and threaten the sustainability of homestay operations. Therefore, accommodation businesses require a costing method that can provide more accurate and reliable cost information (Kaplan & Cooper, 1998; Garrison et al., 2018).

One costing approach considered capable of producing more accurate cost allocation is Activity-Based Costing (ABC). This method allocates overhead costs based on activities consumed by products or services, allowing each room type to receive a more realistic allocation of operational costs. In the hospitality industry, activities such as housekeeping, laundry, electricity usage, facility maintenance, reservation administration, and guest services significantly influence room costs. Previous studies have shown that ABC provides more accurate cost information and improves managerial decision-making compared with conventional costing systems (Cooper & Kaplan, 1991; Innes & Mitchell, 1995).

This research was conducted at a homestay whose identity was anonymized as "Homestay X" in order to maintain business confidentiality. In addition to analyzing the implementation of Activity-Based Costing, this study also relates the findings to Expected Utility Theory proposed by Eugene F. Fama. The theory explains that economic decision-makers tend to choose alternatives that maximize expected utility while considering risks and uncertainty (Fama, 1972). In the context of homestay businesses, pricing decisions involve balancing expected profits, occupancy rates, customer purchasing power, and operational risks. Therefore, accurate cost information generated by ABC can support rational pricing decisions and enhance business sustainability under uncertain market conditions.

2. Literature Review

2.1 Activity-Based Costing (ABC)

Activity-Based Costing (ABC) is a costing method that allocates overhead costs based on the activities consumed by products or services. Unlike conventional costing systems, ABC identifies specific activities and assigns costs according to the actual consumption of resources. As a result, ABC is considered more accurate in determining operational costs because it traces resource usage through activity drivers rather than using broad allocation bases (Cooper & Kaplan, 1991; Kaplan & Cooper, 1998).

In the hospitality industry, operational activities such as housekeeping, laundry, electricity consumption, facility maintenance, and reservation administration are important components influencing room costs. Since different room types consume different levels of services and resources, the use of ABC enables managers to allocate costs more precisely and establish room rates that better reflect actual operational expenses. Previous studies have shown that the implementation of ABC improves cost accuracy, pricing decisions, and operational efficiency in service organizations, including hotels and accommodation businesses (Innes & Mitchell, 1995; Raab & Mayer, 2007).

2.2. Expected Utility Theory

Expected Utility Theory proposed by Eugene F. Fama explains that individuals and organizations tend to make decisions that maximize expected benefits under uncertain conditions. The theory suggests that rational decision-makers evaluate alternative choices by

considering both the probability of outcomes and the utility derived from those outcomes (Fama, 1972; Von Neumann & Morgenstern, 1944).

In the context of homestay businesses, room pricing decisions represent an economic decision-making process in which owners must balance profitability, customer demand, occupancy levels, and operational sustainability. Consequently, pricing strategies should not only focus on short-term profit but also on long-term business continuity. Accurate cost information generated through Activity-Based Costing can reduce uncertainty and provide a stronger basis for selecting pricing alternatives that maximize expected utility. Therefore, ABC can be viewed as a managerial tool that supports rational decision-making consistent with Expected Utility Theory (Fama, 1972; Kaplan & Cooper, 1998).

3. Material and Method

This study employed a case study approach using descriptive quantitative and qualitative methods. The research was conducted at a homestay in Banyuwangi, Indonesia, whose identity was anonymized as "Homestay X" to maintain business confidentiality. The case study approach was selected because it allows an in-depth examination of cost allocation practices and pricing decisions within a real business environment (Yin, 2018).The research utilized both primary and secondary data. Primary data were collected through direct observation of operational activities and semi-structured interviews with the homestay owner and operational staff. Secondary data consisted of financial records, operational reports, room occupancy data, and cost documentation related to accommodation services.

The study focused on operational activities that contribute to room service costs, including housekeeping, laundry, electricity and water consumption, facility maintenance, reservation administration, and guest services. These activities were identified and classified into activity cost pools. Cost drivers were subsequently determined for each activity to allocate indirect costs more accurately to different room categories.The Activity-Based Costing (ABC) method was employed to calculate room costs by assigning overhead expenses according to actual activity consumption. The analysis involved four stages: (1) identification of operational activities, (2) classification of costs into activity pools, (3) determination of cost drivers, and (4) allocation of activity costs to room categories. Room rates were then calculated by adding a reasonable profit margin to the total cost generated by the ABC analysis.

To examine the relationship between pricing decisions and Expected Utility Theory, the study analyzed how the ABC-based room rates affected managerial decision-making under conditions of uncertainty. The theory was used as a conceptual framework to explain how homestay owners select pricing alternatives that maximize expected benefits while minimizing operational risks.Data were analyzed using descriptive analysis to compare existing room rates with ABC-based rates and to evaluate their implications for profitability and business sustainability. The findings were then interpreted through the perspective of Expected Utility Theory to explain the rationality of pricing decisions in the hospitality industry.

3.1 Design Study

This study employed a case study design using a descriptive quantitative approach to examine the application of Activity-Based Costing (ABC) in determining room rates at a homestay business in Banyuwangi, Indonesia. The research focused on a homestay whose identity was

anonymized as “Homestay X” to maintain confidentiality. The case study approach was selected because it allows an in-depth analysis of operational activities, cost allocation practices, and pricing decisions within a real hospitality business environment.The unit of analysis consisted of room categories and operational activities associated with accommodation services. Data were collected from the homestay owner, administrative records, and operational documents. The study considered various operational activities that contribute to room costs, including housekeeping, laundry services, electricity and water consumption, facility maintenance, reservation administration, and guest services.

The Activity-Based Costing method was employed to identify cost drivers and allocate overhead costs according to the actual consumption of activities by each room category. Subsequently, room rates were determined based on the total activity costs and an appropriate profit margin. Furthermore, the study incorporated Expected Utility Theory as a conceptual framework to explain how accurate cost information supports rational pricing decisions under conditions of uncertainty. The research aimed to evaluate whether ABC-based room rates provide a more sustainable pricing strategy by balancing operational costs, profitability, and business risk.

3.2 Data Analysis

After collecting the required data through observation, interviews, and operational cost documentation, the data were analyzed using the Activity-Based Costing (ABC) method. The analysis began with identifying operational activities related to accommodation services, including housekeeping, laundry, electricity and water consumption, facility maintenance, reservation administration, and guest services.The identified costs were then grouped into activity cost pools and assigned to appropriate cost drivers. Subsequently, overhead costs were allocated to each room category based on the actual consumption of activities. The total room cost was calculated by combining direct costs and allocated activity costs. Room rates were then determined by adding a reasonable profit margin to the total cost obtained from the ABC analysis.

To strengthen the interpretation of the findings, the results were further analyzed using Expected Utility Theory. This approach was used to explain how accurate cost information generated by the ABC method supports rational pricing decisions under uncertainty. The comparison between existing room rates and ABC-based room rates was evaluated to assess their implications for profitability, operational efficiency, and business sustainability.

The analytical framework employed in this study is presented in Figure 1.

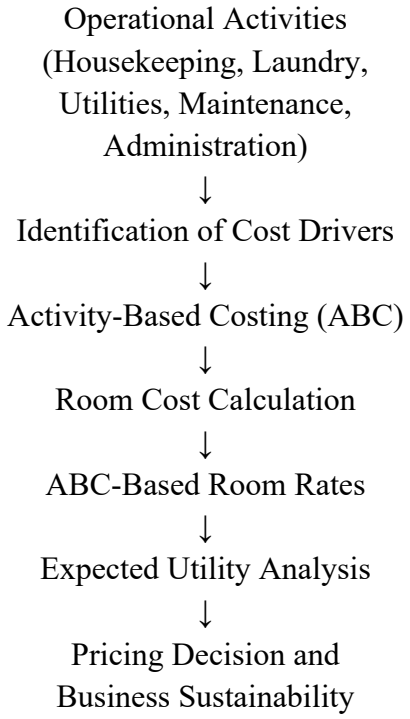


Figure 1. Research Model

4. Result

4.1 Identification of Operational Activities

The first stage of the Activity-Based Costing analysis involved identifying operational activities associated with room services at Homestay X. Based on observations and interviews, six major activities were identified: housekeeping, laundry services, electricity and water consumption, facility maintenance, reservation administration, and guest services. These activities represent the primary sources of overhead costs incurred by the homestay.

Table 1. Operational Activities and Cost Drivers

Activity	Cost Driver
Housekeeping	Number of rooms cleaned
Laundry	Number of occupied rooms
Utilities	Room occupancy days
Maintenance	Number of room units
Reservation Administration	Number of reservations
Guest Services	Number of guests

4.2 Activity Cost Allocation

After identifying the activities, operational costs were grouped into activity cost pools and allocated according to their respective cost drivers.

Table 2. Activity Cost Pools

Activity	Total Cost (IDR)
Housekeeping	4,500,000
Laundry	3,200,000
Utilities	5,100,000
Maintenance	2,700,000
Reservation Administration	1,500,000
Guest Services	1,200,000
Total	**18,200,000**

The results indicate that utility costs represented the largest proportion of operational expenses, followed by housekeeping and laundry activities. This finding suggests that room occupancy significantly influences overall operational costs.

4.3 Room Rate Calculation Using Activity-Based Costing

Based on the allocation of activity costs, room costs were calculated for each room category. The ABC method revealed that the actual operational costs per room were higher than those reflected in the existing pricing structure.

Table 3. Comparison of Existing and ABC-Based Room Rates

Room Type	Existing Rate (IDR)	ABC-Based Rate (IDR)
Standard	200,000	235,000
Deluxe	250,000	290,000
Family Room	350,000	395,000

The findings show that all room categories experienced an increase in recommended room rates after applying the ABC method. The largest difference was observed in the deluxe room category, indicating that several operational activities had previously not been fully considered in pricing decisions.

4.4 Expected Utility Analysis

The ABC-based room rates were further evaluated using Expected Utility Theory. The results suggest that room rates derived from ABC provide greater expected benefits because they fully cover operational costs while maintaining reasonable profit margins. By reducing undercosting conditions, the homestay owner can minimize financial risk and improve long-term business sustainability.These findings indicate that accurate cost information generated through Activity-Based Costing supports rational pricing decisions consistent with Expected Utility Theory. Therefore, the adoption of ABC can enhance both profitability and managerial decision-making under uncertain business conditions

5. Discussion

The findings of this study indicate that the implementation of Activity-Based Costing (ABC) provides more accurate room cost information by allocating overhead costs according to actual activity consumption. The results revealed that the room rates previously applied by Homestay X were lower than the actual operational costs, indicating an undercosting condition. Similar findings have been reported by Cooper and Kaplan (1991), who argued that traditional pricing approaches often fail to capture the true consumption of organizational resources, leading to inaccurate pricing decisions.The application of ABC enables managers to identify cost-intensive activities such as housekeeping, laundry services, utilities, and facility maintenance. Consequently, room rates can be adjusted to better reflect actual operational expenses while maintaining profitability. This finding supports the argument of Kaplan and Cooper (1998), who emphasized that accurate cost information is essential for strategic pricing and long-term business sustainability.

Furthermore, the results can be explained through Expected Utility Theory proposed by Eugene F. Fama. According to the theory, decision-makers tend to choose alternatives that maximize expected benefits while considering uncertainty and risk (Fama, 1972). In this study, the ABC-based room rates provide more reliable cost information, enabling homestay owners to make rational pricing decisions that reduce the risk of financial losses and improve expected profitability. Therefore, the implementation of ABC not only improves cost accuracy but also supports utility-maximizing decisions under uncertain market conditions.

The findings also suggest that accurate cost allocation contributes to business sustainability by ensuring that room rates cover operational costs and generate reasonable profit margins. This result is consistent with previous studies highlighting the role of management accounting systems in improving organizational performance and decision quality (Horngren et al., 2018; Garrison et al., 2018).

6. Conclusion, Implication, and Recommendation

This study demonstrates that Activity-Based Costing (ABC) is an effective method for determining room rates in homestay businesses. By allocating costs based on actual operational activities, ABC provides more accurate cost information than estimation-based pricing practices. The findings reveal that the existing room rates at Homestay X were below actual operational costs, creating undercosting conditions that could reduce long-term

profitability.From a theoretical perspective, this study contributes to the literature by integrating Activity-Based Costing with Expected Utility Theory. The findings support Fama's argument that economic decision-makers tend to select alternatives that maximize expected utility while minimizing uncertainty and risk (Fama, 1972). Accurate cost information generated through ABC serves as an important foundation for rational pricing decisions in the hospitality industry.

From a practical perspective, the study provides valuable insights for homestay owners and small accommodation businesses regarding the importance of implementing activity-based cost allocation to establish sustainable room pricing strategies. Managers are encouraged to periodically evaluate operational activities and cost drivers to ensure pricing decisions remain aligned with changing business conditions.Future research may expand the analysis by involving multiple homestays or hotels and incorporating occupancy forecasting models to further examine the relationship between activity-based costing, pricing decisions, and business performance.

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Conservation of Resources Theory in Contemporary Service Industry Dynamics: A Bibliometric Study

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Abstract

The contemporary service industry has undergone substantial transformation marked by increasing service expectations, emotional demands, and changing work arrangements. These conditions have led to the wider adoption of *Conservation of Resources (COR) Theory* to understand how employees preserve and utilize psychological resources within challenging work settings. This study aims to examine the structure, growth, and thematic evolution of COR research in the contemporary service industry while also identifying potential directions for future studies through a bibliometric approach. The study analyzed publications indexed in the Scopus database between 2000 and 2025. Data analysis was conducted using VOSviewer through *network visualization*, *overlay visualization*, and *density visualization* techniques.

The results indicate that COR-related studies in the service sector have expanded considerably and are largely connected to themes such as *emotional labor*, *job insecurity*, *work engagement*, *job satisfaction*, and *psychological resources*. The *network visualization* revealed several interconnected thematic clusters associated with emotional demands, workplace adaptation, psychological capacity, and organizational work behavior. In addition, the *overlay visualization* illustrates a gradual shift in research attention from organizational behavior toward issues related to emotional strain, employment insecurity, service quality, and employee psychological adaptation. The *density visualization* further shows that *emotional labor*, *job satisfaction*, and *work engagement* remain highly discussed themes, while resilience and psychological adaptation have recently emerged as growing areas of interest. Overall, the findings demonstrate the expanding role of COR Theory in explaining employees' psychological experiences within contemporary service industries and offer future research opportunities regarding employee vulnerability and the sustainability of psychological resources.

Keyword: *conservation of resources theory; contemporary service industry; emotional labor; job insecurity; psychological resources; bibliometric analysis*

1. Introduction

The service industry has become one of the most dominant sectors in the global economy, contributing more than 60% of the world's Gross Domestic Product (GDP) and continuing to expand alongside digital transformation, service-oriented business models, and evolving work arrangements (World Bank, 2023). These developments have increased organizational dependence on employee interactions and emotional involvement in shaping customer experiences (Korczynski, 2009). At the same time, rising service expectations, flexible work systems, and employment uncertainty have intensified the emotional and psychological demands placed on service employees (Bakker & Demerouti, 2017). Previous studies indicate that service occupations involve high levels of *emotional labor*, which may increase the risk of work stress, burnout, and job insecurity among employees (Grandey & Melloy, 2017).

Against this background, *Conservation of Resources (COR) Theory*, introduced by Hobfoll (1989), has become one of the most widely used theoretical perspectives for understanding how individuals acquire, preserve, and protect psychological resources when dealing with workplace pressures. COR Theory has been extensively applied in organizational research to explain phenomena such as burnout, emotional exhaustion, work engagement, emotional labor, and psychological wellbeing (Halbesleben et al., 2014). Within the service industry, the relevance of COR has increased considerably because employees are expected to maintain emotional stability and service performance in highly dynamic work environments.

The evolution of COR research reflects a gradual shift from discussions centered on stress and *resource depletion* toward broader concerns related to psychological resources, resilience, adaptation, and the sustainability of psychological resources in modern workplaces (Hobfoll et al., 2018). Furthermore, COR studies within the service sector have expanded across themes such as emotional labor, job insecurity, work engagement, service quality, and workplace dynamics. Nevertheless, existing studies remain fragmented across different themes and research contexts, and limited research has systematically mapped the intellectual structure, thematic evolution, and future direction of COR research within the contemporary service industry.

Given these circumstances, a bibliometric approach is considered relevant for systematically mapping the development and evolution of COR research. Donthu et al., (2021) explain that bibliometric analysis can be used to identify intellectual structures, thematic developments, and research evolution within a specific field of study. Similarly, Zupic & Čater, (2015) argue that bibliometric methods enable researchers to comprehensively examine relationships among concepts and research themes. In addition, this study employs VOSviewer software developed by van Eck & Waltman, (2010) to visualize keyword networks, thematic evolution, and dominant research themes within COR studies. Therefore, this study aims to analyze the structure, development, and evolution of *Conservation of Resources Theory* research within the contemporary service industry and to identify potential future research directions through a bibliometric approach

2. Literature Review

2.1 Conservation of Resources Theory

Conservation of Resources (COR) Theory, proposed by Hobfoll, (1989), explains that individuals strive to acquire, maintain, and protect valuable resources. Stress occurs when resources are lost, threatened, or fail to generate expected returns after investment. These resources include psychological capacities, social support, energy, and work related conditions that support employee wellbeing.

COR Theory has been widely applied in organizational research to explain burnout, work stress, emotional exhaustion, and work engagement. Previous studies suggest that employees with sufficient psychological resources are better able to cope with workplace demands and maintain positive work outcomes (Bakker & Demerouti, 2007; Halbesleben & Buckley, 2004; Lee & Ashforth, 1996). Consequently, COR has become one of the most influential frameworks for understanding employee psychological experiences in demanding work environments.

2.2 COR Research in the Contemporary Service Industry

The application of COR Theory has expanded significantly within service-sector research due to the increasing psychological and emotional demands experienced by service employees. Drawing on the concept of emotional labor (Hochschild, 1983), service employees are often required to regulate emotions and maintain positive interactions with customers, making them particularly vulnerable to resource depletion.

Previous studies have applied COR Theory to examine burnout, work engagement, turnover intention, emotional exhaustion, and service quality within hospitality, tourism, healthcare, and other service industries (Grandey & Melloy, 2017; Karatepe & Olugbade, 2009; Kim et al., 2017). More recent research has extended COR applications to psychological wellbeing, resilience, job insecurity, and employee adaptability in dynamic work environments (Hobfoll et al., 2018). These developments indicate that COR research has evolved from a primary focus on stress and burnout toward broader issues related to employee wellbeing and psychological sustainability.

2.3 Research Gap and Bibliometric Approach

Although COR research in the service industry has grown substantially, existing studies remain fragmented across various themes and contexts, including hospitality, tourism, healthcare, and customer service (Halbesleben et al., 2014; Hobfoll et al., 2018). As a result, the intellectual structure, thematic evolution, and future directions of COR research within the service sector remain insufficiently understood.

To address this gap, this study employs a bibliometric approach to systematically map the development of COR research in the contemporary service industry. Bibliometric analysis is widely recognized as an effective method for identifying intellectual structures, thematic developments, and research trends within a particular field (Donthu et al., 2021; Zupic & Čater, 2015). Using VOSviewer van Eck & Waltman, (2010), this study analyzes network, overlay, and density visualizations to provide a comprehensive overview of the evolution and future directions of COR research in service sector contexts.

3. Material and Method

3.1 Design Study

This study adopted a bibliometric approach to examine the development and evolution of *Conservation of Resources (COR) Theory* research within the contemporary service industry. Bibliometric analysis was employed to systematically map the intellectual structure, thematic development, and research trends associated with COR studies in service-related contexts. According to Donthu et al., (2021), bibliometric methods are useful for identifying scientific development patterns, thematic relationships, and research evolution within a particular field of study.

The dataset analyzed in this study was retrieved from the Scopus database, which is widely recognized as one of the most comprehensive international scientific indexing platforms. The dataset consisted of journal articles related to COR Theory in service-sector contexts published between 2000 and 2025. The search process was conducted by combining the keyword "conservation of resources theory", "hospitality", "tourism", "healthcare", "retail", "service employee", "service industry".

To ensure data quality and consistency, only English-language journal articles indexed in Scopus were included in the analysis. Meanwhile, conference papers, book chapters, notes, and publications unrelated to the research topic were excluded. The data collection procedure consisted of several stages, including keyword identification, database searching, document screening, metadata extraction, and data cleaning. The initial search yielded 596 documents from the Scopus database. Subsequently, the records were filtered based on subject area, document type, and language criteria. After removing irrelevant and duplicate documents, a total of 528 journal articles met the inclusion criteria and were retained for the final analysis. The screening process is presented in Figure 1. The final dataset was subsequently exported in CSV format for further bibliometric analysis using VOSviewer.

3.2 Data Analysis

The bibliometric analysis was conducted using VOSviewer software developed by (van Eck & Waltman, 2010). VOSviewer was utilized to visualize relationships among keywords, research themes, and thematic developments within COR studies in the contemporary service industry. The software enables researchers to construct and visualize bibliometric networks through multiple visualization techniques.

This study employed three visualization approaches, namely *network visualization*, *overlay visualization*, and *density visualization*. *Network visualization* was used to identify relationships and thematic clusters among keywords within COR research. *Overlay visualization* was applied to examine the temporal evolution of research themes over time. Meanwhile, *density visualization* was utilized to identify dominant and emerging themes within the research field.

In addition, publication trend analysis was conducted to examine the growth of COR-related studies in the service industry between 2000 and 2025. The findings from these analyses were interpreted to understand the intellectual structure, thematic evolution, and potential future research directions related to *Conservation of Resources Theory* within the contemporary service industry.

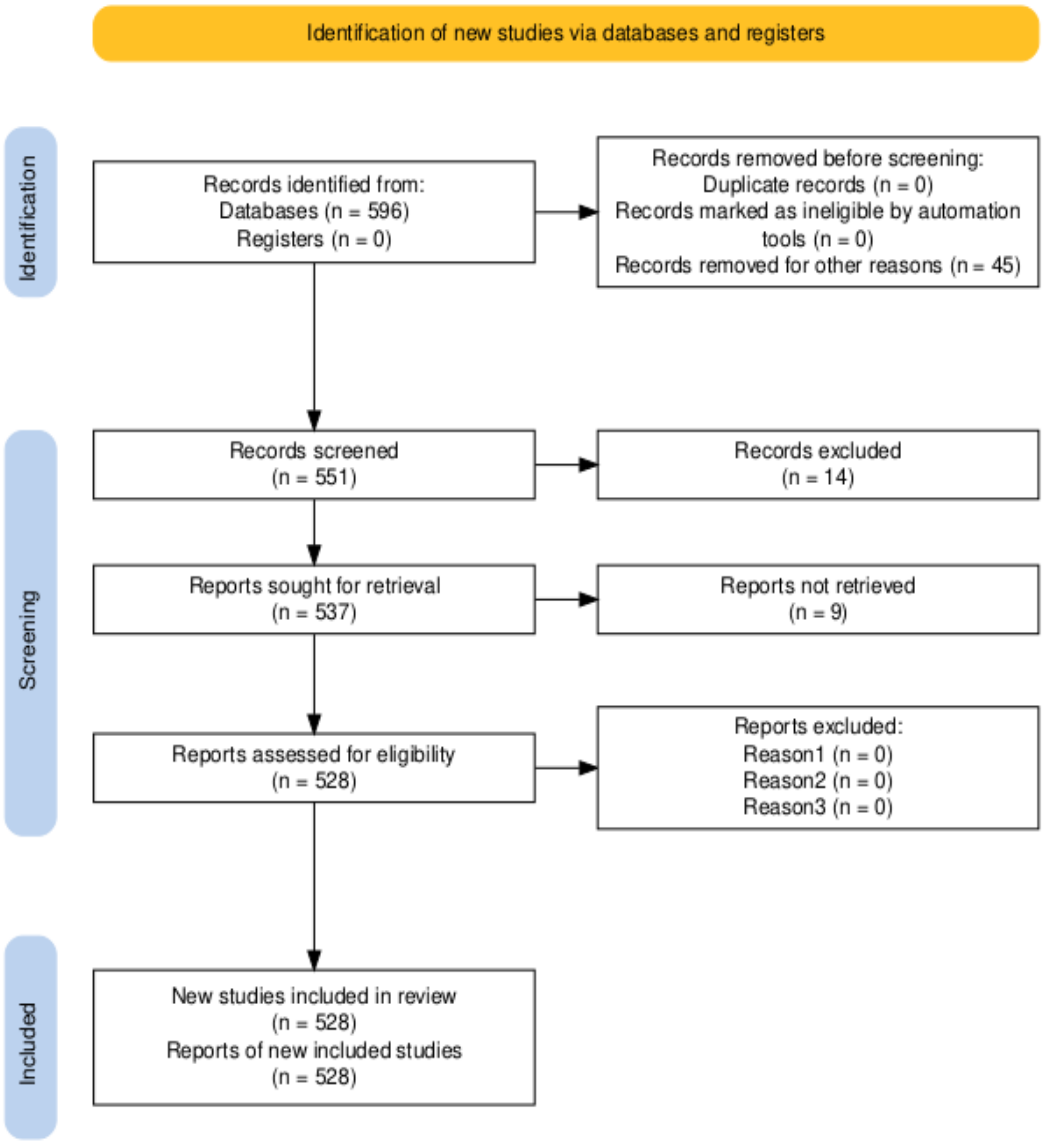


Figure 1. PRISMA Flow Diagram

4. Result

4.1 Publication Trend of COR Research in The Service Industry

The publication trend indicates a steady increase in Conservation of Resources (COR) Theory research within the contemporary service industry from 2000 to 2025. This growth reflects the increasing relevance of COR Theory in explaining employee psychological experiences and workplace dynamics in service-oriented environments.

During the period from 2000 to 2014, the number of publications remained relatively limited, representing the early stage of COR research in service contexts. Studies during this period primarily focused on burnout, occupational stress, and emotional exhaustion, and were largely influenced by Emotional Labor Theory Hochschild, (1983) and the Job Demands Resources (JD-R) Model (Bakker & Demerouti, 2007). Consequently, the application of COR Theory in hospitality, tourism, and other service industries was still emerging.

Publication growth accelerated between 2015 and 2019, indicating broader acceptance of COR Theory within service-sector research. During this period, researchers increasingly applied

COR Theory to explain emotional labor, work engagement, job insecurity, resilience, and psychological capital. Empirical evidence demonstrated that psychological resources play a critical role in enhancing employee wellbeing, service quality, and organizational outcomes(Grandey & Melloy, 2017; Karatepe & Karadas, 2015).

The most substantial growth occurred between 2020 and 2025. This increase may be associated with the growing complexity of service work, digital transformation, flexible work arrangements, and the impact of the COVID-19 pandemic. These conditions intensified concerns regarding employee wellbeing, workplace uncertainty, and resource management, further increasing the relevance of COR Theory in contemporary organizational research.

The findings also reveal an important thematic shift. Earlier studies mainly emphasized resource loss, burnout, and workplace stress, whereas more recent studies focus on psychological capital, resilience, wellbeing, sustainability, leadership, and adaptive workplace behavior (Hobfoll et al., 2018). This evolution suggests that COR research has expanded from explaining negative psychological outcomes toward understanding how employees develop and utilize resources to sustain wellbeing and performance. Overall, the publication trend demonstrates that COR Theory has evolved into an influential framework for understanding employee resource management and adaptation in increasingly dynamic service environments.

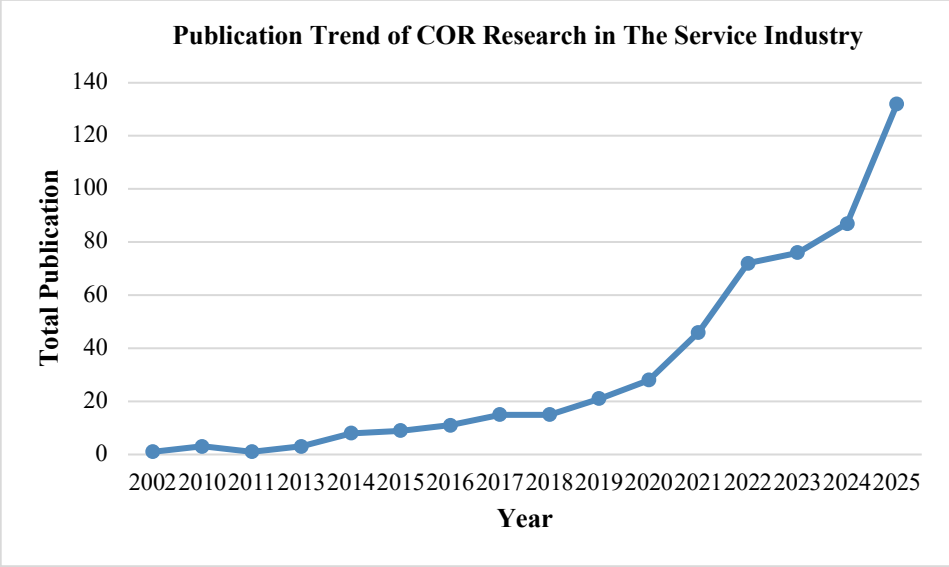


Figure 2. Publication Trend of COR Research in The Service Industry

4.2 Citation Trend of Research in The Service Industry

The citation trend indicates a substantial increase in the academic influence of Conservation of Resources (COR) Theory research within the contemporary service industry between 2000 and 2025. According to Donthu et al., (2021), citation analysis is useful for assessing the intellectual influence and scholarly recognition of a particular research field. Therefore, the increasing citation counts observed in this study suggest that COR Theory has gained growing academic attention and has become increasingly relevant for understanding employee psychological experiences within service sector contexts.

During the period between 2000 and 2013, citation levels remained relatively low. This finding reflects the early stage of COR Theory application within service industry research. At that time, studies examining employee wellbeing and workplace stress were more commonly grounded in emotional labor theory (Hochschild, 1983) and the job demands resources (JD-R) model (Bakker & Demerouti, 2007). Consequently, COR based studies had not yet accumulated substantial scholarly attention within the broader organizational and service management literature.

A noticeable increase in citations emerged after 2014, coinciding with the growing adoption of COR Theory in service sector research. This period was characterized by increasing academic interest in issues such as emotional labor, burnout, job insecurity, employee engagement, resilience, and psychological capital. Previous studies have shown that these factors play important roles in influencing employee wellbeing, service quality, and organizational performance within hospitality, tourism, healthcare, and other service related industries (Grandey & Melloy, 2017; Karatepe & Karadas, 2015). As a result, COR Theory became more widely applied as a framework for explaining how employees manage and preserve psychological resources under demanding work conditions.

The highest citation levels were observed between 2020 and 2022, indicating a period of strong academic recognition of COR based research. This trend appears to coincide with increasing scholarly concern regarding employee wellbeing, workplace uncertainty, and psychological adaptation in contemporary service environments. During this period, service organizations faced significant challenges associated with digital transformation, changing work arrangements, and the COVID-19 pandemic. Consequently, studies grounded in COR Theory received greater attention because they provided valuable insights into how employees respond to resource loss, resource threats, and resource recovery processes under conditions of uncertainty (Hobfoll et al., 2018).

The decline in citation counts observed after 2022 should be interpreted cautiously. Rather than indicating a decline in the relevance of COR Theory, this pattern is likely associated with the citation time-lag effect commonly observed in bibliometric studies (Zupic & Čater, 2015). Newly published articles generally require time to accumulate citations, resulting in lower citation counts for more recent publications. Therefore, the relatively lower citation levels in 2024 and 2025 are more likely attributable to publication recency than to a reduction in scholarly interest.

Overall, the citation trend demonstrates that COR Theory has gained substantial intellectual influence within contemporary service industry research. The continuous growth in citation counts suggests increasing academic recognition of the theory's ability to explain employee wellbeing, psychological resource management, and workplace adaptation in increasingly dynamic and uncertain service environments.

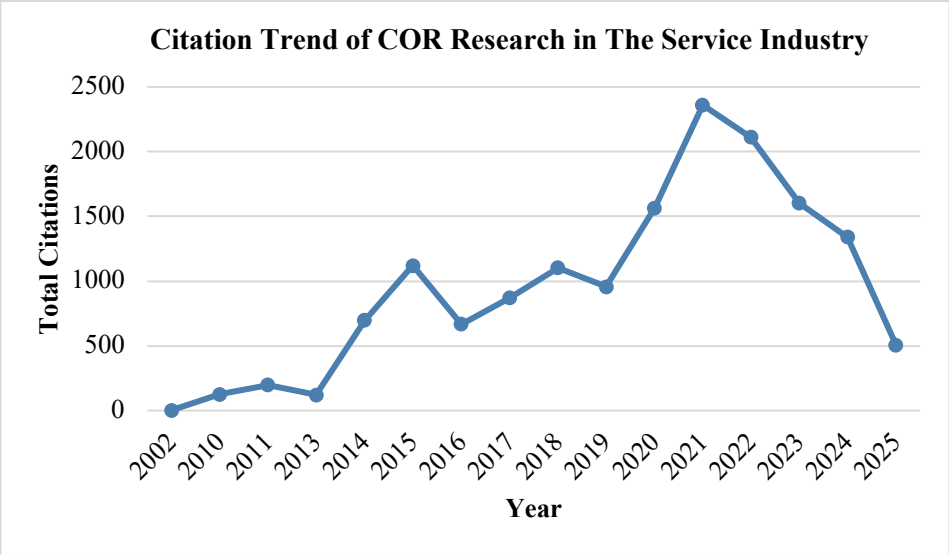


Figure 3. Citation Trend of COR Research in The Service Industry

4.3 Network Visualization

The network visualization illustrates the intellectual structure of Conservation of Resources (COR) Theory research within the contemporary service industry. According to van Eck & Waltman, (2010), network analysis helps identify the relationships among keywords and reveals the major research themes within a particular field. The results show that "Conservation of Resources Theory" occupies a central position and is strongly connected to key topics such as emotional labor, psychological capital, employee engagement, resilience, job satisfaction, and wellbeing. This finding highlights the role of COR Theory as an integrative framework for explaining employee experiences and workplace outcomes in service environments.

Four major thematic clusters were identified. The first cluster focuses on emotional labor, hospitality industry, job insecurity, leadership, and service performance, reflecting the traditional application of COR Theory in explaining the effects of resource depletion on employee attitudes and behaviors. The second cluster emphasizes psychological capital, resilience, employee engagement, emotional intelligence, and wellbeing, indicating increasing scholarly interest in positive psychological resources and employee adaptation. The third cluster is associated with burnout, job stress, and job satisfaction, representing the continuing importance of employee wellbeing within COR research. Meanwhile, the fourth cluster contains demographic and psychological terms, such as employee, human, adult, and workplace, reflecting the psychological foundations of the field.

The strong interconnections among these clusters suggest that COR research has become increasingly multidisciplinary and conceptually integrated. Rather than examining workplace issues separately, contemporary studies tend to investigate the relationships among resource loss, resource gain, employee wellbeing, and performance outcomes. This pattern is consistent with recent research highlighting the growing importance of psychological capital, resilience, and employee engagement in supporting adaptation and sustainable performance within service organizations (Hobfoll et al., 2018; Newman et al., 2014).

Overall, the network visualization indicates that COR research has evolved from a primary focus on burnout and workplace stress toward a broader perspective that incorporates positive

psychological resources, employee wellbeing, and adaptive workplace behavior. These findings demonstrate the growing role of COR Theory as a comprehensive framework for understanding resource management and employee functioning in contemporary service environments.

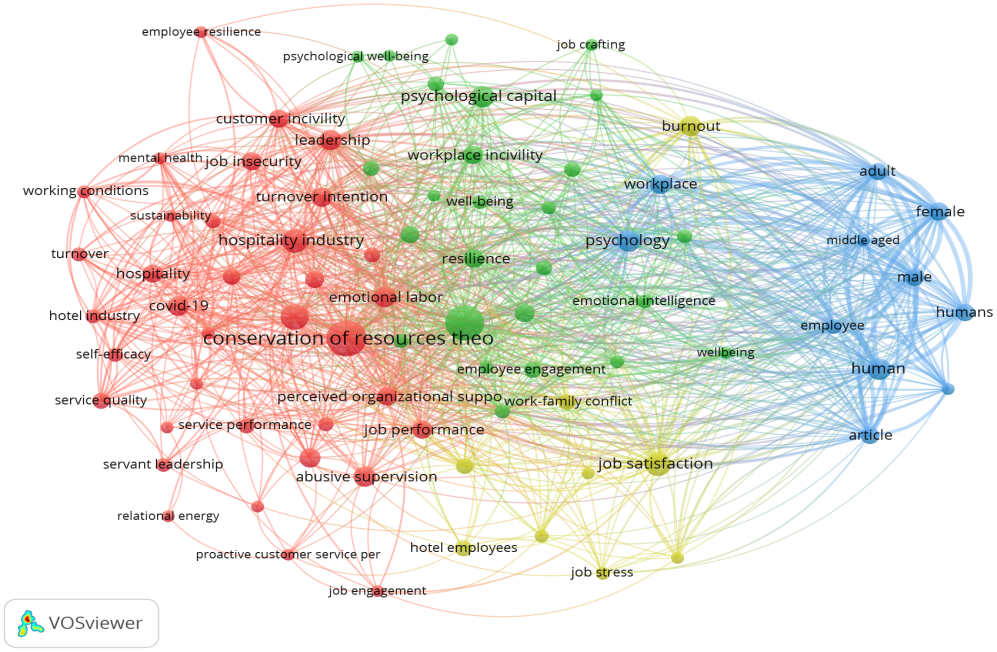


Figure 4. Network Visualization of COR Research Theory in Service Industry

4.4 Overlay Visualization

The overlay visualization illustrates the temporal evolution of Conservation of Resources (COR) Theory research within the contemporary service industry. Unlike network visualization, which focuses on relationships among themes, overlay visualization highlights how research topics have developed over time. Earlier themes are represented by darker colors, whereas more recent themes appear in lighter colors (van Eck & Waltman, 2010).

The results indicate that early COR studies primarily focused on burnout, job stress, job satisfaction, resilience, and turnover intention. These topics reflect the traditional emphasis of COR Theory on resource loss and its consequences for employee wellbeing (Hobfoll, 1989). As the field developed, research attention expanded to include emotional labor, employee engagement, emotional intelligence, workplace wellbeing, and hospitality-related issues. This transition suggests increasing recognition of the role of psychological resources in helping employees manage workplace demands and maintain performance.

More recent studies focus on psychological capital, leadership, sustainability, job crafting, mental health, customer incivility, and psychological wellbeing. The emergence of these themes indicates a shift from understanding resource depletion toward exploring resource development and enhancement. Contemporary research increasingly emphasizes how employees and organizations build psychological resources to support resilience, adaptability, and sustainable performance (Hobfoll et al., 2018; Newman et al., 2014).

Overall, the overlay visualization reveals a clear evolution of COR research within the service industry. While earlier studies concentrated on burnout and workplace stress, recent research increasingly focuses on psychological capital, wellbeing, leadership, and adaptive workplace

behavior. This development suggests that COR Theory has evolved from a stress-oriented framework into a broader perspective for understanding employee development, psychological sustainability, and long-term organizational effectiveness.

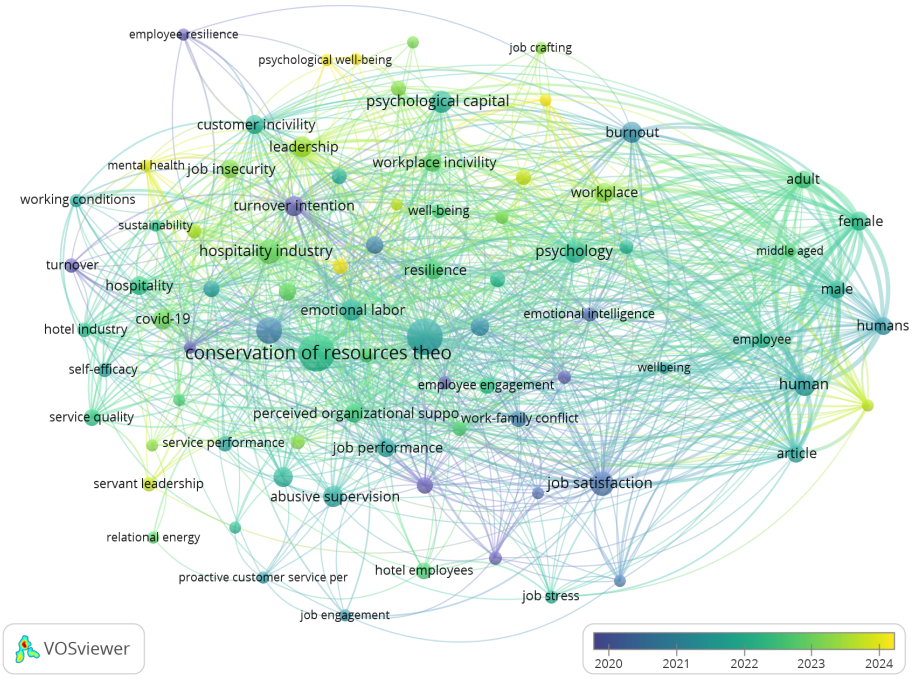


Figure 5. Overlay Visualization of COR Theory in The Service Industry

4.5 Density Visualization

The density visualization highlights the concentration and prominence of research themes within Conservation of Resources (COR) Theory studies in the contemporary service industry. Brighter areas indicate themes with higher research intensity, while darker areas represent topics that have received comparatively less scholarly attention (Donthu et al., 2021; van Eck & Waltman, 2010). This analysis helps identify the dominant research domains that have shaped the development of COR-related studies.

The results show that "Conservation of Resources Theory" occupies the most prominent position within the research landscape, confirming its role as the primary theoretical foundation for understanding employee resource management in service organizations (Hobfoll et al., 2018). Several highly concentrated themes are closely associated with COR Theory, including emotional labor, psychological capital, employee engagement, resilience, job satisfaction, wellbeing, job performance, and hospitality industry. The prominence of these themes indicates that psychological resources remain central to explaining employee attitudes, wellbeing, and performance in service-sector contexts.

The density map also reveals a growing emphasis on positive psychological resources such as psychological capital, resilience, and employee engagement. Previous studies suggest that these resources enhance employee adaptability, wellbeing, and performance in demanding service environments (Newman et al., 2014). At the same time, emotional labor continues to be a dominant topic due to its significant influence on employee wellbeing and service outcomes (Grandey & Melloy, 2017). The strong presence of hospitality-related themes further highlights the importance of service industries as key contexts for COR-based research.

In contrast, themes such as job crafting, mental health, customer incivility, servant leadership, and relational energy appear in lower-density areas. Although these topics remain less explored, they represent emerging directions for future research. Overall, the density visualization suggests that COR research has evolved from a primary focus on resource depletion toward a broader emphasis on resource development, psychological sustainability, and employee wellbeing within contemporary service environments.

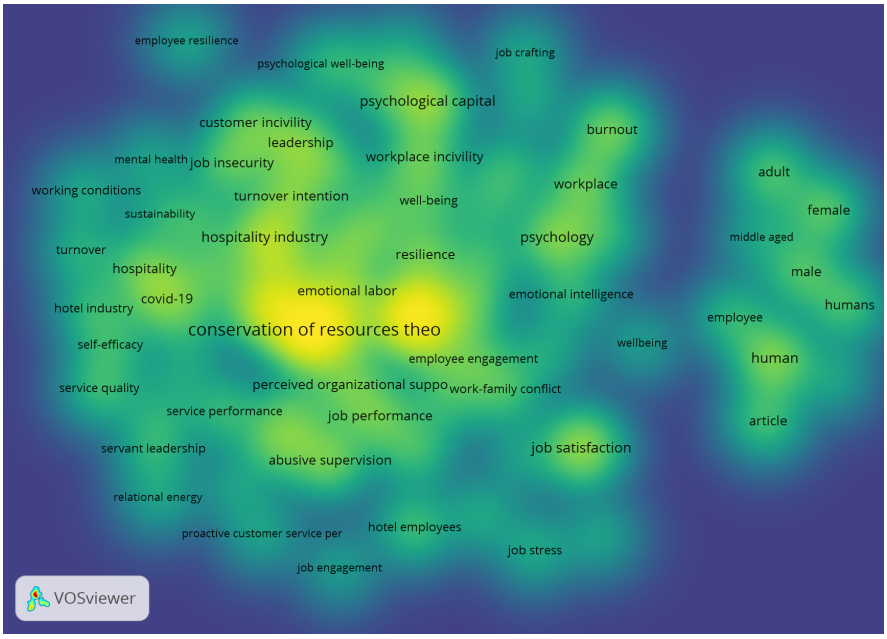


Figure 6. Density Visualization of COR Theory in Service Industry

5. Discussion

The findings demonstrate that Conservation of Resources (COR) Theory has become an increasingly influential framework within contemporary service-industry research. The growth in publication and citation trends indicates expanding academic interest in understanding how employees manage psychological resources in response to workplace demands, uncertainty, and organizational change. These developments suggest that COR Theory has become highly relevant for explaining employee wellbeing and adaptation in service environments (Hobfoll et al., 2018; Jiang & Wen, 2020).

The network, overlay, and density visualizations collectively reveal the evolution of COR research. Earlier studies mainly focused on burnout, job stress, emotional exhaustion, and resource depletion. However, more recent research increasingly emphasizes psychological capital, resilience, employee engagement, wellbeing, leadership, and adaptive workplace behavior. This shift reflects a broader transition from a stress oriented perspective toward a resource development perspective, where psychological resources are viewed as important drivers of employee wellbeing and sustainable performance ((Cooper et al., 2014; Newman et al., 2014).

The findings also highlight the central role of emotional labor, psychological capital, resilience, and employee engagement within the COR literature. These themes indicate that employee outcomes are shaped not only by resource loss but also by employees' ability to acquire, develop, and utilize resources effectively. This interpretation supports the core assumption of

COR Theory that both resource loss and resource gain processes influence employee attitudes, wellbeing, and performance (Halbesleben et al., 2014; Hobfoll et al., 2018).

Another important finding is the emergence of newer themes such as mental health, job crafting, customer incivility, servant leadership, and relational energy. Although these topics remain less dominant, they represent promising directions for future research and reflect the changing nature of contemporary service work. In addition, the strong presence of hospitality and tourism-related themes confirms that service industries continue to provide important contexts for examining resource management and employee adaptation.

Overall, the findings suggest that COR research has evolved from explaining resource depletion and workplace stress toward understanding resource development, psychological sustainability, and employee flourishing. This evolution highlights the growing importance of psychological resources as strategic assets for both employees and organizations operating in increasingly dynamic service environments.

6. Conclusion, Implication, and Recommendation

This bibliometric study demonstrates that Conservation of Resources (COR) Theory has evolved into a mature and influential theoretical framework within contemporary service-industry research. The findings reveal a clear shift from traditional themes emphasizing burnout, job stress, and resource depletion toward broader perspectives focusing on psychological capital, resilience, employee wellbeing, sustainability, and adaptive workplace behavior. Furthermore, the increasing publication and citation trends indicate growing academic recognition of COR Theory as a valuable framework for understanding employee psychological resources in dynamic and uncertain service environments.

The findings imply that psychological resources have become strategic assets for both employees and organizations. Consequently, service organizations should prioritize the development of positive psychological resources, such as resilience, psychological capital, and employee engagement, to enhance employee wellbeing and sustainable performance. The study also highlights the growing relevance of COR Theory in addressing contemporary workplace challenges, including emotional labor, mental health concerns, and workplace uncertainty.

Future research is encouraged to explore emerging themes that remain relatively underdeveloped, including job crafting, mental health, customer incivility, servant leadership, and relational energy. In addition, future studies may extend COR Theory by examining its application in new service contexts and integrating it with contemporary perspectives related to psychological sustainability and employee flourishing

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Machine Learning-Based Consumer Purchase Prediction and Segmentation for Personalized E-Commerce Marketing

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Abstract

The rapid expansion of e-commerce has created vast amounts of consumer behavioral data, necessitating advanced methods to predict purchase decisions and optimize marketing strategies. This study presents a hybrid machine learning framework that integrates supervised and unsupervised learning techniques to analyze and predict consumer behavior. Logistic regression is employed to estimate the probability of a purchase based on features such as browsing history, past transactions, demographic attributes, and engagement metrics. Concurrently, K-Means clustering is applied to segment customers into homogeneous groups, enabling tailored marketing strategies for each segment. The proposed framework combines predictive probabilities with cluster-based segmentation to enhance both the accuracy of purchase prediction and the effectiveness of targeted promotions. Empirical analysis demonstrates that logistic regression effectively quantifies consumer purchase likelihood, producing interpretable probabilities that inform marketing prioritization. Clustering further reveals patterns among high-value, frequent, and occasional buyers, allowing for strategic allocation of promotional resources. The integration of these methods provides a robust, data-driven approach to personalized digital marketing. The findings highlight the practical utility of combining prediction and segmentation in e-commerce, supporting improved conversion rates, customer engagement, and resource efficiency. This study contributes to both theoretical understanding and practical implementation of machine learning in digital marketing.

Keyword: consumer behavior, logistic regression, K-Means clustering, purchase prediction, personalized marketing

1. Introduction

The rapid advancement of digital technologies has transformed the landscape of e-commerce, creating new opportunities and challenges for businesses in predicting consumer behavior. Online platforms generate massive amounts of data from browsing histories, transaction records, and user engagement metrics, which, if analyzed effectively, can provide actionable insights for personalized marketing (Dritsas & Trigka, 2025). Traditional statistical approaches often fail to capture complex, non-linear relationships between customer attributes and purchase behavior, motivating the application of machine learning techniques to better understand and anticipate consumer actions. This technological shift emphasizes the need for predictive frameworks that integrate both supervised and unsupervised learning methods to enhance customer targeting strategies (Balasundaram et al., 2024).

Despite the availability of data and machine learning tools, businesses face challenges in accurately predicting purchase probabilities and segmenting customers into meaningful groups. Many models either focus solely on prediction accuracy without interpretability or neglect the segmentation needed for targeted marketing campaigns (Zhou & Hudin, 2024). In addition, current frameworks often lack integration of behavioral, demographic, and engagement features into a cohesive model. These gaps hinder the ability of e-commerce platforms to optimize marketing resources and achieve higher conversion rates, highlighting a clear research problem that this study aims to address (A. Al-Ebrahim et al., 2023).

This article contributes to the literature by presenting a hybrid framework that combines logistic regression for consumer purchase probability prediction with K-Means clustering for customer segmentation. The novelty of this approach lies in integrating predictive probabilities with cluster-based segmentation, allowing businesses to not only rank potential buyers but also target them according to behavioral similarities. This dual approach enhances both the precision and practical applicability of digital marketing strategies. Furthermore, the study provides visualizations such as probability curves and cluster plots to facilitate interpretability and actionable insights for marketers.

The main objective of this research is to develop and evaluate a machine learning-based framework that predicts consumer purchase likelihood and segments customers for personalized digital marketing. Specifically, the study aims to: (1) implement supervised learning models to estimate purchase probabilities, (2) apply unsupervised clustering techniques to segment customers, and (3) integrate prediction and segmentation results to optimize marketing strategies. By achieving these objectives, the research seeks to provide a robust, data-driven methodology that enhances marketing effectiveness and supports decision-making in e-commerce platforms.

2. Literature Review

2.1 Supervised Learning Models

Supervised learning models have been widely applied in e-commerce to predict consumer behavior by learning patterns from labeled historical data. Logistic regression, one of the most common supervised models, is used to estimate the probability of a binary outcome, such as whether a consumer will make a purchase (Aylin Tokuç & Dag, 2025). By transforming a linear combination of input features into a bounded probability using the logistic function, these models allow marketers to rank consumers according to their likelihood to convert. Other

models such as decision trees, Random Forest, and Gradient Boosting provide flexibility to capture non-linear relationships, enhancing predictive performance for complex consumer behavior datasets (Wen et al., 2024).

These models not only predict outcomes but also offer interpretability through feature importance metrics. Logistic regression coefficients indicate the influence of each predictor, while tree-based models highlight key variables driving consumer decisions (Ling & Weiling, 2025). The effectiveness of supervised learning models is supported by their ability to integrate multiple behavioral, demographic, and engagement features into a single predictive framework, enabling personalized marketing strategies, targeted promotions, and optimization of resources in digital platforms (A. Al-Ebrahim et al., 2023).

2.2 Unsupervised Learning Models

Unsupervised learning techniques, particularly clustering methods like K-Means and Hierarchical Clustering, are commonly employed to segment customers based on similarity in features without predefined labels (Kumar et al., 2025). K-Means partitions customers into clusters by minimizing the sum of squared distances between data points and their cluster centroids, allowing businesses to identify groups such as high-value customers, frequent browsers, or seasonal buyers. Hierarchical clustering, by constructing dendrograms, provides a flexible structure for nested groupings when the optimal number of clusters is not known (Mohan et al., 2025).

These segmentation approaches provide actionable insights for e-commerce marketers, enabling the design of customized campaigns that cater to each group's behavior. By combining unsupervised clustering with consumer purchase probability models, businesses can implement highly targeted strategies, such as personalized discounts, tailored product recommendations, and engagement campaigns (Katyayan et al., 2022). This integration enhances marketing effectiveness, improves customer satisfaction, and increases conversion rates by aligning promotional efforts with observed behavioral patterns (Wen et al., 2024).

2.3 Consumer Purchase Probability Models

Consumer purchase probability models quantify the likelihood of an individual making a purchase based on behavioral and demographic indicators. Logistic regression is frequently used to calculate this probability, where features such as browsing duration, past purchases, and engagement levels are input into the model to generate a predictive score (A. Al-Ebrahim et al., 2023). These probabilistic models are particularly valuable for segmenting high-probability buyers and prioritizing marketing efforts efficiently. By providing a numeric measure of purchase intent, these models help businesses allocate resources effectively and focus on customers most likely to convert (Zhou & Hudin, 2024).

Furthermore, integrating purchase probability models with segmentation allows for a multi-dimensional approach to personalized marketing. Customers can be grouped based on similarity while also being ranked by purchase likelihood, ensuring that campaigns target both the right segment and the most promising individuals (Balasundaram et al., 2024). This combination of prediction and segmentation creates a robust framework for data-driven marketing, improving ROI, enhancing personalization, and supporting informed strategic decision-making in e-commerce environments (Dritsas & Trigka, 2025).

3. Material and Method

3.1 Research Design

This study adopts a quantitative research design aimed at predicting consumer behavior in e-commerce using supervised and unsupervised learning models. The focus is on modeling purchase likelihood and segmenting customers based on behavioral and demographic features. The research involves collecting historical transaction and interaction data from online platforms, including browsing behavior, purchase history, and engagement metrics. The study sample is drawn from active online shoppers, ensuring that the data reflects real-world behavior patterns relevant for predictive analytics and targeted marketing.

3.2 Data Collection and Preparation

Data were collected from digital platforms and preprocessed to ensure accuracy, completeness, and consistency. Key steps included handling missing values, normalizing numerical features, encoding categorical variables, and extracting relevant behavioral indicators such as session duration, product views, and past purchases. Feature selection was performed to retain only the most predictive variables for modeling, enhancing model interpretability and computational efficiency. The prepared dataset was then split into training and testing sets to allow proper evaluation of supervised learning models.

3.3 Analytical Methods

The study employs a combination of supervised and unsupervised machine learning techniques. Logistic regression is used as the primary supervised model to predict the probability of purchase, producing probabilities for binary outcomes. Additionally, K-Means clustering is applied as an unsupervised method to segment customers into meaningful groups based on similarity in features, enabling targeted marketing strategies. Model evaluation includes accuracy metrics for logistic regression and cluster validity measures for K-Means, ensuring the robustness of predictions and the effectiveness of customer segmentation. Visualizations, such as probability curves and cluster plots, are generated to illustrate patterns and support the interpretation of results.

4. Result and Discussion

4.1 Supervised Learning Models

Supervised learning models are essential for predicting consumer behavior in e-commerce, as they leverage labeled historical data to forecast outcomes such as whether a consumer will make a purchase (Dahake et al., 2023). Logistic regression is a widely used model for binary predictions, estimating the probability of an event (y = 1) given features given features $X = \{x_1, x_2, \ldots, x_n\}$ using the logistic function as expressed in Eq. (1).

$$P(y = 1 \mid X) = \frac{1}{1 + e^{-(\beta_0 + \sum_{i=1}^{n} \beta_i x_i)}} \quad (1)$$

where β_0 is the intercept and β_1 are the coefficients for each feature x_i. This formulation converts a linear combination of inputs into a probability, allowing marketers to rank consumers for personalized promotions.

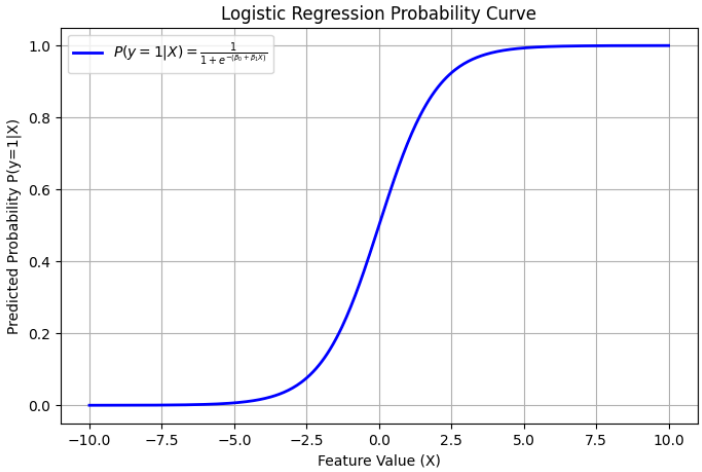


Figure 1. Logistic Regression Probability Curve

The graph as shown in Figure 1 illustrates the S-shaped logistic function, which models the probability of a binary outcome $P(y = 1 \mid X)$ as a function of the feature value X. At low values of X, the predicted probability is close to 0, indicating a low likelihood of the event occurring. As X increases, the probability rises gradually, passing through 0.5 when the linear combination of inputs equals zero, and asymptotically approaches 1 at high X values. This characteristic S-curve highlights the logistic regression model's ability to transform a linear combination of predictors into a bounded probability, making it ideal for predicting binary consumer behaviors, such as purchase decisions, in e-commerce applications. Recent research by Lee et al demonstrates that *logistic regression effectively estimates the likelihood of users performing key actions (e.g., purchase conversion and churn) in online shopping environments*, highlighting its suitability for binary consumer behavior modeling in e-commerce contexts. This underscores how the logistic function's probability output can be used for actionable insights into consumer decision processes such as purchase likelihood (Lee et al., 2025).

4.2 Unsupervised Learning Models

Unsupervised learning models are widely used for customer segmentation in e-commerce, where the goal is to identify groups of consumers with similar behaviors or preferences without predefined labels (Garidzira et al., 2025). Among these models, clustering techniques such as K-Means and Hierarchical Clustering are particularly effective. K-Means partitions customers into $k$clusters by minimizing the sum of squared distances between each data point $x$and its cluster centroid μ_i, expressed mathematically as written in Eq. (2).

$$J = \sum_{i=1}^{k} \sum_{x \in C_i} \| x - \mu_i \|^2 \qquad (2)$$

This objective function ensures that customers within the same cluster are as similar as possible, while customers in different clusters are distinct. Hierarchical clustering, on the other hand, creates a tree-like structure (dendrogram) to represent nested clusters, which is useful when the optimal number of clusters is not known in advance (Lee et al., 2025).

By applying these unsupervised models, e-commerce platforms can segment their user base effectively, revealing patterns such as high-value customers, frequent browsers, or seasonal buyers. These segments enable personalized marketing strategies, like tailored promotions, product recommendations, and targeted email campaigns. The mathematical foundation ensures that clustering is systematic and reproducible, providing a robust framework for data-driven customer insights. Studies applying clustering methods (e.g., k-means, hierarchical clustering, DBSCAN) by Wong et al demonstrate that *grouping customers into segments such as high-value, frequent buyers, and occasional browsers provides concrete insights for creating tailored promotions and personalized engagement strategies* (Wong et al., 2024). Such segmentation enables marketers to interpret behavioral patterns and adapt marketing efforts accordingly.

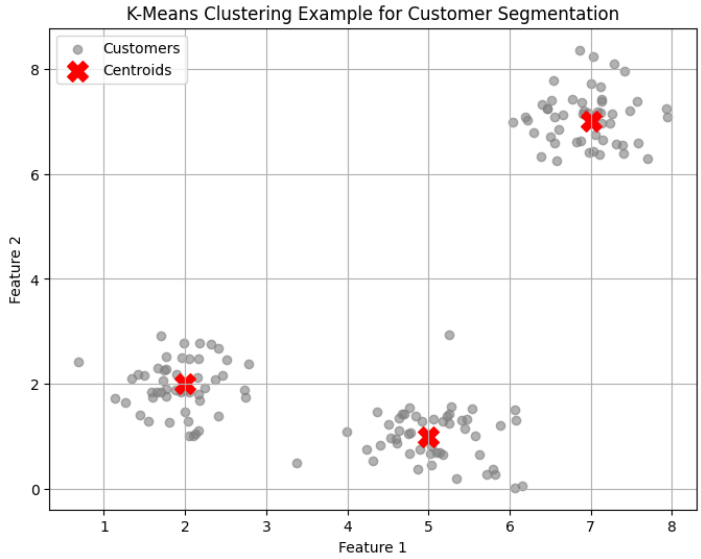


Figure 2. K-Means Clustering Example for Customer Segmentation

The figure as presented in Figure 2 illustrates the process of K-Means clustering applied to customer data for segmentation purposes. Each gray dot represents an individual customer characterized by two features, while the red "X" marks denote the centroids of the three clusters. The algorithm groups customers into clusters by minimizing the distance between each data point and its assigned centroid, as defined by the objective function $J = \sum_{i=1}^{k} \sum_{x \in C_i} \| x - \mu_i \|^2$. This visualization highlights how K-Means effectively identifies clusters of similar consumers, enabling e-commerce platforms to tailor personalized marketing strategies such as targeted promotions, product recommendations, and customer engagement campaigns.

4.3 Consumer Purchase Probability Model

The Consumer Purchase Probability Model is designed to estimate the likelihood that a consumer will make a purchase based on a set of features or behavioral indicators, such as browsing history, past purchases, demographic attributes, and engagement metrics (Poornima N et al., 2025). The predictive function is formulated as $f(X) \rightarrow P(\text{purchase})$, where

Xrepresents the feature vector for a given consumer. By using logistic regression or other probabilistic models, the function transforms the linear combination of input features into a probability value bounded between 0 and 1 (Nygård & Mezei, 2020). This approach allows e-commerce platforms to quantify consumer intent, which is crucial for decision-making in personalized marketing, such as targeting high-probability buyers with relevant promotions or recommendations. Mathematically, the model can be expressed as:

$$P(\text{purchase} \mid X) = f(X) = \frac{1}{1 + e^{-(\beta_0 + \sum_{i=1}^{n} \beta_i x_i)}}$$

where $\beta_0$is the intercept, $\beta_i$are the weights of each feature x_i, and $n$is the total number of features. The coefficients $\beta_i$are learned from historical data using maximum likelihood estimation, capturing the relative influence of each variable on purchase behavior. By integrating this probabilistic model into digital marketing systems, e-commerce businesses can not only predict which customers are likely to convert but also optimize resource allocation, personalize product recommendations, and improve overall marketing ROI. Research using classification and probabilistic models such as logistic regression, decision trees, and random forests has shown that engagement metrics can reliably predict customer conversion behaviour, providing actionable insights for marketing optimization in e-commerce contexts. These models demonstrated substantial predictive accuracy and highlighted key behavioural indicators that influence conversion likelihood, which marketers can use to tailor strategies and resource deployment (Ben Mrad & Hnich, 2024; Prasetio, 2025).

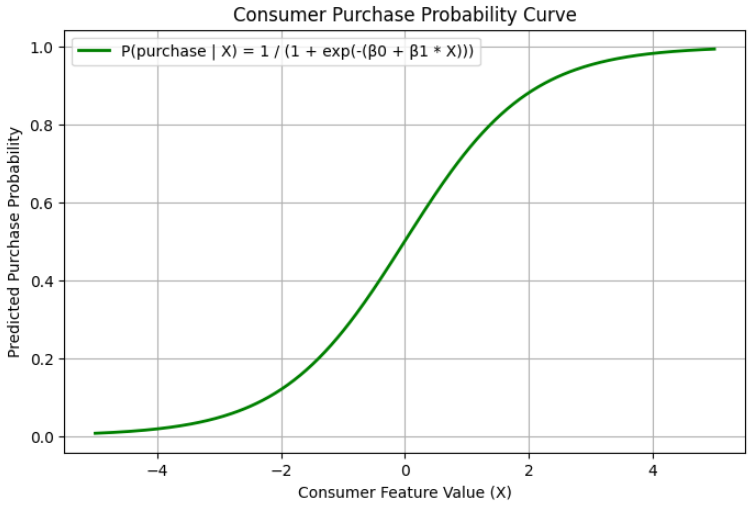


Figure 3. Consumer Purchase Probability Curve

The figure as depicted in Figure 3 visualizes the predicted probability of a consumer making a purchase as a function of a feature value Xusing a logistic regression model. The S-shaped curve indicates that for low feature values, the probability of purchase is near zero, while for high feature values, it approaches one, reflecting increasing likelihood of purchase. The midpoint of the curve, where the probability equals 0.5, corresponds to the point where the linear combination of features $(\beta_0 + \beta_1 X)$equals zero. This curve highlights how the predictive function $f(X) \rightarrow P(\text{purchase})$can quantify consumer intent, providing actionable insights for

personalized digital marketing strategies such as targeting high-probability buyers with recommendations or promotions. Prior work in e-commerce analytics has demonstrated that logistic regression is effective for modeling consumer purchase probability by estimating the likelihood of a purchase event based on observable features such as browsing behaviour and transaction history; models like this have been shown to correctly classify purchase likelihood and can be used to tailor marketing actions accordingly, validating the utility of probabilistic outputs for targeting and personalization (Satu & Islam, 2023).

4.4 Limitation and Challenge

Integrating predictive models and customer segmentation into marketing strategy allows e-commerce platforms to deliver highly targeted promotions. Predicted probabilities from the consumer purchase model provide a quantitative measure of each customer's likelihood to buy a product. By ranking consumers based on these probabilities, marketers can focus promotional efforts on high-potential buyers, optimizing marketing resources and increasing conversion rates. For instance, customers with a probability above a certain threshold may receive personalized discounts, product recommendations, or limited-time offers, while lower-probability segments might be engaged through awareness campaigns or incentives to increase engagement.

Customer segmentation through unsupervised learning further enhances this strategy by grouping consumers with similar behaviors or preferences. Segments such as frequent buyers, occasional shoppers, or window shoppers enable the creation of tailored marketing campaigns that resonate with each group. Combining segmentation with predicted purchase probabilities ensures that promotions are not only targeted to the right individuals but also aligned with their behavioral patterns and interests. This integrated approach leads to more effective personalized marketing, improving customer satisfaction, retention, and overall return on investment for digital campaigns.

5. Conclusion

The logistic regression model effectively predicts the probability of a binary outcome, such as a consumer making a purchase, based on input features. The S-shaped curve illustrates that as the feature value increases, the probability of the event occurring rises gradually, approaching 1 for high feature values and 0 for low feature values. This confirms the model's capability to transform a linear combination of predictors into a bounded probability, allowing businesses to quantify and interpret consumer behavior in a probabilistic manner.

This predictive framework provides actionable insights for decision-making in digital marketing, enabling targeted strategies based on estimated purchase likelihood. Marketers can prioritize high-probability consumers for personalized promotions, discounts, or product recommendations, thereby optimizing marketing resources and improving conversion rates. Overall, the logistic regression model serves as a robust tool for data-driven, probability-based consumer targeting in e-commerce and other domains requiring binary outcome prediction.

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Tourist Experience in Java Community-Based Cultural Tourism Villages: Content Analysis

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Abstract

This article examines tourist experience in three community-based cultural tourism villages in Java: Nglanggeran Tourism Village, Candirejo Tourism Village, and Osing Kemiren Traditional Tourism Village. The study aims to identify how community governance, cultural authenticity, hospitality, participatory activities, local products, facilities, and digital information shape tourist experience and loyalty potential. The research uses qualitative content analysis based on secondary data from JADESTA, official destination websites, local government pages, institutional tourism documents, and publicly available online travel reviews. The analysis applies open coding, thematic grouping, cross-case comparison, and interpretation through community-based tourism, SERVQUAL, tourist experience, local cultural values, and electronic word-of-mouth perspectives. The findings show that Nglanggeran represents an ecological community-based tourism model supported by geological landscape, conservation narratives, homestays, cocoa education, and governance innovation. Candirejo represents a rural Javanese tourism village through live-in programs, homestays, dokar tours, agriculture, crafts, and direct resident interaction. Kemiren represents Osing living culture through traditional houses, performing arts, coffee, batik, culinary heritage, festivals, and community participation. The study concludes that service quality in tourism villages must be read contextually because meaningful experience emerges from the interaction between basic service reliability, local cultural values, and resident-based hospitality. These findings provide a basis for future empirical testing on service quality, tourist experience, satisfaction, loyalty, and positive electronic word-of-mouth in community-based destinations.

Keyword: community-based tourism; cultural tourism village; tourist experience; online reviews; service quality; tourist loyalty

1. Introduction

Community-based tourism villages have become important sites for cultural tourism development because they connect local communities, rural landscapes, cultural heritage, creative economy, and visitor experience. In community-based tourism, residents do not only support tourism operations. They also act as owners, managers, guides, hosts, cultural

interpreters, and direct beneficiaries of tourism development. This position makes tourist experience different from experience in mass tourism destinations. Visitors evaluate not only attractions but also the way local people welcome, guide, involve, and communicate with them. Digital tourist behaviour has strengthened the role of online reviews in evaluating destination experience. Reviews record spontaneous tourist perceptions of atmosphere, access, cleanliness, hospitality, activity quality, price, facilities, interpretation, and willingness to recommend. In service marketing, online reviews function as electronic word-of-mouth because they influence destination image and future travel decisions (Hennig-Thurau et al., 2004; Litvin et al., 2008; Xiang et al., 2017). For tourism villages, this digital trace is useful because it captures visitor responses to both tangible services and local interactions.

This article focuses on three destinations: Nglanggeran Tourism Village in Yogyakarta, Candirejo Tourism Village in Magelang, and Osing Kemiren Traditional Tourism Village in Banyuwangi. The three destinations represent different expressions of community-based cultural tourism. Nglanggeran foregrounds ecological tourism, geological landscape, conservation, and youth-based governance. Candirejo foregrounds rural Javanese village life, live-in programs, homestays, agriculture, crafts, and daily resident interaction. Kemiren foregrounds Osing living culture through traditional houses, arts, culinary heritage, coffee, batik, festivals, and customary identity.

The problem addressed in this study is how tourist experience in community-based cultural tourism villages can be understood through public textual data. This issue is relevant because tourism village performance should not be assessed only from awards, visitor numbers, or promotional narratives. It also needs to be assessed from the meaning of visitor experience, the quality of resident-based service, and the capacity of local culture to create satisfaction, emotional attachment, recommendation, and loyalty.

The study offers an initial empirical review based on secondary data. It does not replace direct fieldwork, tourist surveys, or interviews with destination managers. Its contribution lies in mapping tourist experience themes that can guide further model development on service quality, local cultural values, tourist experience, satisfaction, loyalty, and electronic word-of-mouth in community-based destinations.

2. Literature Review

2.1 Community-Based Tourism and Cultural Tourism Villages

Community-based tourism emphasizes community ownership, local participation, equitable economic benefits, cultural protection, and environmental sustainability. The ASEAN Community-Based Tourism Standard explains that community-based tourism should support sustainable livelihoods, preserve socio-cultural traditions, and ensure that tourism benefits remain connected to local residents (ASEAN Secretariat, 2022). In cultural tourism villages, tourist experience emerges from the interaction between attractions, services, local narratives, resident participation, and host-guest relationships.

Cultural tourism villages face two management demands. They must provide experiences that are attractive, accessible, safe, and marketable. At the same time, they must protect local culture from excessive commercialization. Community-based tourism is relevant because it shifts the orientation from tourism that uses place as a commodity to tourism that allows communities to control cultural presentation, economic distribution, and visitor interaction.

2.2 Tourist Experience and Contextual Service Quality

Tourist experience is a multidimensional construct. It includes functional, emotional, social, sensory, and cultural dimensions. In tourism villages, experience occurs when visitors observe local life, join activities, interact with residents, consume local products, and interpret the meaning of place. A positive experience often appears when visitors perceive the activity as authentic, safe, informative, personal, and worth recommending.

SERVQUAL explains service quality through tangibles, reliability, responsiveness, assurance, and empathy (Parasuraman et al., 1988). These dimensions remain useful, but they need contextual interpretation in tourism villages. Tangibles include cleanliness, signage, toilets, homestays, landscape quality, and cultural space. Reliability refers to the consistency between promised and delivered activities. Responsiveness refers to the readiness of managers and residents to answer tourist needs. Assurance refers to safety, guiding competence, and confidence in service delivery. Empathy refers to personal attention, cultural sensitivity, and respect for visitor expectations.

2.3 Online Reviews as Tourist Experience Data

Online reviews are public archives of tourist experience. They help researchers identify destination strengths and weaknesses through repeated themes such as hospitality, authenticity, access, cleanliness, price fairness, comfort, activity quality, interpretation, and recommendation. Qualitative content analysis can organize these public texts into themes that explain how visitors evaluate destinations (Krippendorff, 2019). Thematic analysis also helps researchers move from initial codes to broader meaning patterns (Braun & Clarke, 2006).

Online reviews also have limits. Not all tourists write reviews. Digital platforms may represent specific visitor groups more strongly than others. Very positive or very negative experiences may appear more frequently than ordinary experiences. For this reason, review-based findings should be treated as indicative rather than statistically representative. They are useful for exploratory analysis and for building instruments that can later be tested through surveys or interviews.

2.4 Local Cultural Values and Tourist Loyalty

Tourist loyalty appears in revisit intention, willingness to recommend, positive reviews, and emotional preference for a destination. In cultural tourism, loyalty can become stronger when visitors view the experience as memorable, authentic, and personally meaningful (Oliver, 1999; Kim et al., 2012). Local cultural values are important because they influence the way residents deliver service, explain traditions, welcome guests, and regulate tourist participation. In Javanese and Osing contexts, values such as hospitality, mutual cooperation, politeness, social harmony, respect for guests, and community pride can shape service behaviour. These values should not be treated only as background narratives. They can become service resources when translated into guiding, storytelling, homestay management, culinary service, craft demonstration, and festival governance. In this sense, local values may connect service quality with satisfaction, emotional attachment, loyalty, and positive electronic word-of-mouth.

3. Material and Method

3.1 Design Study

This study uses qualitative content analysis with a multiple-case orientation. The cases are Nglanggeran Tourism Village, Candirejo Tourism Village, and Osing Kemiren Traditional Tourism Village. The case selection follows five criteria: clear community-based tourism character, strong cultural or rural identity, participatory tourism activities, public recognition as tourism villages, and sufficient comparability as resident-based destinations.

The unit of analysis consists of public statements, official descriptions, and review-based evaluations that contain information about community governance, atmosphere, cultural authenticity, hospitality, activities, facilities, access, local products, and recommendation tendencies. The study uses only publicly available secondary data. It does not collect user identities, profile photographs, or private information. Review content is paraphrased and interpreted thematically to maintain digital research ethics.

Table 1. Research Objects and Main Data Sources

Destination	Main Character	Secondary Data Sources
Nglanggeran Tourism Village	Ecological community-based tourism based on the Ancient Volcano landscape, rural atmosphere, homestays, cocoa education, conservation, and community governance.	JADESTA, official Nglanggeran website, institutional tourism documents, destination descriptions, and public online reviews.
Candirejo Tourism Village	Rural Javanese tourism village based on live-in programs, homestays, dokar tours, agriculture, crafts, home industries, and resident interaction.	JADESTA, official Candirejo website, live-in and village package descriptions, destination descriptions, and public online reviews.
Osing Kemiren Traditional Tourism Village	Osing living-culture destination based on traditional houses, performing arts, coffee, batik, culinary heritage, festivals, and community participation.	JADESTA, official Kemiren website, Banyuwangi local government pages, institutional tourism documents, destination descriptions, and public online reviews.

3.2 Data Analysis

The analysis followed six stages. First, the study mapped official and public sources related to the three destinations. Second, it extracted relevant textual units that described attractions, services, visitor interaction, cultural activities, facilities, access, and recommendation tendencies. Third, open coding was applied to identify initial experience codes. Fourth, similar codes were grouped into broader themes. Fifth, the themes were compared across the three destinations. Sixth, the findings were interpreted through community-based tourism, service quality, tourist experience, local cultural values, and electronic word-of-mouth perspectives.

The analysis used triangulation across source types to reduce dependence on a single platform. Official sources were used to understand destination identity, programs, and management claims. Public online reviews were used to identify tourist perceptions. Institutional documents were used to position community-based tourism within broader sustainability and service quality standards. This procedure supports analytical credibility even though the study remains limited by the absence of direct interviews and primary survey data.

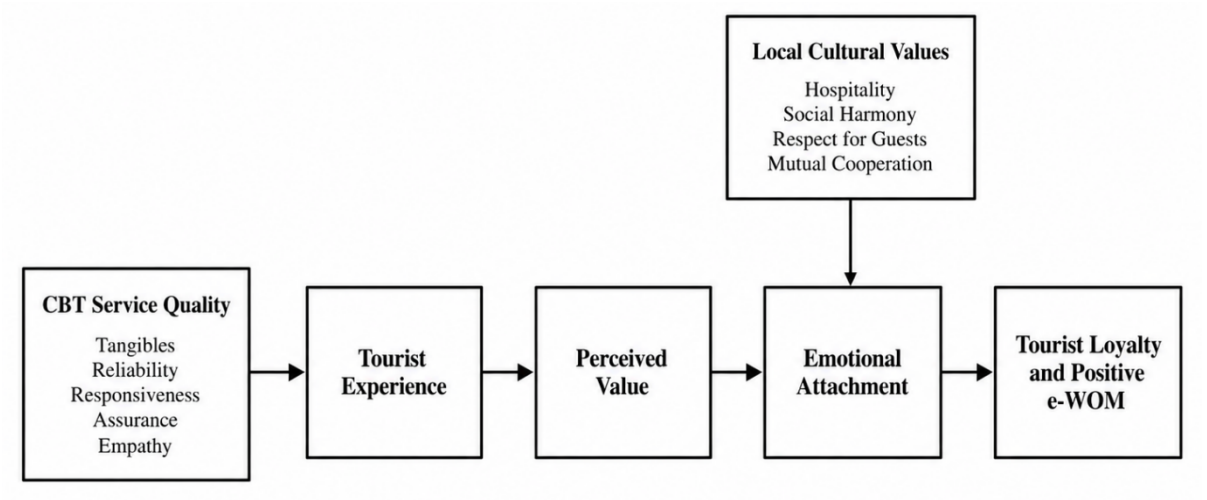


Figure 1. Research Model

4. Result

4.1 Destination Characteristics

Nglanggeran is primarily an ecological community-based tourism village. Its tourist experience is anchored in the Ancient Volcano landscape, rural atmosphere, trekking, reservoir views, homestays, cocoa-processing education, conservation narratives, and local governance. The destination shows how natural attractions can become community-based experiences when residents curate access, guiding, cleanliness, interpretation, local products, and visitor management. The main experience value lies in the combination of nature, education, and community organization.

Candirejo is a rural Javanese tourism village that places village life at the centre of tourist experience. Visitors can join live-in programs, stay in homestays, move through the village by dokar or bicycle, learn about agriculture, observe crafts, visit home industries, and interact with residents. The attraction does not depend on a single iconic object. It depends on the ability of the community to transform daily life into structured, respectful, and educational visitor experience.

Kemiren is an Osing traditional tourism village where living culture becomes the main experience source. Tourists encounter traditional houses, Pasar Kampoeng Osing, Gandrung dance, Barong performance, traditional music, coffee education, Banyuwangi batik, culinary heritage, homestays, and cultural festivals. Kemiren is strong because many cultural expressions remain connected to community practice. The destination therefore requires careful cultural governance so that tourism growth supports cultural dignity rather than reducing it to performance for consumption.

4.2 Cross-Destination Tourist Experience Themes

The coding process generated eight dominant themes: community governance, cultural authenticity, hospitality and resident interaction, participatory activities, landscape and atmosphere, local products and creative economy, facilities and information quality, and loyalty or electronic word-of-mouth potential. These themes show that tourist experience in

community-based tourism villages is produced by the interaction between service quality, local values, and direct involvement in local life.

The three destinations share a resident-based service logic, but each destination creates experience through different strengths. Nglanggeran is strongest in ecological landscape, conservation, educational activities, and governance innovation. Candirejo is strongest in participatory rural activities, homestays, live-in experience, and everyday interaction with Javanese villagers. Kemiren is strongest in Osing cultural authenticity, performing arts, culinary heritage, coffee, batik, and living cultural identity.

Table 2. Tourist Experience Theme Matrix

Theme	Nglanggeran	Candirejo	Kemiren
Community governance	Strong community management, conservation orientation, visitor monitoring, and tourism package coordination.	Strong village-based management through resident participation, homestays, packages, and local service coordination.	Community involvement supports cultural attractions, festivals, local products, and cultural presentation.
Cultural authenticity	Moderate to strong, expressed through rural life, local products, and community narratives around landscape and conservation.	Strong, expressed through Javanese rural life, agriculture, crafts, home industries, and live-in interaction.	Very strong, expressed through Osing houses, arts, festivals, culinary heritage, coffee, batik, and customary identity.
Hospitality and interaction	Guides, homestay owners, and local managers create a personal and educational experience.	Resident interaction is central because visitors learn directly from families, farmers, craft producers, and local hosts.	Host-guest interaction appears through cultural explanation, culinary service, festivals, homestays, and creative products.
Participatory activities	Trekking, cocoa education, village exploration, homestays, and environmental learning.	Live-in programs, dokar tours, farming, crafts, culinary practice, bicycle tours, and homestays.	Dance, music, coffee, batik, culinary experience, festival participation, and village cultural tours.
Landscape and atmosphere	Very strong natural landscape and rural atmosphere around the Ancient Volcano.	Strong rural atmosphere with village roads, fields, homes, and resident activities.	Strong cultural atmosphere shaped by Osing settlement, traditional houses, cultural spaces, and festivals.
Local products and creative economy	Cocoa products, local foods, homestays, guides, and community packages.	Crafts, agriculture, home industries, culinary products, and village packages.	Coffee, batik, culinary heritage, performance arts, festivals, and Osing creative products.
Facilities and information quality	Needs consistent attention to safety, homestay standards, toilets, routes, and digital information.	Needs clear package information, schedule management, homestay standards, and activity differentiation.	Needs clear cultural interpretation, crowd management, visitor ethics, and service standardization during festivals.

Theme	Nglanggeran	Candirejo	Kemiren
Loyalty and e-WOM potential	Nature memory, sustainability narratives, and educational value support recommendation potential.	Personal village experience and local warmth support recommendation and learning-based loyalty.	Cultural immersion and distinctive Osing identity support memorable experience and positive reviews.

4.3 In-Depth Destination Analysis

In Nglanggeran, tourist experience grows from the integration of geological landscape, rural atmosphere, and community management. Visitors obtain visual, physical, and educational experience through trekking, landscape viewing, homestays, reservoir activities, and cocoa education. From a community-based tourism perspective, the landscape does not stand alone as an attraction. It is organized by the community through guiding, safety procedures, cleanliness, information, package design, and local product development. The critical management issue is the need to maintain consistent standards for safety, access, toilets, homestays, and activity information because nature-based destinations are sensitive to weather, route conditions, and visitor preparedness.

In Candirejo, tourist experience is built around village life rather than a single object. The destination transforms residents daily activities into educational experience. Farming, crafts, culinary practice, dokar tours, bicycle tours, homestays, and live-in programs allow tourists to learn through direct interaction. This model is relevant for studying local cultural values because service is delivered not only by formal managers but also by residents as hosts. Candirejo shows that a mature tourism village does not always need spectacular attractions. It needs experience governance that allows local life to be understood respectfully and managed fairly.

In Kemiren, tourist experience is shaped by Osing identity. Traditional houses, dance, music, Barong performance, coffee, batik, culinary heritage, and festivals form a dense cultural experience. The strength of Kemiren lies in living culture, meaning culture that remains part of daily community practice and not only a staged attraction. This strength also creates a management risk. As tourist attention increases, the destination needs ethical codes, curated guiding, cultural rights protection, fair benefit distribution, and careful visitor participation. These safeguards help maintain dignity and prevent cultural reduction.

Across the three cases, tourist loyalty potential appears through different routes. Nglanggeran creates loyalty through nature, conservation, and educational memory. Candirejo creates loyalty through personal village learning and resident hospitality. Kemiren creates loyalty through cultural immersion and distinctive Osing identity. These routes support the argument that tourist loyalty in community-based destinations grows from meaningful experience, not only from facilities or physical attractions.

5. Discussion

The first finding shows that community-based tourism maturity is determined by the capacity of residents and local institutions to organize experience. Nglanggeran, Candirejo, and Kemiren all rely on residents as experience makers, but each case is grounded in a different value base. Nglanggeran foregrounds conservation and governance innovation. Candirejo foregrounds hospitality and rural Javanese activities. Kemiren foregrounds Osing cultural

preservation and identity pride. This difference confirms that community-based tourism cannot use a single management formula for all villages.

The second finding extends the meaning of service quality in tourism villages. Service quality cannot be equated fully with hotel or mass tourism standards. In tourism villages, valuable service often appears through resident warmth, guide competence, storytelling, homestay readiness, activity clarity, and the ability to balance tourist interest with community norms. SERVQUAL therefore needs contextual reading. Tangibles include landscape and cultural space. Reliability includes consistency between package promises and delivered experience. Responsiveness includes readiness of managers and residents. Assurance includes safety and cultural interpretation. Empathy includes personal attention and respect for local boundaries.

The third finding suggests that local cultural values act as a bridge between service quality and tourist loyalty. Tourists remember a destination not only because of facilities but also because they are welcomed, taught, guided, and allowed to feel local life. This is important for a research agenda on Javanese and local marketing values because values become observable through service practice. Hospitality, mutual cooperation, politeness, respect for guests, and community pride are not abstract claims when they appear in guiding, homestays, culinary service, craft demonstrations, festivals, and online responses.

The findings also show that online reviews can support early diagnosis of destination experience. Repeated review themes can reveal what tourists appreciate and what managers need to improve. Positive themes usually relate to hospitality, authenticity, scenery, learning activities, and meaningful interaction. Critical themes often relate to access, toilets, reservation clarity, crowding, safety, price transparency, and inconsistent information. These issues are managerial, not only promotional. Tourism village managers need to treat digital reviews as continuous service feedback.

Conceptually, the study supports a model in which community-based service quality influences tourist experience. Tourist experience then strengthens perceived value, satisfaction, emotional attachment, and loyalty. Local cultural values function as contextual resources that deepen the effect of service quality on experience. Positive electronic word-of-mouth appears when tourists consider the experience meaningful and worth recommending. This conceptual model can be tested through quantitative surveys or mixed-method research involving tourists who have visited Nglanggeran, Candirejo, and Kemiren.

6. Conclusion, Implication, and Recommendation

This article concludes that Nglanggeran, Candirejo, and Kemiren show three distinctive patterns of community-based cultural tourism experience. Nglanggeran is strong in ecological tourism, geological landscape, conservation, community education, homestays, cocoa products, and governance innovation. Candirejo is strong in rural Javanese village experience, live-in programs, homestays, agriculture, crafts, dokar tours, and resident interaction. Kemiren is strong in Osing living culture, traditional houses, performing arts, culinary heritage, coffee, batik, festivals, and cultural interaction.

Eight tourist experience themes emerged from the analysis: community governance, cultural authenticity, hospitality and resident interaction, participatory activities, landscape and atmosphere, local products and creative economy, facilities and information quality, and loyalty or electronic word-of-mouth potential. These themes indicate that tourism village

experience depends not only on attractions but also on the capacity of communities to package activities, maintain cultural narratives, provide reliable basic facilities, and create respectful interaction.

The theoretical implication is that service quality in community-based tourism should be interpreted through local context. The standard dimensions of tangibles, reliability, responsiveness, assurance, and empathy remain useful, but their meaning changes when services are delivered by residents, homestay owners, guides, farmers, artists, and community managers. Local cultural values should be placed as an explanatory mechanism because they help connect service quality with meaningful experience, satisfaction, loyalty, and positive electronic word-of-mouth.

The practical implication differs by destination. Nglanggeran managers need to strengthen safety procedures, route information, homestay audits, toilet comfort, and geological-cultural interpretation. Candirejo managers need to strengthen storytelling, package differentiation, resident activity calendars, homestay standards, and live-in service consistency. Kemiren managers need to strengthen cultural tourism ethics, guide training, crowd management during festivals, protection of cultural rights, and fair benefit distribution.

The study is limited by its reliance on secondary data and public online reviews. The findings do not represent the full tourist population. Future research should collect primary data through interviews with managers and residents, field observation, tourist surveys, and cross-platform review triangulation. Future studies can also test relationships among service quality, local cultural values, tourist experience, satisfaction, loyalty, and electronic word-of-mouth using structural equation modelling or mixed-method designs.

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ANALYSIS OF THE BREAK-EVEN POINT (BEP) IN PROFIT PLANNING FOR AN OYSTER MUSHROOM CULTIVATION BUSINESS IN KELINDANG ATAS VILLAGE, MERIGI KELINDANG DISTRICT, CENTRAL BENGKULU REGENCY

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Abstract

This study was motivated by the importance of profit planning in small businesses, particularly in oyster mushroom cultivation businesses that still face limitations in financial management. The NADA Oyster Mushroom Business in Kelindang Atas Village has not yet applied Break-Even Point (BEP) analysis as a basis for determining minimum production and sales thresholds; therefore, an analysis is needed to assist in business decision-making. This study aims to determine the BEP value, the minimum production and sales volumes, and the application of BEP analysis in business profit planning.

The research method used is quantitative descriptive, employing data collection techniques through documentation of sales data, fixed costs, and variable costs for the year 2025. Data analysis was conducted using the cost-volume-profit approach to calculate the BEP in kilograms and rupiah.

The research results show that total production amounted to 18,940 kg, with revenue of Rp464,030,000 and total costs of Rp345,630,000. The average selling price of Rp24,500/kg and variable costs of Rp10,646/kg resulted in a contribution margin of Rp13,854/kg. The break-even point (BEP) was calculated at 10,394 kg or Rp257,142,857. This indicates that actual production and sales have exceeded the break-even point, meaning the business is operating profitably.

The conclusion of this study is that Break-Even Point analysis can be used as an effective tool in profit planning, as it provides information regarding the minimum production threshold, the business's safety margin, and a basis for managerial decision-making.

Keywords: Break-Even Point, profit planning, fixed costs, variable costs, contribution margin

1. Introduction

Small and micro enterprises form the backbone of the economy because they are numerous and capable of absorbing a large workforce. According to the classification by the Central Statistics Agency (2023), a small enterprise is a business with a workforce of 5–19 people. In other words, although the scale of these businesses is relatively small, their existence is crucial in supporting both regional and national economic development.

Business, according to the Kamus Besar Bahasa Indonesia (KBBI, 2022), is defined as an activity carried out by exerting one's mind, energy, or physical effort to achieve a specific goal.

In the business world, the primary goal of a business is to generate profit. This profit is not merely a number on a financial statement but serves as an indicator of whether the business is operating healthily or not. With profit, business owners can ensure the business's sustainability, expand operations, create new jobs, and improve the well-being of their families and the surrounding community (Rahmat Hidayat, 2024). To achieve these goals, effective management is essential. Management serves as the coordinator of business operations to ensure that all resources—including human capital, capital, and raw materials—are utilized optimally. The success of management in running a business is usually measured by the profit earned. However, this profit is influenced by three main factors: the selling price of the product, production costs, and sales volume. These three factors are interrelated: Costs determine the selling price; the selling price affects consumers' ability to purchase the product; and sales volume determines the scale of production. From this analysis, the concept of the Break-Even Point (BEP) is derived. The BEP is the point at which a business's revenue equals its expenses, meaning that at this point, the business neither makes a profit nor incurs a loss. Soleha (2022) notes that the benefits of BEP analysis are very evident in business practice. First, the BEP helps business owners determine the minimum sales volume required to avoid operating at a loss. Second, this analysis can also be used to estimate the sales volume needed to achieve a specific profit target. Third, the BEP provides insight into the Margin of Safety, which is the difference between actual or projected sales and sales at the break-even point.

2. Literature Review

2.1 Theory

Cost accounting is the calculation of costs for the purposes of planning and control, improving quality and efficiency, and supporting both routine and strategic decision-making. Cost accounting is defined as the process of presenting cost information that is systematically organized according to cost characteristics and activities, presented periodically to assist management in preparing cost plans, determining cost of goods sold, reporting and accounting for costs, and conducting control and oversight

Mulyadi (2016) defines cost accounting as the process of recording, classifying, summarizing, and presenting costs associated with the production and sale of products or services in specific ways, along with their interpretation. The object of cost accounting activities is cost.

Cost information is crucial for management for the following reasons (Dunia, 2019):

a. Determining the Cost of Goods Sold
   In this process, costs are collected based on jobs, company departments, or further grouped into cost pools, products, or services.
b. Cost Planning
   This is the activity of setting objectives and developing comprehensive operational plans to achieve those objectives. This planning also includes determining the strategies to be used, both for the short term and the long term.
   1. Costs by Function in a Company:
      a) Production costs

All costs incurred to produce a product. In the oyster mushroom business, examples include the cost of purchasing baglogs (growing medium), labor costs for tending the mushrooms, and electricity or water costs at the mushroom house.

b) Marketing costs

Costs incurred to sell products to consumers. For example, transportation costs to deliver mushrooms to the market, plastic packaging costs, or promotional costs on social media.

c) Administrative and General Expenses

Costs for managing the business as a whole, such as manager salaries, office supplies, communication costs (phone, internet), or rent for a small office if one is used.

2. Costs Based on Behavior Relative to Production Volume:

a) Fixed costs

Remain unchanged regardless of whether production volume increases or decreases. Examples include mushroom house rent, salaries for permanent employees, or equipment depreciation.

b) Variable costs

These change in proportion to the number of mushrooms produced. Examples include baglog costs, packaging plastic, and daily labor costs paid based on the number of mushrooms harvested.

c) Mixed costs

These consist of both fixed and variable components. An example is electricity for the mushroom house, where there is a fixed monthly subscription fee, but additional costs are incurred if usage increases.

3. Costs Based on Their Relationship to the Product:

a) Direct costs

These can be directly traced to the product produced. In an oyster mushroom business, for example, these include raw materials for baglogs, plastic wrapping for the mushrooms, and the wages of workers who directly care for the mushrooms.

b) Indirect costs

Cannot be directly traced to a specific product. Examples include electricity costs for the entire mushroom house, vehicle maintenance costs for distribution, or the manager's salary.

4. Costs by Accounting Period

a. Product cost

Costs associated with the product that are only recognized as expenses when the product is sold. Examples include the cost of purchasing baglogs, production labor, and greenhouse electricity costs.

b. Period costs

Costs that are immediately recorded as expenses in the period they occur, even if they are not directly related to production. Examples include social media

advertising costs, administrative costs, and transportation costs for non-production purposes.

1. Gross Profit

   This is the difference between net sales and cost of goods sold (COGS). Gross profit represents the initial profit before deducting other operating expenses such as administrative, marketing, and interest costs.

2. Net Profit (Net Profit)

   This is the profit that actually becomes the company's earnings after deducting all expenses, including operating costs, taxes, and other expenses. Net profit is typically used to measure a company's financial health and is distributed as dividends or retained for business development.

2.2 Method of Analysis

The method of analysis used in this study is quantitative descriptive. This method aims to describe and explain the data obtained in accordance with actual conditions. The collected data is analyzed by presenting it in the form of figures, calculations, and systematic explanations, thereby providing a clear picture of the conditions under study. Through the quantitative descriptive method, this study can present measurable calculation results and provide accurate information without intending to draw conclusions that apply universally. The BEP calculation in this study uses the formula from Putri et al., (2023), which consists of:

BEP Calculation in Kilograms

BEP can be calculated using the following formula:

$$BEP\,(\text{kg}) = \frac{FC}{P - VC}$$

Or it can also be written as:

$$\text{BEP (kg)} = \frac{\text{Fixed Costs}}{\text{contribution margin per kg}}$$

BEP Calculation in Rupiah

To calculate the BEP in rupiah, the formula is:

$$BEP(Rp) = \frac{FC}{1 - \frac{VC}{S}}$$

Or it can also be written as:

$$BEP(Rp) = \frac{\text{Fixed Costs}}{\text{Contribution Margin Ratio}}$$

Notes:
BEP = Break-Even Point
FC = Fixed Costs
P = Selling Price per kg
VC = Variable Costs per kg
S = Total Sales

3. Data Collection Methods

In this study, data were collected using the documentation method, which involves gathering data from various documents such as books, archives, financial reports, numerical records, and images related to the research subject. Sugiyono (2015:329) states that documentation aims to provide information related to the content of the documents, which is then used as evidence and material for further analysis.

3.1 Assumptions and Limitations of Break-Even Point Analysis

The more assumptions used, the greater the likelihood of weaknesses in the analysis (Shakespeare, 2014, in Cahyanti & Yuwono, 2024). Cahyanti & Yuwono (2024) outline the basic assumptions that form the foundation of break-even point analysis, including:

1. Costs must be clearly distinguishable into two types: fixed costs and variable costs. The principle that costs can be distinguished and analyzed by type must be applied accurately.
2. Total fixed costs remain constant until full capacity is reached. Fixed costs are costs that remain even when the company is not operating; that is, these costs will not change even if production volume or activity changes.
3. Variable costs will change in proportion to sales volume. This means that if sales increase, variable costs will also increase, and vice versa. Variable costs are also considered to always align with sales, so there is no mismatch between production and sales.
4. The selling price per kilogram of goods is assumed to be fixed, regardless of the quantity sold. This means the unit price generally remains unchanged.
5. It is assumed that the company sells or produces only one type of product. If the company sells more than one product, the sales mix is considered fixed or unchanged.

3.2 Sales Data

Based on the results of the research conducted, sales data for oyster mushrooms for the year 2025 was obtained, showing high monthly sales volumes and revenue. This data reflects the actual conditions of the business in carrying out its production activities, as well as the level of market demand for oyster mushrooms. For further details, please refer to the table below.

Month	Sales (units)	income
January	1333	32.658.500
February	1387	33.981.500
March	1405	34.422.500

April	1852	45.374.000
May	1538	37.681.000
June	1584	38.808.000
July	1555	38.097.500
Agust	1692	41.454.000
September	1644	40.278.000
October	1661	40.694.500
November	1654	40.523.000
December	1635	40.057.500
Total	18940	464.030.000

Based on the table above, it is evident that total oyster mushroom sales in 2025 reached 18,940 kg, generating total revenue of Rp 464,030,000. The highest sales occurred in April at 1,852 kg, while the lowest sales occurred in January at 1,333 kg. In general, oyster mushroom sales show a stable pattern and tend to increase, particularly from the middle to the end of the year.

4. Result

a. Selling Price per Unit

The selling price per unit can be calculated using the following formula:

$$\text{Selling Price per Unit} = \frac{\text{Total Revenue}}{\text{Total Production}}$$

Notes:
Total Revenue = the total amount of revenue received over the course of one year
Total Production = the total number of products produced

Based on this formula, the selling price per unit is:

$$\text{Selling Price per Unit} = \frac{464.030.000}{18.940\ \text{kg}} = 24.500/\text{kg}$$

The calculation shows that the average selling price of oyster mushrooms is Rp24,500 per kilogram. This price is relatively stable and in line with market prices.

b Variable Cost per Unit

Variable cost per unit can be calculated using the following formula:

$$\text{Variable Cost per Unit} = \frac{\text{Total Variable Cost}}{\text{Total Production}}$$

Notes:

Total Variable Cost = all costs that vary with the volume of production (Rp)
Total Production = total product volume (kg)
Therefore, the variable cost per unit is:

$$\text{Variable Cost per Unit} = \frac{201.630.000}{18.940\ kg} = \text{Rp. } 10.646/\text{kg}$$

This figure indicates that each 1 kg of oyster mushrooms incurs a variable cost of Rp10,646. This cost is considered efficient because it is still well below the selling price.

c. Contribution Margin
Contribution margin = Total selling price per unit -variable cost

Notes:
Selling price per unit = average price per kg (Rp)
Variable cost per unit = production cost per kg (Rp)

From this formula, the contribution margin is
"Contribution Margin = Rp24,500 - Rp10,646 = Rp13,854/kg"

A contribution margin of Rp13,854 indicates that each kilogram of product contributes enough to cover fixed costs and generate a profit.

d. Break-Even Point (BEP)

1). BEP in Units (kg)

BEP in units can be calculated using the following formula:

$$\text{BEP (units)} = \frac{\text{fixed costs}}{\text{contribution margin}}$$

Notes:
Fixed costs = costs that do not change (Rp)
Contribution margin = the difference between selling price and variable costs per unit (Rp/kg)

From this formula:

$$BEP_{\text{in units}} = \frac{\text{Rp}144.000.000}{\text{Rp}13.854} = Rp.\,10.394/kg$$

This means the business must produce at least 10,394 kg to avoid a loss.

2). BEP in Rupiah

BEP in rupiah can be calculated using the following formula:

$$BEP_{(\text{Rp.})} = \frac{\text{Fixed Costs}}{\text{Contribution Margin Ratio (CMR)}}$$

CMR Formula:

$$\text{CMR} = \frac{\text{Contribution Margin}}{\text{Selling Price}}$$

Notes:
CMR = contribution margin ratio
Selling price = price per unit (Rp)

Thus, the calculation can be performed as follows

$$\text{CMR} = \frac{13.854}{24.500} = 0{,}56$$

Therefore, the BEP (Rupiah) is:

$$BEP(\text{Rp}) = \frac{\text{Rp}144.000.000}{0{,}56} = Rp.\,257.142.857$$

This figure indicates that the business must generate a minimum revenue of Rp257,142,857 to reach the break-even point.

e. Margin of Safety

The margin of safety can be calculated using the following formula:

$$\text{MOS} = \frac{\text{(Actual Sales -BEP Sales)}}{\text{Actual Sales x 100\%}}$$

Notes:
Actual Sales = total business revenue (Rp)
BEP Sales = revenue at the break-even point (Rp)

Calculation results:

$$\text{MOS} = \frac{\text{(Rp464.030.000 - Rp257.142.857)}}{\text{Rp464.030.000 x 100\%}}$$

$$= \frac{\text{Rp206.887.143}}{\text{Rp464.030.000 x 100\%}} = 44.6\%$$

A Margin of Safety of 44.6% indicates that the business is still in a safe condition. This means that sales can still drop by up to 44.6% before the business incurs a loss.

f. Business Profit Analysis

Business profit analysis can be calculated using the following formula:

Profit = Total Revenue – Total Production Costs

Notes:
Total revenue = receipts over one year (Rp)
Total production costs = fixed costs + variable costs (Rp)
Therefore, the profit obtained is
Profit = Rp464,030,000 – Rp345,630,000 = Rp118,400,000

This result indicates that the oyster mushroom business earned a profit of Rp118,400,000 in one year.

5. Discussion

Based on the research findings, the NADA Oyster Mushroom Cultivation business demonstrates sound and profitable operations. Total sales for the year 2025 reached 18,940 kg, generating revenue of Rp464,030,000. Sales remained stable due to partnerships with eateries, restaurants, and hotels, which helped maintain market demand, streamline distribution, and stabilize the business's cash flow. Total production costs of Rp345,630,000 consist of fixed costs of Rp144,000,000 and variable costs of Rp201,630,000, with variable costs being more dominant as they are influenced by production volume. The Break-Even Point (BEP) analysis indicates a break-even point of 10,394 kg, while actual production reached 18,940 kg, meaning the business is well above the break-even point and able to generate a profit of Rp118,400,000. Additionally, a Margin of Safety (MOS) of 44.6% indicates that the business has a sufficiently high level of security against the risk of declining sales. The BEP graph also shows that actual production is in the profit zone, meaning the business is in a safe and profitable position. Thus, the NADA oyster mushroom business can be said to have good sales performance, fairly effective cost management, and significant potential for continued development in the future.

6. Conclusion, Implication, and Recommendation

Based on the research findings, the Break-Even Point (BEP) analysis for the NADA oyster mushroom cultivation business indicates that the break-even point is reached at a production volume of 10,394 kg or sales of Rp257,142,857. With an actual production volume of 18,940 kg, the business is profitable and able to generate a profit. The BEP analysis also aids in profit planning by illustrating the relationship between costs, production, and revenue. Reaching the break-even point is influenced by fixed costs, variable costs, selling price, and sales volume; therefore, cost control and increased sales are crucial for the business's sustainability.

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Osing Local Wisdom-Based Business Strategies for MSME Sustainability in Banyuwangi, Indonesia

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Abstract

This study examines the integration of local wisdom into business strategies that promote the sustainability of MSMEs in Banyuwangi, Indonesia. Previous research on MSME sustainability has primarily emphasized financial capability, innovation, and digital transformation, with limited exploration of strategies rooted in local wisdom. To address this gap, the research focuses on culinary and creative MSMEs that incorporate Osing cultural values into their operations. This research employs a qualitative case study approach using a single-case embedded design. The Osing -based MSME ecosystem in Banyuwangi served as the main case, with culinary and creative MSMEs serving as embedded units of analysis. Data were collected through in-depth interviews, observations, and documentation involving MSME owners and relevant local stakeholders. Thematic analysis, including coding, categorization, and theme development, was conducted to interpret the data. The findings indicate that Osing local wisdom is reflected in business values such as cultural authenticity, mutual cooperation, and community-based relationships. These values are integrated into branding, product development, and collaborative business practices. The findings suggest that local wisdom serves as an intangible strategic resource, enhancing product differentiation, business resilience, cultural legitimacy, and long-term MSME sustainability. This study contributes to the literature on sustainable entrepreneurship and the Resource-Based View by illustrating how local wisdom values can serve as strategic assets for MSME sustainability in developing economies.

Keyword: Osing local wisdom; business strategies; MSME sustainability; sustainable entrepreneurship; Resource-Based View

1. Introduction

Micro, Small, and Medium Enterprises (MSMEs) play a strategic role in Indonesia's economic development as they are one of the main drivers of the local economy and the foundation of community economic activity. MSMEs also serve as the driving force behind local economic growth. In line with this, KADIN notes that MSMEs account for approximately 99% of all business units in Indonesia. Data from the Ministry of MSMEs' 2024 Single Data Information System (SIDT) indicates that the number of non-agricultural and non-fisheries MSMEs recorded as of December 31, 2024, reached 30,178,617 units (KADIN Indonesia,

n.d.). This large number indicates that MSMEs play a significant role in supporting the local economy, creating jobs, promoting economic equity, and strengthening regional economic resilience. Therefore, the sustainability of MSMEs must be recognized as a strategic issue in national economic development, particularly in regional contexts that rely on community networks, local potential, and the social-cultural identity of the community.

The sustainability of MSMEs cannot be fully understood solely through a business's ability to generate profits or survive in a competitive market. Business sustainability also encompasses the ability of entrepreneurs to create social value, maintain community relationships, preserve local identity, and adapt to changes in the business environment. From a sustainable entrepreneurship perspective, business actors need to link economic activities with social, environmental, and community values that must be preserved (Rosário et al., 2022; Yasir et al., 2021). Recent studies also indicate that the sustainability of SMEs must be understood in a multidimensional manner, as social, economic, and environmental aspects are interrelated in determining business resilience (Ansar et al., 2025).

Most studies on the sustainability of MSMEs still emphasize financial factors, innovation, digital transformation, technology adoption, entrepreneurial orientation, environmentally friendly practices, and competitive strategies (Alshebami, 2023; Kurniasari et al., 2023; Pu et al., 2021). In the context of the creative industry in Banyuwangi, Fahrurrozi et al. (2024) demonstrate that business model transformation is a critical strategy for creative enterprises to address stagnant sales, limited marketing innovation, the need to expand digital channels, and the strengthening of strategic partnerships. These findings indicate that the sustainability of creative MSMEs is significantly influenced by entrepreneurs' ability to adapt their business models to market changes. This approach is important because MSMEs still face various constraints, such as access to financing, digital literacy, managerial capacity, product innovation, and market access. Studies on creative MSMEs in Indonesia also show that the adoption of sustainable technologies, accounting and financial resources, and green competitive advantages can influence business performance (Kusuma et al., 2024). However, approaches that emphasize financial, technological, innovation, and competitive strategy aspects have not fully explained how socio-cultural resources inherent in local communities can shape business strategies and support the sustainability of MSMEs

According to Afidah & Zulfa (2025), local wisdom, often referred to as local wisdom refers to the values, knowledge, norms, and socio-cultural practices that have developed within a community. Local wisdom can serve as the foundation for solidarity, social reputation, business legitimacy, and the strengthening of community-based business identity. In the context of MSMEs, local values can influence products, services, brand identity, and patterns of business collaboration. Therefore, local wisdom can be understood as an intangible resource with the potential to strengthen business sustainability. Recent studies indicate that local wisdom can reinforce sustainable competitive advantage in the creative industry when local values are supported by an entrepreneurial orientation, entrepreneurial marketing, and government involvement (Mahrinasari et al., 2024).

Banyuwangi Regency is one of the regions in Indonesia with a rich local cultural heritage, namely the Osing culture. The Osing culture thrives within Banyuwangi society and is reflected in the language, traditions, arts, cuisine, hospitality, and daily social practices. Values such as consensus, solidarity, mutual trust, hospitality, and communal relationships are integral to how

the community builds social and economic ties. In the context of culinary and creative MSMEs, Osing values serve not only as a cultural backdrop but can also be integrated into business strategies. MSMEs operators can incorporate these values into brand narratives, product design, customer experiences, trust-building approaches, and collaboration models among business actors. Thus, Osing culture should be understood not merely as a symbol of regional identity but as a socio-cultural resource capable of strengthening business value.

Recent research shows that local wisdom is becoming increasingly important in the development of MSMEs and the creative economy. A study on MSMEs based on cultural wisdom in Sumbawa indicates that cultural elements, such as traditional weaving, herbal products, and local cuisine, can strengthen innovation, product differentiation, and consumer engagement in the digital age (Diatmika & Rahayu, 2025). Research on ikat weaving MSMEs in Kupang also shows that collaboration rooted in local wisdom helps preserve cultural heritage while creating economic opportunities for MSME actors (Tuthaes et al., 2024). In addition, a study on women-owned MSMEs in the Lake Toba region shows that synergy between digital literacy and local wisdom can support value creation, eco-friendly innovation, and culture-based brand storytelling (Togatorop et al., 2025). The findings reinforce that local wisdom can play a role in business sustainability. However, studies specifically explaining the strategic mechanisms of Osing values in culinary and creative MSMEs in Banyuwangi remain limited.

The research gaps in this study lie in three main aspects. First, empirically, studies on MSMEs based on Osing local wisdom in Banyuwangi remain limited, particularly in the culinary and creative sectors. Second, theoretically, the RBV literature has extensively discussed intangible resources but has not yet widely positioned local wisdom as a culturally embedded strategic resource. Third, methodologically, studies on MSMEs sustainability still largely rely on quantitative approaches to test the relationship between variables, whereas the process of integrating cultural values into business strategies requires a more contextually grounded qualitative understanding. These three gaps highlight the need for studies capable of explaining how local values function in the day-to-day business practices of MSMEs.

RBV is a relevant framework for explaining the relationship between local wisdom, business strategy, and the sustainability of MSMEs. The RBV posits that organizations can achieve sustainable competitive advantage when they possess resources that are valuable, rare, difficult to imitate, and can be effectively managed (J. Barney, 1991). In the context of culture-based MSMEs, local wisdom can be understood as a strategic resource because its value stems from social history, collective experience, community relations, and local cultural practices. The values of Osing, such as cultural authenticity, consensus, solidarity, pride in local identity, and communal relationships, possess valuable characteristics because they can create differentiation and customer trust; they are scarce because they are embedded in the socio-cultural context of Banyuwangi, they are difficult to imitate because they are historical and rooted in community practices; and they are difficult to replace because they cannot easily be subsumed by other cultural identities. Therefore, Osing local wisdom can be positioned as a culturally embedded intangible resource that supports differentiation, social legitimacy, business collaboration, and business resilience

Based on this explanation, this study aims to explore how Osing local wisdom is integrated into the business strategies of culinary and creative MSMEs in Banyuwangi and how these values contribute to the sustainability of MSMEs. Specifically, this study identifies the forms

of Osing values reflected in business practices, such as cultural authenticity, sambatan, and community-based relationships. This study also analyses how these values are applied in branding, product development, and business collaboration practices. To achieve these objectives, this study uses a qualitative case study approach with a single-case embedded design. The Osing-based MSMEs ecosystem in Banyuwangi is positioned as the main case, while culinary and creative MSMEs are positioned as embedded units of analysis.

This study's novelty lies in mapping the strategic mechanisms that explain how Osing values are translated into MSMEs business strategies. This study not only positions local wisdom as a cultural context but also as a strategic resource that operates through product authenticity, customer trust, emotional closeness, social legitimacy, and community-based collaboration. Thus, this study broadens the application of RBV within the context of culture-based MSMEs and enriches the literature on sustainable entrepreneurship in developing countries. Practically, this research can serve as a foundation for MSMEs operators, business mentors, and local governments in designing branding strategies, product development, and business collaborations that are not only market-driven but also rooted in local cultural identity.

2. Literature Review

2.1. The Resource-Based View as a Theoretical Foundation for MSMEs Sustainability

RBV is one of the main perspectives in strategic management that posits that a firm's competitive advantage is influenced by the organization's ability to manage its internal resources, in addition to market conditions. This perspective views resources as a crucial foundation for strategy formulation, enhancing competitiveness, and achieving business sustainability (Beamish & Chakravarty, 2021). J. Barney (1991) states that a resource can create sustainable competitive advantage if it possesses the characteristics of being valuable, rare, difficult to imitate, and not easily substituted. The RBV framework is relevant for explaining the sustainability of MSMEs because many MSMEs do not yet have strong financial capital, technology, or managerial infrastructure. However, MSMEs often possess other strengths in the form of social, cultural, relational, and reputational resources embedded within local communities.

Within the MSMEs context, strategic resources do not always take the form of physical assets. MSME operators can build sustainability through local reputation, community networks, adaptability, and experience-based knowledge. These resources have strategic value because they can influence customer loyalty, social legitimacy, and the business's ability to survive in a changing environment. J. B. Barney et al. (2011) emphasize that the development of RBV needs to be directed toward a broader understanding of how resources are formed, managed, and used in different organizational contexts. Thus, RBV can be used to understand how MSMEs transform local resources into valuable business strategies.

MSMEs sustainability must be understood as a multidimensional concept. This concept encompasses economic, social, and cultural aspects. Economic sustainability is evident in a business's ability to generate profits on a sustainable basis. Social sustainability is evident in business owners' ability to maintain social relationships and create value for the community. Cultural sustainability is evident in MSMEs' ability to preserve local values in their business practices. From this perspective, entrepreneurs are guided to achieve economic gains that align with social, ecological, and community values (Shepherd & Patzelt, 2011). Therefore, this

article examines the sustainability of MSMEs through three primary dimensions: economic, social, and cultural sustainability.

The economic dimension reflects the ability of MSMEs to retain customers and sustain business operations in the long term. The social dimension relates to a business's ability to maintain relationships with the community, partners, suppliers, and other business actors. The social dimension is evident through collaboration, support from local networks, community ties, and engagement with other business actors. Meanwhile, the cultural dimension is reflected in the ability of MSMEs to preserve local identity in their products, services, brand narratives, and daily business practices. This multi-dimensional interpretation is important because culture-based culinary and creative MSMEs do not merely sell goods or provide services but also offer experiences, stories, identities, and the social values inherent in their products.

Studies on MSMEs show that business sustainability is largely influenced by entrepreneurs' ability to manage strategic resources. Kusuma et al. (2024) demonstrate that the adoption of sustainable technologies, accounting and financial resources, and green competitive advantages play a role in improving the performance of creative MSMEs in Indonesia. In addition, Utami et al. (2024) emphasize that innovation, resource management, and circular economy practices can support both business performance and the social-environmental performance of MSMEs. These findings demonstrate that MSMEs sustainability is inextricably linked to entrepreneurs' ability to manage internal resources and adapt them to changes in the business environment.

However, most contemporary research still places greater emphasis on economic resources, technology, innovation, and managerial capabilities. The socio-cultural resources embedded in local communities have not always been recognized as key strategic resources. In fact, for culture-based MSMEs, local values can serve as a source of differentiation, trust, loyalty, social legitimacy, and business resilience. Local values are also difficult to imitate because they are formed through social history, collective experiences, and long-standing community practices. This is where RBV becomes important. This perspective helps explain why local wisdom can function as an intangible strategic resource.

This study positions Osing local wisdom as a culturally embedded strategic resource. Osing values such as cultural authenticity, consensus, solidarity, mutual trust, hospitality, and communal relationships possess strategic characteristics. These values are valuable because they can differentiate products, strengthen customer relationships, and enhance social legitimacy. These values are also rare because they are inherent to the socio-cultural context of Banyuwangi. Furthermore, Osing values are difficult to replicate because they have evolved through the community's social experiences and cultural practices. These values are difficult to replace because other cultural identities cannot fully substitute the social meaning inherent in Osing culture. Thus, RBV provides a theoretical foundation for understanding Osing local wisdom as a culturally embedded intangible resource for the sustainability of MSMEs.

By positioning local wisdom as a strategic resource, RBV is able to explain the types of resources possessed by MSMEs and how those resources are utilized. Local wisdom does not automatically ensure business sustainability. Cultural values must be embodied in concrete business practices. In this study, Osing values are understood to operate through three business strategy pathways. The first pathway is culture-based branding. The second pathway is product development that highlights local authenticity. The third pathway is community-based business

collaboration. These three pathways serve as a bridge between cultural resources and the sustainability of MSMEs.

2.2 Osing Local Wisdom, Business Strategies, and the Sustainability of MSMEs

Local wisdom refers to the values, knowledge, norms, symbols, and socio-cultural practices that have developed within a community (Afidah & Zulfa, 2025). In a social and economic context, local wisdom serves as a cultural guide that influences economic behavior, patterns of cooperation, the formation of trust, and resource management strategies. From the perspective of community-based entrepreneurship, the existence of a community plays a strategic role in business development because it fosters shared values, solidarity, collective participation, and common goals that can strengthen business resilience and sustainability (Esteves et al., 2021; Suriyankietkaew et al., 2022; Thananusak & Suriyankietkaew, 2023). This perspective shows that the growth of local MSMEs often relies on close social ties, community reputation, and a strong cultural identity.

Recent literature increasingly indicates that local wisdom can play a role in the development of MSMEs and the creative industries. Mahrinasari et al. (2024) demonstrate that local wisdom and government intervention can strengthen sustainable competitive advantages in Indonesia's creative industries. This study is significant because it no longer views local wisdom merely as a cultural symbol, but as a factor that can enhance business competitiveness

A similar finding also emerged in a recent study on culture-based MSMEs in various local contexts across Indonesia. Diatmika & Rahayu (2025) demonstrated that local creativity and cultural wisdom can strengthen MSME innovation through the development of products with distinctive cultural characteristics. Tuthaes et al. (2024) found that collaboration based on local wisdom in ikat weaving MSMEs can help preserve cultural heritage and open economic opportunities for communities. Purwati et al. (2026) also demonstrate that digital heritage branding can strengthen the competitive advantage of MSMEs rooted in local wisdom through brand authenticity and the readiness of supporting ecosystems. In the general sense, these studies indicate that local cultural values can serve as an economic resource. However, most studies have not yet detailed how cultural values are translated into concrete business strategies within specific culture-based MSMEs.

In Banyuwangi, Osing local wisdom holds a significant place because Osing culture is one of the main identities of the local community. Values such as consensus, solidarity, mutual trust, hospitality, and communal relationships reflect how the community builds social and economic ties. The value of consensus is evident in how business owners reach agreements and make decisions together. Sambatan reflects the practice of mutual assistance in both social and economic activities. Mutual trust strengthens relationships between business owners, customers, suppliers, and partners. Hospitality shapes the customer experience, particularly in culinary and creative businesses that interact directly with consumers. Meanwhile, communal relations foster cooperation, information sharing, and the strengthening of community-based business networks.

Osing local wisdom can be integrated into MSMEs business strategies through three main approaches. The first is culture-based branding. In this strategy, MSMEs actors use local stories, cultural symbols, language, visual design, local materials, or historical narratives to build brand identity. Culture-based branding can strengthen a product's authenticity because

customers view the product not merely as a consumer good, but also as a representation of local identity. This strategy is particularly important for culinary and creative MSMEs, as both sectors rely heavily on uniqueness, experience, and perceived value.

The second approach is the development of products rooted in local authenticity. Culinary and creative MSMEs can develop products by utilizing local ingredients, cultural motifs, traditional stories, local production techniques, or visual symbols connected to the Osing identity. Culture-based product development does not mean rejecting innovation. On the contrary, innovation must be pursued while preserving local roots so that products can meet the needs of the modern market without losing their identity. In the context of this approach, local wisdom serves as the source of inspiration for products, while the creativity of business owners acts as the means to translate local values into more competitive products.

The third approach is community-based business collaboration. The values of consensus, solidarity, and communal relationships can strengthen cooperation among MSMEs, cultural communities, local governments, tourism stakeholders, and business support institutions. Collaboration is essential because MSMEs often face limitations in capital, information, technology, and market access. By collaborating, MSMEs can share information, expand market networks, conduct joint promotions, develop products together, and strengthen their position within the local economic ecosystem. A study by Tuthaes et al. (2024) also indicates that multi-stakeholder collaboration in MSMEs rooted in local wisdom can enhance innovation, resource exchange, and community engagement.

These three approaches demonstrate that Osing local wisdom serves not only as a cultural identity but also as a strategic mechanism in MSME businesses. Cultural-based branding reinforces differentiation. Product development rooted in local authenticity enhances the unique value of products. Community-based collaboration enhances business resilience and adaptive capacity. Thus, business strategies rooted in local wisdom can support the sustainability of MSMEs through customer loyalty, social legitimacy, market adaptation, strengthened business networks, and the preservation of cultural values in business practices.

According to the literature, this study positions Osing local wisdom as a culturally embedded, intangible strategic resource. This resource operates through three main strategies: culture-based branding, product development rooted in local authenticity, and community-based business collaboration. These three strategies serve as mechanisms linking Osing values to the sustainability of MSMEs. This sustainability is evident through customer loyalty, business resilience, social legitimacy, adaptability, network strengthening, and the sustainability of cultural values. This framework serves as the conceptual foundation for the study to explore how Osing values are integrated into the business strategies of culinary and creative MSMEs in Banyuwangi.

3. Material and Method

This study employs a qualitative approach using the case study method. This approach was chosen because the study focuses on gaining an in-depth understanding of the processes, meanings, experiences, and socio-cultural practices involved in integrating Osing local wisdom into MSME business strategies. The study focuses on exploring how MSME actors utilize Osing values in building their brand, developing products, and strengthening business collaborations.

The case study method was used because the phenomenon under study occurs within a real-life context, namely the Osing-based SME ecosystem in Banyuwangi Regency. Case studies are relevant when researchers wish to deeply understand contemporary phenomena within a specific context, particularly when the boundary between the phenomenon and the context cannot be clearly separated (Yin, 2018). In this study, Osing local wisdom is not understood merely as a cultural symbol but as a strategic resource inherent in SME business practices.

The data for this study were collected using several techniques, including, first, a semi-structured interview. Semi-structured interviews were used to gather in-depth information on how MSMEs integrate local cultural wisdom into their business practices (Creswell & Poth, 2018). The interviews were conducted in a semi-structured manner so that the researcher had a set of guiding questions, yet still allowed informants the freedom to openly describe their experiences, perspectives, and business practices. Second, non-participant observation. Observation was used to gain a contextual understanding of how Osing values manifest in daily business practices (Fetters & Rubinstein, 2019). In this case, the researcher observed business activities, product displays, packaging, cultural symbols, customer interactions, service practices, and business collaboration patterns without intervening in the informants' business activities. Third, documentation. Documentation was carried out on product photos, packaging, promotional materials, social media posts, business profiles, and other relevant supporting evidence.

3.1 Design Study

The study employs a single-case embedded design (Baxter & Jack, 2008). The primary case in this study is the Osing-based MSMEs ecosystem in Banyuwangi Regency. The embedded unit of analysis consists of two groups: Osing-based culinary MSMEs and Osing-based creative MSMEs. The design was chosen because the study aims to understand a single shared cultural context, namely Osing culture, while also considering the variations in business practices across the two distinct MSMEs sectors.

The case boundaries in this study were determined through two aspects. First, the geographical boundary, which is Banyuwangi Subdistrict and Gelagah Subdistrict, Banyuwangi Regency, East Java, Indonesia. Second, substantive boundaries, namely SMEs that utilize Osing cultural values, symbols, products, narratives, language, cuisine, or identity in their business activities. With these boundaries, the MSMEs studied do not necessarily have to be owned by Osing people. However, the businesses must demonstrate a tangible connection to Osing culture through their products, services, branding, or collaborative business practices.

The informants were selected using purposive sampling, which involves intentionally selecting informants based on the suitability of their knowledge, experience, and involvement with the phenomenon under study (Etikan et al., 2015). The technique was used because qualitative research requires informants capable of providing in-depth and relevant information (Campbell et al., 2020; Creswell & Poth, 2018). In the context of this study, informants were selected because they had direct experience in operating, supporting, or understanding Osing culture-based MSMEs.

There were eight informants in this study. The informants consisted of owners of Osing-based culinary MSMEs, owners of Osing-based creative MSMEs, cultural figures or members of the

Osing community, and MSME facilitators who understand the MSME ecosystem and the local culture of Banyuwangi. The number of informants was deemed sufficient because the data obtained showed a repetition of information patterns and no longer yielded significant new themes in the final stages of the interviews. In a qualitative study, data sufficiency is determined more by the depth of information and data saturation than by a large number of informants (Creswell & Poth, 2018).

Informant Code	**Informant Category**	**Role in Study**	**Number**
KUL1-KUL3	Owner of Osing-based culinary MSMEs	Explain integration mark Osing in product culinary, branding, stories culture and development product local	3 people
KRE1-KRE3	Owners of Osing-based creative MSMEs	Explaining the integration of Osing values in creative products, designs, brand narratives, and business collaborations	3 people
BUD1	Figure culture / community Osing	Give context values, symbols, and identity culture Osing	1 person
PDM1	MSME Companion	Providing perspectives on business ecosystems, mentoring, and development of culture-based MSMEs	1 person
Total			**8 informants**

Selection of key informants was based on five criteria. First, the business is located in Banyuwangi Regency. Second, the business operates in the culinary or creative sector. Third, the business incorporates Osing cultural elements into its products, services, brand narrative, packaging, language, visual symbols, and collaborative practices. The fourth criterion is that the business has been operating for at least one year so that the informant has sufficient experience to explain the dynamics of the business. The fifth criterion is that the informant is willing to participate in a face-to-face interview and provide information relevant to the research objectives.

The primary instrument in this study is the researcher. The researcher serves as the key instrument in qualitative research because they are directly involved in collecting, interpreting, and constructing meaning from field data (Creswell & Poth, 2018). To ensure focused data collection, this study employs semi-structured interview guidelines, observation sheets, and documentation guidelines.

The research procedure was conducted in several stages. The first stage involved an initial mapping of culinary and creative MSMEs associated with Osing culture in Banyuwangi Regency. The second stage involved selecting informants based on predetermined criteria. The third stage involved conducting semi-structured face-to-face interviews, non-participatory observation, and collecting documentation. The fourth stage involved compiling interview transcripts, field notes, and supporting documents. The fifth stage consisted of manual coding and thematic analysis. The sixth stage involved comparing patterns of findings between

culinary MSMEs and creative MSMEs. Finally, the findings were interpreted using the RBV as an analytical lens.

3.2 Data Analysis

Data was analyzed using thematic analysis, following the approach outlined by Braun & Clarke (2022). Thematic analysis was chosen because this method allows researchers to systematically identify, develop, and interpret patterns of meaning from qualitative data. Analysis was conducted iteratively through in-depth reading of interview transcripts, observation notes, and supporting documents; coding of relevant data; development, review, refinement, and naming of themes; and writing of analysis results supported by informant quotes. Coding focused on issues related to Osing local wisdom, cultural branding, product development, collaboration, and the sustainability of MSMEs.

Data credibility was maintained through source triangulation and methodological triangulation. Source triangulation was conducted by comparing information from culinary MSMEs owners, creative MSMEs owners, Osing cultural figures or community members, and MSMEs facilitators who understand the culture-based MSMEs ecosystem in Banyuwangi. Methodological triangulation was conducted by comparing the results of interviews, observations, and documentation. The qualitative case study research employs triangulation not only to identify commonalities in information but also to understand complementary and divergent meanings across sources (Farquhar et al., 2020).

This study also adheres to research ethics principles. Each informant was provided with an explanation of the research objectives, the types of data collected, and the use of data for academic purposes. Informant participation was voluntary. The informants had the right to refuse to answer certain questions and could withdraw their participation if they felt uncomfortable. The informants' identities were disguised in the presentation of the research results. Interview quotes were used selectively to support the findings and were presented with informant codes to ensure confidentiality.

4. Result

This section presents the results of a thematic analysis of interviews, observations, and documentation involving eight informants. These informants include owners or managers of Osing-based culinary MSMEs, owners or managers of Osing-based creative businesses, cultural figures or members of the Osing community, and MSMEs mentors from business incubators or support organizations. This analysis reveals three main themes: cultural branding and business differentiation, the development of authentic local products, and community-based collaboration. These three themes demonstrate how Osing local wisdom is translated into business strategies for culinary and creative MSMEs in Banyuwangi.

Table 1. Profile of Informants

Informant Code	**Category Informant**	**Type of Business/Role**	**Forms of Osing Integration**	**Data source**
KUL1	culinary MSMEs	Osing traditional food / pecel pitik	Traditional recipe, cultural story, and local culinary experience	Interviews, observations

Informant Code	Category Informant	Type of Business/Role	Forms of Osing Integration	Data source
KUL2	culinary MSMEs	Banyuwangi specialty coffee	Packaging local, story of Kemiren Village, symbol of Banyuwangi	Interviews, documentation
KUL3	culinary MSMEs	Chocolate local / souvenir products	Modern packaging, Banyuwangi's identity	Interviews, documentation
KRE1	creative MSMEs	Batik/fashion	Osing motifs, visual design, symbols culture	Interviews, documentation
KRE2	creative MSMEs	Crafts/ souvenirs	Ornamen Osing, cultural merchandise, stories product	Interviews, documentation
KRE3	creative MSMEs	Product worship/travel equipment	Adaptation modern products with cultural visual design Osing	Interviews, documentation
BUD1	Cultural figure	Informant culture	Context mark Osing, connection, relationship communal, identity local	Interview
PDM1	MSME facilitator	Informant supporters	Ecosystem business, events, networking, mentoring, opportunities tour	Interview

Table 2. Themes, Categories, Codes, and Data Sources

Main Theme	Category	Code Example	Dominant Unit	Data source
Cultural branding and differentiation business	Cultural narratives, symbols local, product name, story area	typical Osing, typical of Banyuwangi, Kemiren Village, symbol Gandrung, language Osing	Culinary and creative	Interviews, observations, documentation, social media
Development of authentic local products	Recipe local, materials local, cultural motifs, design local, modern packaging	pecel pitik, local coffee, Choco Deles, Osing motif, batik, travel products	Culinary and creative	Interviews, documentation product
Collaboration based community	Sambatan /gotong royong, cultural events, promotions together, network business	Work same event, cultural festival, promotion together, community tourism, support government	Culinary and creative	Interviews, observations, documentation activity

4.1. Cultural Branding and Business Differentiation

The results of the study show that Osing culture is used as a foundation for building business identity and differentiation. MSMEs entrepreneurs not only sell products but also convey the local stories, symbols, and values inherent in those products. Cultural branding is

evident in product names, packaging, promotional narratives, social media content, visual symbols, and the way entrepreneurs describe their products to customers.

In culinary MSMEs, cultural branding emerges through traditional Osing recipes, local foods, the use of the Osing language, and stories about Banyuwangi. Products such as pecel pitik, coffee, traditional Osing dishes, and local chocolate are positioned as products with cultural origins. Observations show that some business owners incorporate local elements into their packaging, promotional copy, and product stories. Social media posts also demonstrate the use of terms like Banyuwangi-style, Osing-style, or narratives about Kemiren Village to reinforce the product's identity. One culinary informant explained:

> *"I sell traditional Osing food, but it's not just the taste that we bring to the table. The story behind it is just as important. Customers usually appreciate learning about the traditions behind the food, when it's typically served, and why it's considered a traditional Osing dish." (KUL1)*

Other informants stated that local identity helps customers recognize products more easily:

> *"My packaging features Osing elements. If the packaging includes Banyuwangi or Osing elements, people remember it more quickly. They immediately say, this is a typical Banyuwangi souvenir, right? So, our products don't look the same as others, especially since the brand is synonymous with Osing, like 'Deles' and 'Choco Deles.'" (KUL2)*

In creative MSMEs, cultural branding is more strongly reflected through visual symbols. Entrepreneurs use batik motifs, Osing ornaments, Gandrung symbols, distinctive Banyuwangi designs, local colors, and cultural narratives as part of the product's identity. Products such as batik, fashion, handicrafts, cultural merchandise, art products, and religious/travel accessories convey cultural value through visual forms and product narratives. One creative SME entrepreneur stated:

> *"The first thing people notice about a creative product is its form. So, we incorporate Banyuwangi elements, such as motifs, colors, or the Gandrung symbol. From that, buyers immediately know this product has a local identity." (KRE3)*

The data shows that creative MSMEs use cultural visual elements more frequently in their catalogs, packaging, and social media. Product narratives highlight not only functionality but also Banyuwangi's identity. These findings indicate that cultural branding serves as a crucial differentiation strategy for both culinary and creative MSMEs. For culinary MSMEs, differentiation is primarily built through taste, food stories, and the dining experience. For creative MSMEs, differentiation is more strongly established through visual symbols, design, and the cultural value of the product.

4.2. Development of Authentic Local Products

The results of the study show that MSME operators develop products while maintaining local authenticity. Authenticity in the data is evident in three aspects: the use of local ingredients or recipes, the use of cultural symbols, and efforts to preserve the product's origin story. MSMEs actor engage in innovation, but this innovation is not aimed at erasing cultural identity. Instead, innovation is used to make local products more relevant to the needs of the modern market.

In the culinary MSMEs, local authenticity is reflected in recipes, presentation methods, and product narratives. Pecel pitik, coffee, Osing-style dishes, and local chocolate are developed while retaining the identity of Banyuwangi. Some business owners use more modern packaging to make the products easier for tourists to carry. However, they still preserve the taste, ingredients, and local stories. One culinary informant stated:

> *"The packaging can be made more modern. On my packaging, for example, there's an image of Gandrung, and there's also an image of Seblang, so people still recognize the Osing characteristics. The promotion can also keep up with the times through the use of social media or more modern methods. But what's important is that the distinctive flavor must not be lost. The story must also remain. If both the flavor and the story are lost, then it's no longer truly Osing." (KUL3)*

Another informant explained that product adaptation is necessary so that local products can be accepted by a broader consumer base:

> *"Nowadays, culinary products aren't enough if they're just tasty. The packaging must also be attractive to entice people to buy, especially if it's a souvenir. On the packaging, I still include the story of Kemiren Village and symbols of Banyuwangi so that buyers know the product's origins. So, the appearance can be made more modern, but the taste and local identity must still be preserved." (KUL2)*

In the creative MSMEs sector, local authenticity is evident in the use of motifs, visual designs, cultural symbols, and product narratives. Products such as batik, fashion, handicrafts, cultural merchandise, and art pieces demonstrate that local values can be applied to modern products. Entrepreneurs strive to align with market tastes without compromising Banyuwangi's identity. One creative informant stated:

> *"In my opinion, batik isn't just about the motifs; there's a story behind it. We use motifs closely tied to Osing and Banyuwangi culture, then adapt them into more modern fashion styles. So young people can still wear them, but the regional identity remains visible." (KRE1)*

Another informant explained that cultural symbols are also incorporated into souvenir products to give them local meaning:

> *"For souvenir products, we usually include ornaments or distinctive Banyuwangi symbols, like Gandrung, the Banyuwangi udeng, or the seblang. Or shapes that remind people of Osing culture. Buyers today prefer simple and aesthetically pleasing products, so we design them to be more modern. But we still carry the cultural story, so the item has meaning, not just as a decoration." (KRE2)*

Another creative MSME actor emphasized that adapting to the modern market is still done without losing local identity:

> *"Products today do have to follow market needs. For example, the design is made more practical, the colors more elegant, and they can be used daily. But we still incorporate Banyuwangi elements into the visuals, so people know this product has cultural roots, there's a QR code for that. For us, modernity is fine, as long as the local identity isn't lost." (KRE3)*

These MSME actors' views are reinforced by an Osing cultural figure who stresses that using cultural symbols in business products must be accompanied by an understanding of the cultural meanings embedded within them. The cultural figure explained:

> *"In my opinion, Osing symbols like gandrung, seblang, and udeng shouldn't just be used as decorations on packaging or products. They all have meaning. If business owners use these symbols, they should also understand the stories behind them, so the products don't just look distinctively Banyuwangi but also respect the cultural values of Osing." (BUD1)*

Results from product documentation show that creative MSMEs frequently incorporate cultural motifs and symbols into their designs. Meanwhile, culinary MSMEs emphasize authenticity through flavor, food narratives, and souvenir packaging. Thus, the development of authentic local products does not preclude innovation. MSMEs actor, in fact, use innovation to enhance product appeal, open up tourism market opportunities, and ensure the sustainability of cultural values.

4.3 Community-Based Collaboration

The third theme indicates that the sustainability of Osing-based MSMEs is supported by collaboration. In the context of this research data, informants understand sambatan as a practice of mutual assistance that emerges in social and business activities. An Osing cultural figure explained that sambatan is not limited to social activities but is also present in the economic relationships of the local community. The cultural figure explained:

> *"In Osing culture, sambatan isn't just about people coming to help during celebrations or village events. It is also the case in daily life. If a neighbor or business owner needs help, others usually pitch in, whether by providing information or connecting them to a broader network. So, 'sambatan' is actually a value of mutual support that remains alive in the community." (BUD1)*

These values manifest in the form of joint promotions, collaboration during events, product partnerships, information sharing, and community support. In the culinary MSME sector, collaboration emerges when business owners participate in trade shows, food festivals, or regional promotional events. Some informants noted that MSME owners share information about events, sales locations, and promotional opportunities. Collaboration also occurs when business owners receive large orders or participate in joint activities. One culinary informant explained:

> *"When there's an event, we usually keep each other in the loop. We have a community called UMAMI. The parent organization is called AKRAB. We share who's participating, what they're selling, and what help they need. Sometimes we also promote together on social media." (KUL2)*

Among creative MSMEs, collaboration frequently occurs with creative communities and exhibition events. Business owners leverage exhibitions such as the Banyuwangi Festival. Observations of promotional activities indicate that culturally based products are more easily recognized when showcased alongside cultural or tourism events. One creative MSME owner stated:

> *"Creative products need a platform to be seen. When there's an event or exhibition, we can showcase our products, like at the Batik Festival. From there, our network grows, and people start to recognize us." (KRE1)*
>
> *"We often collaborate with other artisans. Especially when there's an exhibition." (KRE2)*

Supporting informants emphasized that culture-based MSMEs need an interconnected ecosystem:

> *"Osing-based MSMEs are strong when they're part of an ecosystem. They need events, communities, promotion, and collaboration with tourism stakeholders. If they operate in isolation, their potential isn't fully realized." (PDM1)*

These findings indicate that collaboration helps MSMEs overcome resource constraints. Collaboration is perceived to open market opportunities, expand networks, strengthen social legitimacy, and help businesses survive in a competitive environment. In the culinary MSME sector, collaboration is more evident in culinary events and joint promotions. In the creative MSME sector, collaboration is stronger within creative communities, cultural exhibitions, and tourism networks.

4.4. Comparison of Culinary and Creative MSMEs

The results of the study show that culinary MSMEs and creative MSMEs both utilize Osing local wisdom, but in different forms. Culinary MSMEs place greater emphasis on authentic flavors, signature recipes, friendly service, and culinary narratives. Meanwhile, creative MSMEs place greater emphasis on visual symbols, design, motifs, art products, and cultural branding.

This difference demonstrates that Osing local wisdom is flexible. The same values can be translated into different business strategies depending on the nature of the business sector. In the culinary sector, Osing values are often expressed through taste experiences and interactions with customers. In the creative sector, Osing values are more evident through visual forms, product design, cultural symbols, and brand narratives.

Table 3. Comparison between Culinary and Creative MSMEs

Aspect Findings	Osing-Based Culinary MSMEs	Osing-Based Creative MSMEs	Implications for Sustainability
Forms of Osing Value Integration	Recipe typical, authentic taste, food local, language Osing, Kemiren Village story, service friendly	Batik motifs, ornaments Osing, symbol Gandrung, Banyuwangi visual design, narrative culture	Culture become differentiator products and strengthen market identity
Example product	Pecel pitik, coffee, food typical Osing, chocolate local	Batik, crafts, fashion, products art, merchandise, travel products	Product more easy positioned as typical of Banyuwangi/ Osing
Dominant branding strategy	The product is positioned as a typical Banyuwangi/Osing culinary specialty	The product is positioned as a creative work based on Banyuwangi identity	Local branding strengthen tourism market appeal
Development product	Adapting traditional food to modern packaging and using local ingredients	Innovation design without leaving motifs, symbols and stories local	Product still relevant with a market without lost identity

Aspect Findings	Osing-Based Culinary MSMEs	Osing-Based Creative MSMEs	Implications for Sustainability
Collaboration	Joint promotions, collaboration during events, culinary product collaboration	Collaboration with community creative, cultural events, actors' tourism and government	Network expand the market and strengthen resilience business
The visible pattern of continuity	Loyalty customers, tourism market opportunities culinary, resilience business	differentiation, expansion network, legitimacy culture, strengthening branding	Both sectors show different but complementary sustainability pathways.

In order to synthesize the research findings, Table 4 presents the relationship between Osing values, business strategies, empirical evidence, and the sustainability dimensions of MSMEs. This matrix shows that Osing local wisdom is not only used as a cultural identity but is also translated into concrete business strategies through cultural branding, the development of authentic local products, and community-based collaboration.

Table 4. Matrix of Osing Values, Business Strategies, Evidence, and Sustainability Dimensions

Osing Values	Business Strategy	Empirical Evidence	Sustainability Dimension
Cultural authenticity and local identity pride	Cultural branding and business differentiation	Use of Osing /Banyuwangi narratives, local product names, Gandrung symbols, Kemiren Village stories, and cultural packaging	Cultural and economic sustainability
Local authenticity and cultural symbols	Authentic local product development	Use of traditional recipes, local ingredients, batik motifs, Osing ornaments, modern packaging, and culturally inspired product design	Cultural and economic sustainability
Connection, mutual cooperation, and communal relations	Community-based collaboration	Joint promotion, participation in cultural events, MSME exhibitions, collaboration with creative communities, tourism actors, and local stakeholders	Social and economic sustainability

The matrix shows that Osing local wisdom is perceived to contribute to practices that support the sustainability of MSMEs through three interrelated mechanisms. First, cultural authenticity and pride in local identity strengthen product differentiation and cultural legitimacy. Second, the development of authentic local products enables MSMEs to innovate without losing their cultural roots. Third, community-based collaboration helps MSMEs overcome resource constraints, expand their networks, and open up broader market opportunities. These three mechanisms demonstrate that Osing local wisdom functions as a culturally embedded intangible resource that supports economic, social, and cultural sustainability.

Table 5. Summary of Findings

Osing Values that Appear	Business Strategy	Form Practice	Impact to Sustainability of MSMEs

Authenticity culture and pride identity local	Cultural branding and differentiation business	Product name, story Osing, symbol local, narrative typical of Banyuwangi/ Osing, and position product as product typical area	Differentiation products, branding strengthening, legitimacy culture and power attract tourist markets
Local authenticity and local ingredients	Development of authentic local products	Signature recipes, local ingredients, modern packaging, cultural designs, local motifs, and product adaptation to market needs	Unique product value, market relevance, product appeal, and sustainability of cultural values
Connection /mutual cooperation and relations communal	Collaboration based community	Joint promotions, event collaborations, product collaborations, community support, cultural exhibitions, and tourism networking	Business resilience, network expansion, social legitimacy, and tourism market opportunities

The results of this study indicate that Osing local wisdom is applied in concrete business practices through cultural branding, the development of authentic local products, and community-based collaboration. In culinary MSMEs, Osing values are most strongly reflected in flavors, recipes, packaging, and culinary narratives. In creative MSMEs, Osing values are more prominent through visual symbols, motifs, designs, ornaments, and cultural narratives. These two patterns demonstrate that local wisdom can serve as a cultural resource that supports product differentiation, social legitimacy, network expansion, and the sustainability of MSMEs in Banyuwangi.

5. Discussion

This study's findings indicate that Osing values function as a cultural resource translated into MSME business strategies. These findings expand our understanding of MSME sustainability, which has traditionally been explained through financial aspects, innovation, technology, entrepreneurial orientation, and managerial capabilities (Kusuma et al., 2024; Muafi & Roostika, 2022). In the context of culinary and creative MSMEs in Banyuwangi, Osing values are not merely present as a cultural identity but are perceived to support business sustainability through cultural branding, the development of authentic local products, and community-based collaboration.

The main findings of this study underscore a shift from local wisdom as cultural identity toward local wisdom as a strategic business resource. This shift is significant because local wisdom is often understood merely as a regional symbol, a traditional legacy, or a promotional attraction. This study demonstrates that local values can become a business resource when MSME actors manage them strategically in their daily business practices. Thus, culture is not merely a backdrop for products but becomes an integral part of the value offered to customers.

Within the RBV framework, resources can support sustainable competitive advantage if they possess the characteristics of value, rarity, imitability, and substitutability (J. Barney, 1991; Wernerfelt, 1984). Osing values can be understood through these VRIN characteristics. These values are valuable because they help MSMEs build differentiation and social legitimacy. This value is rare because it is inherent to the socio-cultural identity of Banyuwangi. It is difficult to imitate because it grows from history, community practices, collective experiences, and

social relations within the community. It is also difficult to substitute because other cultural identities cannot fully replace the local meaning inherent in Osing culture. Thus, Osing value can be positioned as a culturally embedded intangible resource.

This finding builds upon the study by Mahrinasari et al. (2024), which demonstrated that local wisdom can strengthen sustainable competitive advantage in Indonesia's creative industries. Unlike studies that primarily position local wisdom as a factor supporting competitiveness, this research explains the process of converting local values into concrete business strategies. The main contribution of this research is not only to demonstrate that local wisdom is important but also to explain how these values operate through branding, product development, and community collaboration. In other words, this study provides an explanation of mechanisms that have not been extensively discussed in studies of local wisdom-based MSMEs.

The first mechanism is cultural branding. Cultural branding functions as a differentiation mechanism by transforming MSME products from mere consumer goods into products that carry a story, social meaning, and local identity. In culinary MSMEs, differentiation is built through taste, recipes, signature dishes, local language, and narratives about Banyuwangi or Kemiren Village. In creative MSMEs, differentiation emerges more strongly through batik motifs, Osing ornaments, Gandrung symbols, visual design, and cultural narratives. These findings indicate that culture can enhance a product's symbolic value. In the tourism market, specifically for souvenirs, local cuisine, and creative products, customers seek not only the product's functionality but also the experience, origin, and authenticity. These findings align with Diatmika & Rahayu (2025), who demonstrate that local creativity and cultural wisdom can strengthen MSME innovation through distinctive products that are relevant to the market.

The second mechanism is the development of authentic local products. Findings indicate that MSME actors do not view tradition and innovation as mutually exclusive. Local products can be repackaged, redesigned, and promoted in a modern way without losing their cultural roots. In the culinary MSME sector, authenticity is evident in recipes, flavors, local ingredients, and food stories. In creative MSMEs, authenticity emerges through motifs, symbols, designs, and product narratives. Thus, authenticity does not hinder innovation but serves as its foundation. These findings reinforce the concept of sustainable entrepreneurship, which emphasizes that entrepreneurial activities must link economic value with elements worth preserving, such as community, culture, the environment, and local identity (Schaltegger & Wagner, 2011).

The third mechanism is community-based collaboration. The value of solidarity or mutual cooperation helps MSMEs access resources that they do not possess individually. Through joint promotions, trade shows, community networks, government support, and collaboration with tourism stakeholders, MSMEs can expand their markets and strengthen business resilience. In this context, community-based collaboration functions as a sustainability mechanism because it helps MSMEs address limitations in capital, information, promotional capacity, and market access through collective support. This finding aligns with Fahrurrozi et al. (2024), who show that the transformation of creative business models requires strengthening strategic partnerships with suppliers, logistics providers, other MSMEs, relevant government agencies, business incubators, and supporting institutions to expand market access and strengthen business capabilities. In addition, these findings also reinforce the view of Peredo & Chrisman (2006), who position communities as a crucial foundation for business development because they provide shared values, solidarity, social resources, and collective

goals. In the context of Osing-based MSMEs, collaboration is not only economic but also social and cultural.

A comparison between culinary MSMEs and creative MSMEs shows that a single cultural source can be translated into different forms of business strategy. In culinary MSMEs, Osing values are more strongly present through taste, recipes, local ingredients, friendly service, and food stories. Customers experience the culture directly through taste and interaction. Therefore, the sustainability of culinary MSMEs is largely perceived through repeat purchases, customer recommendations, and culinary tourism appeal.

Conversely, in creative MSMEs, Osing values are more strongly expressed through motifs, visual symbols, design, fashion, souvenirs, art products, and cultural narratives. Customers experience the culture through the visual form and symbolic meaning of the products. Therefore, the sustainability of creative MSMEs is more often perceived through visual differentiation, brand image, souvenir value, participation in cultural events, and market network expansion. This distinction demonstrates that local values are flexible. Similar values can yield different strategic forms depending on the nature of the business sector. However, their strategic functions remain the same: differentiating products, creating meaning, expanding networks, and strengthening social legitimacy.

Theoretically, this study offers three main contributions. First, it expands RBV by demonstrating that local wisdom can be understood as a culturally embedded intangible resource. In RBV literature, intangible resources are often discussed in terms of reputation, organizational culture, relationships, knowledge, and capabilities (J. Barney, 1991; J. B. Barney et al., 2011). This study adds that local values can also become strategic resources when managed in business practices. Second, this study explains the mechanism of converting cultural values into business strategies through cultural branding, the development of authentic products, and community collaboration. Third, this study enriches the literature on MSME sustainability in developing countries by demonstrating that sustainability is not solely determined by technology, financing, innovation, or green capabilities, but also by entrepreneurs' ability to manage cultural and relational resources (Kusuma et al., 2024; Muafi & Roostika, 2022).

Thus, this discussion demonstrates that the sustainability of culture-based MSMEs is determined not only by economic capabilities but also by entrepreneurs' ability to manage local values as a strategic resource embedded in daily business practices. Osing values are perceived to support MSME sustainability because they foster differentiation, strengthen trust, preserve product authenticity, and expand collaboration within the local business ecosystem.

6. Conclusion, Implication, and Recommendation

This study aims to explore how Osing local wisdom is integrated into the business strategies of culinary and creative MSMEs in Banyuwangi and how these values contribute to the sustainability of MSMEs. The results show that Osing local wisdom not only serves as a cultural identity but can also be understood as a strategic resource that is translated into business practices. Values such as cultural authenticity, sambatan, communal relationships, and pride in local identity emerge through three main strategies: cultural branding, the development of authentic local products, and community-based collaboration.

The findings also indicate that culinary and creative MSMEs exhibit distinct patterns in the application of Osing values. In culinary MSMEs, Osing values are more strongly expressed through flavor, recipes, and food narratives. In creative MSMEs, these values are more evident through motifs, visual symbols, design, cultural narratives, and creative products. Although differing in form of application, both sectors demonstrate the same strategic functions: building differentiation, expanding business networks, maintaining social legitimacy, and supporting the sustainability of cultural values in business activities.

Theoretically, this research contributes to the development of RBV and the literature on sustainable entrepreneurship. These findings indicate that Osing values can be understood as intangible resources embedded in culture, as they possess characteristics of value, scarcity, difficulty in replication, and difficulty in substitution. Furthermore, this study explains the mechanism of converting local values into business strategies, thereby broadening the understanding that the sustainability of MSMEs is shaped not only by financial capital, technology, and innovation but also by the ability of business actors to manage cultural and community resources.

In practical terms, this research has implications for MSME actors, local governments, business incubators, cultural communities, and tourism stakeholders. MSME actors need to develop culturally-based product narratives, maintain the authenticity of taste or design, improve packaging, and consistently showcase local identity. Local governments and business incubators can strengthen support through curation of Osing-based products, training in cultural branding, digital storytelling, packaging development, and facilitating cultural exhibitions or events. Cultural communities can help validate the use of Osing symbols and stories to ensure they are not merely commercial add-ons. Tourism stakeholders can also integrate culinary and creative MSMEs into Osing-based tourism packages.

Based on research findings, several recommendations can be proposed. First, strategies for developing culture-based MSMEs need to focus on strengthening product narratives, local symbols, and community collaboration. Second, MSME mentoring programs should not only focus on production and marketing aspects but also on the ability of business operators to translate cultural values into business value. Third, local governments need to build a promotional ecosystem that connects culinary MSMEs, creative MSMEs, cultural communities, tourism operators, business incubators, and local events so that local wisdom can be managed as a sustainable economic strength.

This study has several limitations. The research focuses solely on Osing-based culinary and creative MSMEs in Banyuwangi Regency with 8 informants selected through purposive sampling; therefore, the findings are not intended for statistical generalization. Additionally, the qualitative approach used emphasizes depth of understanding rather than measuring relationships between variables. Future research could employ a quantitative approach to test the influence of local wisdom on the competitive advantage and sustainability of MSMEs. Comparative studies on other local cultures in Indonesia are also needed to determine whether similar mechanisms emerge in different socio-cultural contexts. Future research could also explore the role of digital marketing, tourism platforms, and the creative ecosystem in strengthening cultural storytelling and expanding the market for local wisdom-based MSMEs.

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Tax Consultants' Acceptance of the Coretax Administration System

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Abstract

This study aims to analyze tax consultants' perceptions regarding the implementation of the Coretax Administration System (CTAS) in supporting tax administration modernization in Indonesia. The study employed a qualitative descriptive approach through in-depth interviews with two tax consultants from Amon Silaban Tax Consulting Office and Hendra Setiyawan Tax Consulting Office in Batam City. Data analysis was conducted using the Technology Acceptance Model (TAM), particularly focusing on perceived usefulness and perceived ease of use. The findings indicate that CTAS provides significant benefits in improving work efficiency, accelerating tax administration processes, and integrating various tax services into one platform. From the perspective of perceived usefulness, the system is considered capable of supporting tax consultants' professional performance through automation and integrated data management. However, from the perspective of perceived ease of use, several technical obstacles were still encountered, particularly during peak reporting periods due to system errors and server overload. Despite these challenges, tax consultants continued to use the system because the perceived benefits outweighed the technical difficulties. The study concludes that perceived usefulness plays a more dominant role than perceived ease of use in influencing the acceptance of CTAS among tax consultants. These findings contribute to the understanding of technology adoption in tax administration reform and provide practical implications for improving the implementation of digital taxation systems.

Keywords: Coretax Administration System; Technology Acceptance Model; perceived usefulness; perceived ease of use; tax consultants

1. Introduction

Tax is the primary source of state revenue that plays a significant role in financing government programs and national development. In addition to functioning as a source of state income, taxation also serves as an instrument for regulating economic policy, maintaining economic stability, and supporting income redistribution within society (DJP, 2024a). Therefore, taxation has become a strategic instrument for supporting sustainable economic growth and national welfare.

Along with the increasing role of taxation, tax administration systems are required to continuously adapt in order to remain effective and efficient. The development of digital technology has encouraged transformation in various sectors, including taxation

administration. The Directorate General of Taxes (DGT) has implemented several electronic systems such as e-Filing, e-Billing, and DJP Online to facilitate online tax reporting and payment. However, these systems previously operated separately and were not integrated into a unified tax administration platform.

As part of Indonesia's tax reform agenda, the Directorate General of Taxes introduced the Coretax Administration System (CTAS), developed from 2021 to 2024 and officially implemented in January 2025 (DJP, 2024b). CTAS is part of the Core Tax Administration System Program and adopts Commercial Off-the-Shelf (COTS) technology to establish a modern, data-driven tax administration system. The system integrates taxpayer registration, document processing, tax payment, audit, and collection processes into a single platform.

Although CTAS offers various advantages, its implementation also presents several challenges. The transition from previous systems to a new integrated system requires user adaptation and technical readiness. The success of the system does not only depend on the readiness of the tax authority but also on external parties who interact directly with the system, including tax consultants.

Tax consultants play an important role as intermediaries between taxpayers and tax authorities. They assist clients in understanding tax regulations, calculating tax obligations, and ensuring compliance with tax reporting and payment requirements. Consequently, the implementation of CTAS potentially affects consultants' productivity, work effectiveness, and quality of professional services.

Previous studies indicate that CTAS has the potential to improve tax administration efficiency and transparency, although technical issues such as system bugs and adaptation challenges remain obstacles for users. These findings suggest that users' perceptions regarding the usefulness and ease of use of the system are essential determinants of technology acceptance.

Based on this background, this study focuses on analyzing tax consultants' perceptions of CTAS implementation using the Technology Acceptance Model (TAM). The study specifically examines two main TAM constructs, namely perceived usefulness and perceived ease of use, to understand factors influencing system acceptance among tax consultants in Batam City.

Despite the growing implementation of digital taxation systems in Indonesia, limited studies have specifically explored tax consultants' acceptance of CTAS from a qualitative perspective. Previous studies generally focused on taxpayers or tax officers, while research involving tax consultants remains relatively limited. Therefore, this study contributes to the literature by providing empirical evidence regarding tax consultants' experiences and perceptions toward CTAS implementation.

This study also contributes practically by providing insights for the Directorate General of Taxes regarding challenges and benefits experienced by tax consultants during the implementation of CTAS. The findings are expected to support future improvements in taxation digitalization policies and system development.

2. Literature Review

2.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), introduced by Davis (1989), explains user acceptance of technology based on two primary constructs: perceived usefulness and perceived

ease of use. Perceived usefulness refers to the degree to which individuals believe that using a system enhances their job performance, while perceived ease of use refers to the extent to which users believe that the system can be operated without significant effort.

TAM has been widely used to analyze technology adoption in various sectors, including taxation and digital public services. In the context of tax administration systems, users are more likely to accept and continue using technology when they perceive clear benefits and operational convenience.

2.2 Coretax Administration System (CTAS)

The Coretax Administration System (CTAS) is a digital taxation platform developed by the Directorate General of Taxes to modernize Indonesia's tax administration system. The system integrates various taxation services into a single platform to improve administrative efficiency, data integration, transparency, and taxpayer compliance.

CTAS automates tax administration processes such as taxpayer registration, tax payment, tax reporting, and audit administration. Through this integration, the system is expected to simplify tax administration procedures and improve service quality for taxpayers and tax professionals.

2.3 Previous Studies

Previous studies have highlighted the importance of technology acceptance in digital taxation systems. Nafisah and Widodo (2024) found that perceived usefulness and perceived ease of use significantly influence user acceptance of digital tax administration systems. Similarly, Asmoro et al. (2025) reported that tax consultants perceived CTAS as beneficial in improving efficiency and transparency in taxation processes.

Other studies also indicate that technical barriers and system adaptation challenges may affect user experience during the initial implementation period. Nevertheless, users tend to continue adopting systems that provide substantial practical benefits despite technical limitations.

3. Material and Method

3.1 Research Design

This study employed a descriptive qualitative approach to understand tax consultants' perceptions regarding the implementation of CTAS. Qualitative methods were selected because they allow in-depth exploration of participants' experiences, perceptions, and interactions with the taxation system.

3.2 Participants

The participants consisted of two tax consultants in Batam City. The first participant was the owner of Amon Silaban Tax Consulting Office, while the second participant was the owner of Hendra Setiyawan Tax Consulting Office. Both participants have professional experience in providing tax consulting services and actively use CTAS in their work activities.

3.3 Data Collection

Data were collected through semi-structured interviews, observations, and literature studies. Semi-structured interviews enabled researchers to explore participants' experiences and opinions regarding the usefulness and ease of use of CTAS.

3.4 Data Analysis

Data analysis was conducted using qualitative descriptive analysis. Interview data were categorized into themes related to perceived usefulness and perceived ease of use based on the Technology Acceptance Model. The analysis process involved data reduction, data presentation, and conclusion drawing.

4. Result

Table 1. Summary of TAM Findings

TAM Construct	Indicators Identified	Main Findings	Implication
Perceived Usefulness	Efficiency, integration, automation, service quality	CTAS improves efficiency, integrates tax administration, accelerates reporting and payment processes, and supports paperless administration.	Tax consultants perceive CTAS as beneficial for improving professional performance and administrative effectiveness.
Perceived Ease of Use	Ease of navigation, understandable features, operational simplicity	CTAS is generally easy to use due to integrated features and user-friendly menus, although technical issues still occur during peak reporting periods.	Technical barriers do not significantly reduce users' willingness to continue using the system because the perceived benefits remain dominant.

4.1 Perceived Usefulness

The interview results indicate that tax consultants perceive CTAS as highly beneficial in supporting taxation work activities. The system provides integrated tax administration services that improve efficiency and reduce repetitive administrative procedures.

One participant stated that CTAS "makes tax administration easier and saves time because all processes are integrated into one system." This integration minimizes the need to switch between multiple taxation platforms and simplifies administrative workflows.

Another participant explained that CTAS modernizes tax administration by combining multiple tax services into a single platform. The participant emphasized that users only need to input transaction values and select tax types, while the system automatically calculates tax obligations.

Participants also noted that CTAS facilitates faster access to tax-related information, including withholding tax documents and input tax data. This automation improves service quality and supports paperless administrative processes.

Overall, the findings demonstrate that perceived usefulness significantly influences tax consultants' acceptance of CTAS. The system is viewed as capable of improving productivity, work efficiency, and administrative accuracy.

4.2 Perceived Ease of Use

The findings also show that CTAS is generally perceived as easy to use. Participants explained that the system interface and menu structure are relatively understandable because they use Indonesian language instructions and organized navigation features. However, participants acknowledged several technical challenges during the early implementation period. One participant stated that system errors frequently occurred during peak reporting periods due to high user traffic. Despite these technical obstacles, participants emphasized that the issues were temporary and did not significantly reduce their willingness to continue using the system.

Another participant explained that CTAS does not increase work complexity because users only need to input taxation data into the available forms. As long as users understand taxation concepts and calculations, the operational process is considered manageable.

The findings suggest that technical issues are mainly related to system stability rather than operational complexity. Consequently, perceived ease of use remains relatively positive among tax consultants.

4.3 Coding and Theme Analysis

Table 2. Coding and Theme Analysis

Main Theme	Subtheme	Participant Statement	Interpretation
Perceived Usefulness	System Integration	"All tax services are integrated into one platform."	Participants perceive CTAS as improving administrative integration and reducing fragmented tax processes.
Perceived Usefulness	Work Efficiency	"The system saves time in reporting and payment processes."	CTAS is considered capable of improving productivity and accelerating tax administration activities.
Perceived Usefulness	Automation	"Users only need to input values and select tax types because the calculation is automatic."	Automation features reduce manual calculations and minimize administrative errors.
Perceived Usefulness	Service Quality	"Tax documents can now be checked directly from the system."	The system improves responsiveness and effectiveness in serving clients' taxation needs.
Perceived Ease of Use	Ease of Navigation	"The menus are understandable because they use Indonesian language instructions."	CTAS is perceived as relatively user-friendly and understandable for tax consultants.
Perceived Ease of Use	Operational Simplicity	"The system only requires users to input taxation data into available forms."	The operational process is considered manageable for users with taxation knowledge.

Main Theme	Subtheme	Participant Statement	Interpretation
Perceived Ease of Use	Technical Constraints	"Errors often occur during peak reporting periods."	Technical stability and server capacity remain challenges during implementation.
Perceived Ease of Use	User Adaptation	"At the beginning, there were adaptation difficulties due to system transition."	Initial implementation required adjustment and adaptation from users.

The coding analysis indicates that perceived usefulness emerged as the dominant theme influencing tax consultants' acceptance of CTAS. Although technical challenges were identified, participants consistently emphasized the practical benefits of the system in improving efficiency and supporting taxation administration processes. This finding confirms that users tend to maintain system usage when the perceived benefits outweigh operational difficulties.

5. Discussion

This study demonstrates that tax consultants' acceptance of CTAS is strongly influenced by perceived usefulness. Participants considered the system beneficial because it integrates taxation services, accelerates administrative processes, and improves work efficiency.

The findings are consistent with the Technology Acceptance Model, which suggests that users are more likely to adopt technology when they perceive substantial performance benefits. In the context of taxation administration, CTAS provides practical advantages through automation and centralized data management.

Although technical problems were experienced during the initial implementation period, these challenges did not significantly reduce users' acceptance of the system. Participants continued using CTAS because the perceived benefits outweighed operational difficulties. The findings also support previous studies indicating that perceived usefulness often has a stronger influence on technology adoption than perceived ease of use, particularly in professional work environments where efficiency and productivity are prioritized.

6. Conclusion, Implication, and Recommendation

The study concludes that CTAS provides substantial benefits in improving tax administration efficiency and supporting tax consultants' professional activities. The system simplifies administrative procedures through integrated services and automation features.

From the perspective of perceived ease of use, CTAS is generally considered easy to understand and operate, although several technical problems still occur during high-access periods. Nevertheless, these technical barriers do not significantly affect users' willingness to continue using the system.

The findings imply that the successful implementation of digital taxation systems depends not only on technical functionality but also on users' perceptions regarding system benefits. Therefore, the Directorate General of Taxes should continue improving system stability and providing technical support for users.

Future studies are recommended to involve broader participants and employ quantitative approaches to examine the relationship between TAM variables and CTAS adoption more comprehensively.

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Human Resource Management in Public Sector: Challenges and Sustainable Development

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Abstract

This qualitative research explores the implementation of Human Resource Management (HRM) policies in Indonesian public institutions, focusing on identifying challenges and developing strategies for improving apparatus quality. Using phenomenological approach, this study involved in-depth interviews with 15 key informants comprising government officials, HR managers, and civil servants at various organizational levels. Data analysis using coding and thematic analysis identified five major themes: (1) Structural and regulatory constraints limiting modern HRM implementation; (2) Significant competency gaps between existing and required qualifications; (3) Inadequate incentive systems failing to motivate performance; (4) Conservative organizational culture resisting innovation; (5) Adaptive strategies developed by forward-thinking institutions. Results indicate that effective HRM in public sector requires holistic approach addressing structural reform, competency development, performance-based incentive systems, and organizational culture transformation. Key recommendations include: modernizing regulatory framework, increasing HRM investment, strengthening merit-based recruitment, developing continuous learning programs, and cultivating transformational leadership. This research contributes to public policy formulation and sustainable HRM practices improvement in government institutions, emphasizing the critical importance of aligning policies with organizational context for achieving sustainable development goals.

Keyword: HRM; Public Sector; Competency Development; Qualitative Research; Organizational Culture; Sustainable Development

1. Introduction

Human Resource Management (HRM) is increasingly recognized as a critical strategic function in modern organizations, particularly in public sector institutions. In Indonesia, as stated in Law Number 43 of 1999 on Governance Principles, apparatus HRM must be managed professionally based on merit system to achieve organizational efficiency, effectiveness, and accountability. However, implementation of modern HRM in Indonesian public sector faces significant structural and operational challenges. These include: (1) misalignment between available and needed qualified personnel, (2) recruitment and selection systems not fully merit-

based, (3) limited investment in competency development and career progression, (4) gap between expected and actual performance, and (5) lack of effective recognition and reward mechanisms to drive work motivation. These challenges significantly impact quality of public service and institutional responsiveness to community needs.

This qualitative research is designed to deeply explore HRM challenges in public sector through holistic phenomenological approach. By focusing on context understanding, actor perspectives, and field implementation experiences, this research identifies critical factors affecting HRM effectiveness and formulates relevant and sustainable strategies for improving apparatus quality. Research output is expected to provide significant contribution for policymakers in designing and implementing HRM systems that are more responsive, inclusive, and oriented toward sustainable organizational goal achievement.

2. Literature Review

2.1 HRM Concept and Theories

Human Resource Management is defined as a series of activities designed to recruit, develop, maintain, and motivate employees in achieving organizational objectives. According to Dessler (2015), HRM is the process of identifying, recruiting, developing, maintaining, and utilizing human resources so that organizational objectives can be achieved efficiently. In public sector context, HRM has unique characteristics influenced by regulations, public policies, and ethical considerations different from private sector. Resource-Based View (RBV) theory conceptualizes HRM as strategic resource providing competitive advantage. Organizational Learning Theory emphasizes role of competency development in organizational learning. Change Management Theory explains organizational change dynamics and HRM role in supporting transformation.

2.2 HRM Best Practices in Public Sector

High-performing public sector organizations consistently apply strategic and integrated HRM practices. These include: (1) comprehensive HRM planning based on needs and competency gap analysis; (2) transparent merit-based recruitment and selection systems; (3) structured and continuous competency development programs; (4) objective and fair performance evaluation systems; (5) clear and transparent career management; (6) competitive compensation and benefits systems; and (7) positive and inclusive organizational culture development. However, implementation of these practices in Indonesian context faces various structural and contextual barriers requiring adapted approaches.

3. Research Method

3.1 Research Design

This research uses qualitative approach with phenomenological design. Phenomenological approach was selected because this research aims to understand meaning, experience, and perspective of social actors (government officials, HR managers, and employees) in context of HRM policy implementation and practices in public sector. Through holistic understanding of social phenomena, research can identify factors affecting HRM effectiveness and develop theoretical propositions relevant to local context.

3.2 Sample and Data Collection

Research sample consists of 15 key informants selected through purposive sampling: 5 government officials (senior managers), 5 HR managers/personnel department heads, and 5 civil servants at various levels. Sample selection criteria: (1) direct involvement in HRM policy formulation or implementation, (2) minimum 5 years experience in public sector, (3) willingness to share experience and perspectives deeply. Data collected through three methods: (1) In-depth semi-structured interviews (60-90 minutes each), exploring experience, perspectives, and understanding of HRM policies and practices; (2) Participatory observation in organization settings (meetings, recruitment processes, training programs); (3) Document analysis (HRM policies, regulations, annual reports, strategic plans). Data analyzed using thematic analysis technique with stages: familiarization, coding, theme searching, review, definition, and reporting with narrative integration of themes with data quotes and researcher interpretation.

4. Results

4.1 Research Participants Profile

Fifteen key informants from three different government institutions participated. Majority (12 people) had minimum S1 education with 3 possessing postgraduate degrees. Average public sector experience 12 years (range 5-28 years). Most informants (10 people) directly involved in HRM policy formulation/implementation. Gender representation balanced (8 female, 7 male).

4.2 Major Themes Identified

Theme 1 - Structural and Regulatory Constraints: Modern HRM implementation severely limited by rigid bureaucratic structure and strict regulations. System very centralistic and bound by difficult-to-change laws, providing no space for local innovation. Particularly evident in: (1) bureaucratic recruitment processes lasting 6-9 months; (2) classification systems not

matching modern organizational needs; (3) promotion based on seniority rather than merit; (4) barriers to implementing performance-based reward systems.

Theme 2 - Competency Gaps: Significant gap between apparatus competencies and requirements for modern governance. Includes: (1) technical competencies, especially IT, project management, data analysis; (2) soft skills like communication, creativity, problem-solving; (3) leadership competencies oriented toward innovation; (4) knowledge of current public policy issues. Caused by limited new recruitment, ad-hoc development programs, conventional training methods.

Theme 3 - Inadequate Incentive Systems: Compensation system based on position and tenure, not individual performance. Creates disincentive for high performers lacking significant financial recognition. Non-financial systems (recognition, rapid promotion, career development) equally ineffective due to slow promotion processes, lack of transparency, minimal mentoring programs.

Theme 4 - Conservative Organizational Culture: Culture tends toward compliance and risk-aversion, hindering innovation. Built by: (1) strong emphasis on regulation compliance, (2) fear of risk-taking due to audit concerns, (3) rigid hierarchical structure limiting bottom-up communication, (4) lack of appreciation for new ideas. Impact: employees become passive and non-proactive in problem-solving.

Theme 5 - Adaptive Strategies: Despite structural challenges, some institutions developed creative adaptation strategies: (1) exploiting regulatory gaps through consultants and special contracts; (2) intensive leadership development programs; (3) informal mentoring relationships; (4) learning communities for cross-unit collaboration and knowledge sharing.

5. Discussion

Research findings demonstrate that HRM effectiveness in Indonesian public sector results from complex interaction between structural factors (regulations, bureaucracy), organizational factors (culture, systems), and individual factors (competency, motivation). Effectiveness is not determined by single factor but combination working synergistically. Findings align with theoretical framework: RBV emphasizes HRM as strategic resource but organizational capacity to develop and utilize HRM is severely limited by rigid regulatory framework. This indicates RBV requires adjustment in public sector context considering strong institutional constraints. Organizational Learning Theory confirms gap in competency and lack of organizational learning culture. Findings show many institutions still use conventional

learning approaches requiring fundamental cultural change beyond just adding training programs.

6. Conclusion and Recommendations

This qualitative research explored HRM phenomenon in Indonesian public sector identifying five major themes explaining challenges and HRM implementation opportunities. Main conclusion: HRM effectiveness in Indonesian public sector affected by complex combination of structural factors (strict regulations and bureaucracy), organizational systems (not optimal), and conservative work culture. Three factors interact creating barriers to adopting modern HRM practices more responsive and performance-oriented.

However, research shows that despite significant constraints, some institutions developed creative adaptation strategies showing transformation is possible requiring visionary leadership, sustained commitment, and integrated incremental approach. Recommendations for policy include: (1) Modernize regulatory framework providing more institutional HRM management flexibility; (2) Increase HRM development investment focusing on relevant training; (3) Strengthen merit-based recruitment implementation with transparent and competitive mechanisms; (4) Develop performance-based incentive systems; (5) Implement systematic organizational culture transformation emphasizing performance and innovation orientation.

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The Influence of Digital Marketing Strategies on Customer Loyalty in Indonesian E-Commerce MSMEs In Indonesian

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Abstract

This study aims to analyse the influence of digital marketing strategies—projected through social media marketing, content marketing, and search engine marketing (SEM)—on customer loyalty within the e-commerce-based Micro, Small, and Medium Enterprises (MSMEs) sector in Indonesia. A causal-associative quantitative approach was applied in this research. Primary data were gathered through online questionnaires distributed to 200 respondents selected using a purposive sampling technique, with inclusion criteria targeting active MSME e-commerce consumers. The data analysis technique utilized Structural Equation modelling (SEM) based on Partial Least Squares (PLS) via Smart PLS software.

The results indicate that social media marketing and content marketing partially exert a positive and significant influence on customer loyalty, with content marketing acting as the most dominant predictor in the model. Conversely, search engine marketing was found to have a positive but non-significant direct effect on long-term customer loyalty. Simultaneously, these three digital marketing components can explain 54.8% of the variance in customer loyalty. The practical implications of this study recommend that MSME actors reduce transactional, high-cost paid advertising expenses (burn rate) and reposition their budget focus toward relationship management based on educational content and intimate community interaction to reduce customer switching rates (churn rate).

Keywords: Digital Marketing; Content Marketing; Customer Loyalty; E-commerce; Indonesian MSMEs.

1. Introduction

1.1 Research Background

The Micro, Small, and Medium Enterprises (MSMEs) sector serves as the backbone and economic safety valve of Indonesia's national economy. Based on macroeconomic data from the Ministry of Cooperatives and SMEs and the Coordinating Ministry for Economic Affairs, the MSME sector in Indonesia dominates the business unit population, reaching 99.9% of the total national business actors, which equates to approximately 64.2 million business units. Macroeconomically, the contribution of MSMEs to the national Gross Domestic Product (GDP) is highly significant, ranging from 60.5% to 61%, and possesses an immense labour absorption capacity, reaching 97% of the total domestic workforce. These figures confirm that any fluctuations occurring in the stability and growth of the MSME sector will directly impact national economic resilience in the aggregate.

Table 1.1 Macroeconomic Overview of Indonesian MSMEs

Indicator	Data
Total Business Units	99.9% (± 64.2 million Units)
GDP Contribution	60.5% - 61%
Labor Absorption	97%

Entering the second half of the 2020s, the business landscape of MSMEs in Indonesia experienced a radical paradigm shift due to the acceleration of digital transformation. Based on the government's *Go Digital* roadmap targets, the integration of MSMEs into the digital ecosystem (onboarding) is targeted to reach 30 million businesses. This push is reinforced by internet penetration in Indonesia, which has surpassed 78% of the total population, alongside the rapid growth of giant e-commerce platforms (such as Shopee, Tokopedia, Lazada) and disruptive social commerce trends (such as TikTok Shop). Digitalization is no longer viewed merely as a tactical market expansion option but has transformed into an absolute defensive strategy for business survival amidst the wave of retail modernization.

However, the mass migration of MSMEs to the e-commerce realm has triggered new anomalies and challenges never encountered in conventional markets. The digital ecosystem presents a highly ruthless perfect competition market. The primary characteristics of the e-commerce landscape in Indonesia include:

- **Extreme Price Transparency:** Consumers can compare the prices of similar products from hundreds of shops in just a matter of seconds.
- **Abundant Substitutes:** Consumers are presented with a nearly limitless variety of products.
- **Extremely Low Switching Costs:** There are no physical or financial barriers preventing consumers from switching to another merchant.

This condition triggers the phenomenon of fragile loyalty. Digital consumers in Indonesia tend to be opportunistic and highly sensitive to short-term price stimuli, such as discounts, free shipping vouchers, and double-date campaigns (e.g., 11.11 or 12.12). For MSME actors with limited capital structures, a competitive strategy that relies on price wars is a suicidal path that gradually erodes profit margins.

Therefore, the business orientation focus of digital MSMEs must shift from high-cost customer acquisition strategies to customer retention strategies aimed at building long-term customer loyalty. Loyal customers not only ensure cash flow stability through repeat purchases but also serve as organic marketing agents through positive testimonials and word-of-mouth recommendations.

To bridge this need, digital marketing strategies are widely adopted by MSME actors. Instruments such as social media marketing, content marketing, and search engine marketing

(SEM) are touted as effective tools to build closeness with consumers. Nonetheless, the empirical effectiveness of these three digital marketing instruments in shaping customer loyalty at the micro and small business levels still leaves an academic debate (research gap). Most prior digital marketing literature focuses on large-scale corporations with unlimited advertising budgets and professional content management teams. Conversely, MSMEs operate under constraints of human resources, uneven digital competencies, and tight capital. Some studies show that paid advertising (SEM) is effective in increasing sales, yet other studies argue that paid advertising fails to build the emotional bonds that generate loyalty. This empirical gap underscores the importance of conducting this study in a more specific, contextual, and in-depth manner within the e-commerce MSME sector in Indonesia.

1.2 Research Questions

Based on the background outlined, the research questions are structured into several academic inquiries as follows:

1. Does the implementation of social media marketing (X1) partially exert a positive and significant influence on customer loyalty (Y) among e-commerce MSMEs in Indonesia?
2. Does the implementation of content marketing (X2) partially exert a positive and significant influence on customer loyalty (Y) among e-commerce MSMEs in Indonesia?
3. Does the implementation of search engine marketing (X3) partially exert a positive and significant influence on customer loyalty (Y) among e-commerce MSMEs in Indonesia?
4. Do social media marketing (X1), content marketing (X2), and search engine marketing (X3) simultaneously exert a significant influence on the formation of customer loyalty (Y) among e-commerce MSMEs in Indonesia?

1.3 Research Objectives

In line with the research questions above, this study is designed to achieve the following objectives:

1. To empirically test, analyse, and prove the partial influence of social media marketing (X1) on customer loyalty (Y) among e-commerce MSMEs in Indonesia.
2. To empirically test, analyse, and prove the partial influence of content marketing (X2) on customer loyalty (Y) among e-commerce MSMEs in Indonesia.
3. To empirically test, analyse, and prove the partial influence of search engine marketing (X3) on customer loyalty (Y) among e-commerce MSMEs in Indonesia.
4. To analyse the simultaneous contribution and identify the most dominant digital marketing instrument influencing customer loyalty (Y) among e-commerce MSMEs in Indonesia.

1.4 Research Significance

1.4.1 Theoretical (Academic) Significance

- **Development of Marketing Management Science:** This study is expected to enrich the literature on digital marketing management, particularly regarding Relationship Marketing Theory applied to small and medium enterprise scales in emerging markets.
- **Future Study Reference:** To provide a new conceptual framework and up-to-date empirical data that can be used as a reference or comparison for future researchers examining digital consumer behaviour and e-commerce dynamics.

1.4.2 Practical Significance (For Industry Practitioners and Policy)

- **For MSME Actors:** To serve as a strategic guide and evaluation material in allocating their digital marketing budgets efficiently. This study provides direction on which instruments should be prioritized to minimize churn rates and optimize buyer retention.
- **For E-commerce Platform Providers:** To provide input for developing supporting features (such as shop algorithm optimization, interactive features, or data analytics) that are user-friendly and effectively assist consumer retention for their MSME partners.
- **For Policy Makers (Government):** To provide an empirical database and recommendations for the Ministry of Cooperatives and SMEs in designing targeted digital transformation training programs—not merely teaching how to open an online shop but training the managerial capability to maintain markets sustainably.

2. Literature Review

2.1 Theoretical Framework

2.1.1 Relationship Marketing Theory

The theoretical roots of this research rest on Relationship Marketing Theory, which was first formally introduced into the academic landscape by Berry and further developed by Morgan and Hunt through the Commitment-Trust Theory. Relationship marketing marks a major paradigm shift in marketing management science, moving from a traditional transactional orientation (*transactional marketing*) to a long-term relational orientation. Transactional marketing focuses exclusively on maximizing short-term sales volume through a single marketing mix stimulus (4Ps: Product, Price, Place, Promotion). Conversely, relationship marketing views every transaction not as an end point, but as a foundational cornerstone to build, maintain, and develop mutually beneficial (win-win) relationships between product providers and consumers over the long term.

1. Marketing Paradigm
2. Transactional Marketing focuses on short-term single sales volume.
3. Relationship Marketing focuses on long-term retention and emotional bonds.

Morgan and Hunt, emphasized that the core pillars of success in relationship marketing are the presence of trust and commitment. In the context of the e-commerce digital ecosystem, the urgency of relationship marketing increases exponentially. The asymmetric nature of digital markets—where consumers cannot touch or examine physical products directly before purchasing—creates a high perceived risk. Digital marketing (X) operated through social media, content, and search optimization essentially serves as a modern instrument to bridge this psychological gap. Digital marketing strategies act as value-delivery mechanisms to foster

trust and affective commitment. When these relational aspects are fulfilled, consumers will disregard price incentives offered by competitors, which eventually crystallizes into customer loyalty (Y).

2.1.2 Customer Loyalty

According to Zeithaml et al. (2024), customer loyalty is a manifestation of positive behavioural intentions created when customers consistently perceive exceptionally high service quality and value.

In the Indonesian e-commerce MSME landscape, customer loyalty measurement cannot rely solely on mechanical repeat purchase indicators. This is because repeat purchases can be superficial (*spurious loyalty*), triggered by temporary dependence on shipping subsidies. Therefore, referring to the contemporary theoretical development by Zeithaml et al. (2024), loyalty must be measured through a combination of behavioural and attitudinal indicators, namely:

1. Saying positive things (providing voluntary reviews/five-star ratings).
2. Recommending to others (recommending the shop to their community).
3. Remaining loyal (resisting discounts from neighbouring shops).

2.1.3 Components of Digital Marketing Strategy

Chaffey and Ellis-Chadwick (2022) define digital marketing as the application of digital technologies that form online communication channels to contribute to marketing activities aimed at achieving profitable customer acquisition and retention. In this study, digital marketing strategies are differentiated into three main pillars most relevant to MSME operations:

- **Social Media Marketing (X1):** Refers to the utilization of social media platforms (such as Instagram, TikTok, Facebook) to build interaction, collaboration, and relationships between brands and consumers (Kingsnorth, 2022). Its main indicators include entertainment, two-way interaction, trendiness, and customization.
- **Content Marketing (X2):** A strategic marketing approach focused on creating and distributing valuable, relevant, and consistent content to attract and retain a clearly defined audience (Pulizzi & Barrett, 2021). Its indicators include informativeness, content credibility, and consistency of presentation.
- **Search Engine Marketing (X3):** A digital marketing strategy to increase the visibility of a website or e-commerce shop on search engine results pages (SERPs) or marketplace internal search features through organic optimization (SEO) or paid advertising (PPC) (Chaffey & Ellis-Chadwick, 2022). Main indicators encompass keyword relevance, ease of information access, and visual appeal of advertisements.

2.2 Hypothesis Development

2.2.1 The Influence of Social Media Marketing on Customer Loyalty

Social media activities optimally managed by MSMEs act as communication channels that humanize the brand. Unlike large corporations that tend to be rigid, MSMEs have the flexibility

to communicate personally and casually with their audience. Through intensive interactions in comment sections, direct messages (DMs), and Live Streaming sessions, consumers are not merely exposed to product information but are engaged in a digital community. Theoretically, this responsive interaction fulfills the psychological need of consumers for a sense of belonging, which is a vital determinant in Relationship Marketing Theory. When MSMEs can transform cold digital transactions into warm interpersonal relationships, consumers develop an affective commitment. The emotional bonds built through social media create a psychological barrier that makes it difficult for competitors to poach those customers. Based on this argument, the following hypothesis is proposed:

- **H1:** Social Media Marketing (X1) exerts a positive and significant influence on Customer Loyalty (Y) among Indonesian e-commerce MSMEs.

2.2.2 The Influence of Content Marketing on Customer Loyalty

In the digital era, consumers have full control over the information they choose to consume. Traditional disruptive marketing (such as automatic pop-up ads) tends to be avoided. Content Marketing offers a solution through a value-first approach—creating value before a transaction occurs. Content that is educational, inspiring, or entertaining builds a perception that the MSME is not merely seeking profit but genuinely cares about fulfilling its consumers' knowledge needs. When consumers consistently receive benefits from the presented content (e.g., clothing care tips from a fashion MSME, or cooking recipes from an organic seasoning MSME), trust and respect toward the brand are formed. This trust is what distinguishes generic commodities from brands that possess a Unique Selling Proposition (USP). Consumers who place high trust in the utility of a shop's content tend to make repeat purchases because they associate the shop's physical products with the same high quality as the content produced. Based on this premise, the following hypothesis is proposed:

- **H2:** Content Marketing (X2) exerts a positive and significant influence on Customer Loyalty (Y) among Indonesian e-commerce MSMEs.

2.2.3 The Influence of Search Engine Marketing (SEM) on Customer Loyalty

Search Engine Marketing—whether through Google Ads or internal paid advertising features within marketplaces—works by placing MSME products at the forefront when consumers specifically search for items using certain keywords. The primary advantage of SEM is relevance and time efficiency in bringing together supply and demand (*matchmaking efficiency*). Consumers captured through SEM generally possess high purchase intent. Although SEM is highly powerful in triggering initial purchase conversion, its direct relationship with long-term loyalty still requires robust empirical evidence. From a relationship marketing perspective, meeting expectations on the first transaction facilitated by SEM ads can serve as an entry point for customer satisfaction. If the easy search process and product discovery through ads are coupled with appropriate product quality, then that seamless transaction experience can become a foundation for loyalty formation. Based on this line of thought, the following hypothesis is proposed:

- **H3:** Search Engine Marketing (X3) exerts a positive and significant influence on Customer Loyalty (Y) among Indonesian e-commerce MSMEs.

2.3 Conceptual Framework

Based on the literature review and hypothesis development outlined, the model of causal relationships between variables in this study can be mapped as follows:

Social Media Marketing (X1) → Hypothesis 1 (+) → Customer Loyalty (Y)

Content Marketing (X2) → Hypothesis 2 (+) → Customer Loyalty (Y)

Search Engine Marketing (X3) → Hypothesis 3 (+) → Customer Loyalty (Y)

3. Materials and Methods

3.1 Research Design

This study utilizes a quantitative approach with a causal-associative research design. A quantitative approach was selected because this study aims to test formulated hypotheses empirically through numeric data measurement and statistical analysis (Creswell & Creswell, 2023). The causal-associative design was applied to identify and explain the direction and strength of the cause-and-effect relationship from the independent variables consisting of Social Media Marketing (X1), Content Marketing (X2), and Search Engine Marketing (X3) toward the dependent variable, Customer Loyalty (Y), within the Indonesian e-commerce MSME ecosystem.

3.2 Population and Sample

3.2.1 Population

The population in this study is an infinite population, namely all digital consumers in Indonesia who have conducted purchase transactions of products from MSME units through e-commerce platforms (such as Shopee, Tokopedia, Lazada, or TikTok Shop). Since the exact number of this population cannot be known nominally, non-probability sampling techniques became the most rational and justifiable choice.

3.2.2 Sample Determination Using Hair et al. Recommendations

Given that the population size is unknown, the sample size in this study was determined based on the operational guidelines proposed by Hair et al. (2022) for multivariate analysis modelling and Structural Equation modelling (SEM). Hair et al. (2022) recommend that the minimum sample size be based on the ratio of the number of observed indicators (questionnaire items) multiplied by a coefficient between 5 and 10 (5 X 10 Indicators). This study examines 4 latent variables broken down into a total of 20 empirical indicators. Based on the upper limit ratio (10 Indicators) to increase data precision and minimize sampling errors, the sample size calculation was determined as follows:

Minimum Sample Size = 20 Indicators X 10 = 200 Respondents

Based on the formula above, the sample size was established at 200 respondents.

3.2.3 Sampling Technique

Sampling was conducted using the purposive sampling method, which is a non-probability sampling technique based on specific criteria established by the researcher so that the obtained data are relevant to the substance of the study (Sekaran & Bougie, 2023). The inclusion criteria for respondents in this study include:

1. Indonesian Citizens (WNI) aged at least 18 years (considered independent in making shopping decisions).
2. Having an active account and using e-commerce applications within the last 6 months.
3. Having conducted purchase transactions at shops of MSME scale (not official stores of large multinational corporations) at least 3 times within the last 6 months.

3.3 Research Instruments and Operationalization of Variables

Primary data collection was carried out through the distribution of online questionnaires using digital forms (Google Forms). Each questionnaire statement item was measured using a 5-Point Likert Scale to capture the gradations of respondents' perceptions precisely: Scale 1 (Strongly Disagree), Scale 2 (Disagree), Scale 3 (Neutral/Slightly Disagree), Scale 4 (Agree), and Scale 5 (Strongly Agree).

5-Point Likert Measurement Scale: (1) SD ← (2) D ← (3) N → (4) A → (5) SA

To guarantee content validity, the instrument framework matrix and operationalization of variables were adapted from conceptually reputable scientific literature in line with Smart PLS measurement instruments.

3.4 Data Analysis Technique Using Smart PLS

Data analysis in this study was executed comprehensively using variance-based Structural Equation Modelling (SEM), frequently referred to as Partial Least Squares (PLS), with the assistance of Smart PLS software. The PLS-SEM approach was chosen because it excels in analysing causal research models with latent variables without requiring strict assumptions of data normality (*distribution-free*) and is highly reliable for prediction-oriented research models (Hair et al., 2022). The stages of data analysis with Smart PLS are divided into two structural phases:

3.4.1 Measurement Model Evaluation (Outer Model)

This evaluation was conducted to ensure the validity and reliability aspects of the research instruments:

- **Convergent Validity:** Measured based on the loading factor value for each indicator. An indicator is declared valid if it has a loading factor value > 0.70$. However, in early-stage exploratory research, values between 0.40 and 0.70 can be considered for retention if they do not drop the AVE value (Hair et al., 2022). The second parameter is the Average Variance Extracted (AVE) value, which must be above the threshold of 0.50.
- **Discriminant Validity:** Tested using the Fornell-Larcker criterion, where the square root of the AVE of a latent variable must be greater than the correlation value between that latent variable and other latent variables in the model. Additionally, the testing was reinforced with the Heterotrait-Monotrait Ratio (HTMT) method with a threshold value < 0.90$.

- **Construct Reliability:** The internal consistency of the instruments was tested via Cronbach's Alpha (threshold > 0.70$) and Composite Reliability (CR), which must be > 0.70$ as an indicator that the construct possesses highly solid reliability.

3.4.2 Structural Model Evaluation (Inner Model)

Once the measurement model was proven valid and reliable, the testing proceeded to the structural model analysis to test the validity of the causal hypotheses:

- **Coefficient of Determination (R^2):** Measures how large a proportion of the variance of the dependent variable (Y) can be explained collectively by the variance of the three independent variables (X_1, X_2, X_3). $\mathbf{R^2}$ values are classified into three categories: 0.67 (substantial), 0.33 (moderate), and 0.19 (weak) (Hair et al., 2022).
- **Significance Testing and Path Coefficients:** Calculated using the mechanical bootstrapping resampling procedure with a setting of 5,000 sub-samples. The research hypothesis is declared empirically accepted if the coefficient direction is positive (matching the hypothesis direction), possesses a T-statistic > 1.96 , and is supported by a significance error value $P < 0.05$ (significance level alpha = 5).

4. Results

4.1 Characteristics of Respondents

Out of 200 respondents, the sample was dominated by Generation Z and Millennials (aged 18–34 years) at 74%, with a gender profile of 62% female and 38% male. The e-commerce platforms most frequently accessed were Shopee (41%), TikTok Shop (35%), Tokopedia (18%), and independent platforms/Instagram Shopping (6%). This profile reflects the characteristics of Indonesian digital consumers who are highly adaptive to *shoppertainment* trends.

4.2 Evaluation of the Measurement Model (Outer Model)

- **Convergent Validity:** The loading factor values of all indicators ranged from 0.724 to 0.891 (> 0.70), thus being declared valid. The AVE values for all variables were above the critical threshold of 0.50 (X1 = 0.582; X2 = 0.614; X3 = 0.556; Y = 0.642).
- **Construct Reliability:** The Composite Reliability (CR) values for all constructs were above 0.80, and Cronbach's Alpha values were above 0.70. The Customer Loyalty variable (Y) recorded a CR value of 0.878, proving exceptionally high internal consistency of the instrument.

4.3 Evaluation of the Structural Model (Inner Model) and Hypothesis Testing

- **Coefficient of Determination R^2:** The $\mathbf{R^2}$ value for the Customer Loyalty variable (Y) was obtained at 0.548. This indicates that social media marketing, content marketing, and search engine marketing simultaneously explain 54.8% of the variance in customer loyalty. The remaining 45.2% is explained by factors outside the model (such as price perception, physical product quality, or logistics).

Table 4.1 Summary of Path Coefficients & Hypotheses

Path Relationship (Hypothesis)	Coefficient (β)	T-Statistic	P-Value	Conclusion
H1: SMM (X1) → Loyalty (Y)	0.385	4.212	0.000	Accepted
H2: CM (X2) → Loyalty (Y)	0.412	5.108	0.000	Accepted (Dominant)
H3: SEM (X3) → Loyalty (Y)	0.095	1.143	0.254	Rejected

4.4 Analytical Discussion

4.4.1 The Influence of Social Media Marketing on Customer Loyalty

H1 is accepted; optimized social media activity functions in humanizing the brand. Interactive features such as Live Shopping trigger direct dialogue and real-time personalization processes that satisfy the need for close communication in the high-context culture of Indonesian consumers. This personal touch creates psychological switching costs, making consumers reluctant to switch to competitors.

4.4.2 The Influence of Content Marketing on Customer Loyalty

H2 is accepted and proven to be the most dominant predictor. Amidst the phenomenon of information overload, digital consumers have become more discerning. MSMEs that present educational, authentic, and consistent content (e.g., video tutorials or behind-the-scenes) succeed in delivering perceived subjective value. This content builds brand authority, triggers trust, and fosters affective commitment, culminating in behavioural loyalty.

4.4.3 The Influence of Search Engine Marketing (SEM) on Customer Loyalty

H3 is rejected; SEM does not exert a significant direct influence on loyalty. Paid advertising (Google Ads, Shopee Ads, Top Ads) is effective at a tactical transactional level to trigger clicks and initial purchases. However, consumers acquired through this channel tend to be opportunistic, driven by immediate needs, and highly price sensitive. "Burning money" on pay-per-click ads will not yield long-term loyalty if it is not accompanied by a post-purchase retention strategy.

4.5 Synthesis of Loyalty Formation Flow

The SEM variable functions as a gateway (top of funnel) to attract incoming traffic and drive first-time purchases. However, the primary engine that transforms fleeting buyers into loyalists is the synergy of valuable content marketing (X2) and intimate interactions through social media marketing (X1).

5. Conclusion, Implications, and Recommendations

5.1 Research Conclusion

Based on the results of data analysis using variance-based Structural Equation Modelling (SEM-PLS) and the in-depth discussion in the previous chapter, empirical conclusions are drawn as follows:

1. **Social Media Marketing Exerts a Positive and Significant Influence on Customer Loyalty.** Two-way interaction activities, communication responsiveness, and real-time service personalization (especially through Live Shopping features) are proven to reduce the psychological distance between MSME actors and digital consumers. This emotional engagement acts as an invisible psychological switching cost that effectively locks in consumer loyalty amidst fierce competition.
2. **Content Marketing Exerts a Positive and Significant Influence on Customer Loyalty, Standing as the Most Dominant Variable.** This finding confirms that a value-first approach strategy—distributing educational, relevant, and authentic content—is far more effective in nurturing long-term customer commitment than aggressive hard-selling promotional pushes. Quality content consistently builds brand authority and credibility, triggering voluntary repeat purchase behavior.
3. **Search Engine Marketing (SEM) Exerts a Positive But Non-Significant Direct Influence on Customer Loyalty.** Paid advertising (PPC) both on search engines and marketplace internal ad features is proven reliable as an acquisition instrument to drive instant traffic and trigger initial purchases. However, this instrument lacks the managerial capacity to build long-term relational bonds. Consumers acquired through SEM channels tend to be opportunistic, oriented toward short-term needs, and highly sensitive to price fluctuations.
4. **Simultaneously, Digital Marketing Exerts a Powerful Influence in Constructing Customer Loyalty.** The synergy of interactive social media management, educational content production, and precise search ad visualization is capable of explaining 54.8% of the variance in customer loyalty ($R^2 = 0.548$). Meanwhile, the remaining 45.2% is explained by other variables outside this research model, such as price perception, physical product quality, or shipping logistics efficiency.

5.2 Policy and Practical Recommendations (Solutive Recommendations)

5.2.1 Applicative Recommendations for Industry Practitioners (MSMEs)

- **Reposition Digital Marketing Budget Allocation:** Given that investment in paid advertising (SEM) does not correlate directly with long-term customer loyalty, MSME actors are advised to limit high paid-ad expenditures (burn rate). The ad budget should be allocated tactically only for new product launches or capitalizing on seasonal momentum (such as double-date campaigns). Conversely, a portion of this budget must be redirected as a long-term investment to enhance creative content creation skills and upgrade visual equipment.
- **Optimize Community-Based Retention Strategies:** MSME actors must maximize relationship marketing strategies by utilizing digital community features. Applicative examples include building customer loyalty groups on instant messaging applications, providing exclusive non-commercial access (such as weekly tips or member-only

discounts), and requiring admins to respond to five-star reviews or complaints in the marketplace column in less than 15 minutes to maintain trust value.

5.2.2 Solutive Recommendations for Policy Makers (Government)

- **Redesign the MSME Digitalization Training Curriculum:** The Ministry of Cooperatives and SMEs along with regional-level Departments of Industry and Trade are advised to shift the focus of their digital training modules. Training must not stop at basic tactical digital literacy (such as how to set up an online shop or place paid ads). The government needs to introduce advanced managerial modules focusing on Creative Storytelling, Customer Relationship Management (CRM) for Small Businesses, and consumer data retention analysis strategies.

Redesign of Government MSME Training Focus

Old (Less Effective) → Acquisition Focus: Opening online shops \& burning money via ads.New (Recommended → Retention Focus: Community management, CRM, \& content storytelling.

- **Provide Shared Content Studio Facilities:** Recognizing the high cost of producing high-quality visual content as a primary barrier for micro-businesses, local governments could build Co-working Spaces or packaging house facilities equipped with mini studios for free product video/photo creation for registered local MSME actors.

5.2.3 Academic Recommendations for Future Researchers

- **Expand Variables within the Research Model:** Since the R-Square value in this study is at a moderate level (54.8%), future research is expected to expand the conceptual model by incorporating mediating variables such as customer satisfaction or brand image. Future researchers are also advised to explore moderating variables such as platform User Experience (UX) or expedition/logistics reliability.
- **Sectoral Differentiation and Methodological Approaches:** Future studies could perform comparative analyses on specific MSME sectors (for instance, comparing content effectiveness in the fashion sector versus the culinary sector). Furthermore, employing mixed-methods by combining SEM-PLS questionnaire analysis and in-depth interviews with business owners will provide a much richer, holistic, and comprehensive data interpretation perspective.

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UNDERSTANDING LECTURERS' PROACTIVE WORK BEHAVIOR IN SUPPORTING CONTEXTUAL PERFORMANCE IN INDONESIAN PRIVATE HIGHER EDUCATION

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Abstract

This study aims to understand lecturers' proactive work behavior in supporting contextual performance within private higher education institutions in Indonesia. The study employed an exploratory qualitative design using semi-structured interviews with nine lecturers from several private universities in Bengkulu Province. Informants were selected through purposive sampling based on their involvement in academic and institutional activities. Data were analyzed using thematic analysis through transcription, coding, categorization, and theme development.

The findings reveal that lecturers' proactive work behavior is reflected in their willingness to assist colleagues, provide ideas and solutions, participate in institutional activities, and support academic development. These behaviors contribute to contextual performance by strengthening collaboration, organizational participation, and a more supportive academic work environment. The study also found that lecturers' willingness to engage in extra-role activities is influenced by perceptions of administrative workload, time constraints, organizational support, compensation, and fairness in task distribution.

This study contributes to the organizational behavior literature in higher education by highlighting how proactive work behavior supports lecturers' contextual performance while also being shaped by organizational and workload-related factors within private higher education institutions in Indonesia.

Keywords: proactive work behavior, contextual performance, lecturers, higher education, qualitative research

1. Introduction

The increasingly dynamic changes in the higher education environment require private universities in Indonesia to continuously adapt quickly to various challenges, ranging from institutional improvements, accreditation requirements, digital technology developments, to enhancing the quality of educational services. The success of higher education institutions is also determined by lecturers' ability to perform tasks beyond formal duties—such as teaching,

conducting research, and engaging in community service—while also demonstrating proactive work behavior and making contributions beyond formal job requirements. According to Parker and Collins, proactive work behavior refers to an individual's tendency to actively take initiative in creating positive changes for themselves and their work environment. Meanwhile, Borman and Motowidlo describe this behavior as an individual's actions that support the social and psychological effectiveness of the organization beyond core job duties. In the context of higher education, faculty members who demonstrate initiative, adaptability, support for colleagues, and active participation in institutional activities beyond core duties—carried out voluntarily—are considered better equipped to foster a productive and collaborative academic work environment. Such behavior constitutes a vital component of contextual performance, which is increasingly essential for supporting the sustainability and competitiveness of private universities.

Faculty contextual performance is reflected not only through the achievement of primary job targets but also through social and organizational contributions that support the institution's overall effectiveness. Contextual performance encompasses various behaviors such as a willingness to assist colleagues, maintaining positive interpersonal relationships, actively participating in institutional activities, and demonstrating loyalty and commitment to the organization. According to Organ, extra-role behaviors performed voluntarily by individuals can enhance organizational effectiveness by fostering a cooperative work environment and supporting the achievement of shared goals. In private universities in Indonesia, such behaviors are becoming increasingly important given that most institutions face resource constraints, high administrative demands, and pressure to improve academic quality and institutional reputation. Furthermore, Robbins and Judge state that organizations capable of fostering proactive behavior and voluntary contributions from employees will be more adaptive in facing environmental changes. Faculty members' proactive work behavior is viewed as one of the factors capable of strengthening individual engagement in supporting the achievement of broader organizational goals.

Although studies on proactive work behavior and contextual performance have been extensive, most previous research has been dominated by quantitative approaches and focused on the business sector or corporate organizations. Research on proactive work behavior in the context of university faculty, particularly at private universities in Indonesia, remains relatively limited, especially studies aiming to understand the experiences, meanings, and dynamics of faculty behavior in their daily academic work lives.

Faculty members possess unique complexities and work characteristics because their roles are not solely oriented toward individual achievement but also entail moral, social, and institutional responsibilities in fulfilling the Tri Dharma of Higher Education. According to Boyer, the role of faculty in higher education extends beyond that of an instructor; they also serve as agents of knowledge development and social change within society. The dynamics of modern higher education require faculty members to possess flexibility, adaptability, and active engagement in supporting institutional development (Altbach). These conditions highlight the importance of a more in-depth approach to understanding how proactive work behavior emerges, develops, and is interpreted by faculty members in supporting contextual performance within the environment of private universities in Indonesia.

2. Literature Review

2.1 Proactive Work Behavior

Proactive work behavior is a form of individual behavior demonstrated through active initiatives to create positive change in one's work or organizational environment. This concept emphasizes that individuals do not merely passively carry out tasks according to instructions

but are also capable of anticipating problems, seeking opportunities for improvement, and taking independent action to enhance work effectiveness. According to Crant, proactive work behavior describes an individual's tendency to take actions aimed at constructively influencing the work environment. Meanwhile, Parker and Bindl explain that proactive behavior relates to an individual's ability to initiate change, demonstrate personal responsibility, and be oriented toward the organization's future. In the context of modern organizations characterized by constant change, proactive work behavior is considered crucial as it enhances adaptability, innovation, and the effectiveness of both individuals and the organization as a whole.

2.2 Contextual Performance

Contextual performance refers to individual behaviors that support the organization's social and psychological environment, thereby contributing to overall work effectiveness. Unlike task performance, which focuses on the execution of primary job duties, contextual performance emphasizes extra-role contributions such as assisting colleagues, maintaining positive interpersonal relationships, demonstrating loyalty to the organization, and actively participating in organizational activities. According to Borman and Motowidlo, contextual performance plays a crucial role in creating a work environment that supports the achievement of organizational goals. In the context of higher education, faculty members' contextual performance is reflected not only in their success in fulfilling the Tri Dharma of Higher Education but also in their willingness to support the institution's academic activities, build collaborations, assist students and colleagues, and demonstrate a commitment to the development of the higher education organization.

2.3 Proactive Behavior in Higher Education

The increasingly competitive higher education environment demands that faculty members not only fulfill their formal duties but also demonstrate adaptive and proactive work behavior. Private universities in Indonesia currently face various challenges, such as accreditation requirements, the digital transformation of learning, improving the quality of scholarly publications, and competition among higher education institutions. These conditions underscore the importance of faculty members' proactive behavior in supporting the sustainability and competitiveness of the institution. According to Boyer, faculty members play a strategic role not only as educators but also as agents of academic and social change within the higher education environment. Furthermore, Altbach explains that the dynamics of modern higher education require faculty members to possess flexibility, adaptability, and active engagement in institutional development. Therefore, proactive work behavior is crucial in the context of higher education as it encourages faculty members to be more innovative, collaborative, and responsive to changes in the academic environment.

3. Materials and Methods

This study employs a qualitative approach with an exploratory descriptive research design to understand the proactive work behavior of lecturers in supporting contextual performance at private universities in Indonesia. The qualitative approach was chosen because this study aims to explore the experiences, interpretations, and behavioral dynamics of lecturers in the context of academic work in greater depth. Research informants were selected using purposive

sampling, with the criteria being active faculty members at private universities who have experience in academic, organizational, and institutional development activities. Data collection was conducted through semi-structured interviews, allowing the researcher to obtain more flexible and in-depth information regarding faculty members' proactive work behavior in the Tri Dharma of Higher Education activities and their contributions to the institutional environment.

Research data was analyzed using thematic analysis to identify findings emerging from the interviews. The analysis process involved several stages, including transcription of interview data, initial *coding*, categorization, and the extraction of conceptual themes relevant to the research focus. To ensure data validity, this study employed source triangulation and confirmed interview results with the informants (*member checking*).

3.1 Study Design

This study employs an exploratory qualitative design to understand the proactive work behaviors of faculty members in supporting contextual performance at private universities in Indonesia. This design was chosen because the study aims to explore faculty members' experiences, perspectives, and interpretations of proactive work behaviors within the context of academic and university organizational activities.

3.2 Data Analysis

Data analysis in this study employs a thematic analysis approach to identify and interpret patterns of meaning from the interview results with the informants. According to Braun and Clarke, thematic analysis is a qualitative analysis method used to systematically identify key themes based on empirical data. The analysis process was conducted through several stages, namely transcription of interview data, repeated reading of the data, coding, categorization, theme development, and interpretation of research findings. To enhance data credibility, this study applied triangulation and member checking techniques. The stages of data analysis are presented in Table 1.

Table 1. Qualitative Data Analysis Procedure

Analysis Stages	Research Activities	Purpose of Analysis	Output
Data Transcription	Transcribe all interview results verbatim	Preserve the integrity of the information and the context of the interview	Interview Transcript Document
Data Familiarization	Rereading the transcript repeatedly	Comprehensively understanding the meaning and context of the data	Initial understanding of the data
Open Coding	Assigning codes to relevant parts of the data	Identifying key issues and meanings related to proactive work behavior and contextual performance	Initial research codes
Data Categorization	Grouping codes based on common meanings	Identifying patterns of relationships between codes	Research categories

Table 1

Theme Development	Developing categories into main themes	Identifying conceptual research themes	Research themes
Theme Interpretation	Analyzing relationships between themes	Understanding the dynamics of lecturers' proactive work behaviors in supporting contextual performance	Conceptual research findings
Data Validation	Conducting triangulation and *member checking*	Enhancing data credibility and validity	Validated Data
Drawing Conclusions	Formulating the final interpretation of the research	Addressing the research focus and objectives	Research conclusions

Source: authors, 2026

Table 2: Profile of Informants

No	Informants	Academic Position	Number
1.	Faculty of Economics Lecturer	Lecturer	1
2.	Faculty of Agriculture Lecturer	Lecturer	1
3.	Faculty of Law Lecturer	Lecturer	1
4.	Faculty of Health Sciences Lecturer	Lecturer	1
5.	Faculty of Computer Lecturer	Lecturer	1
6.	Faculty of Public Administration	Lecturer	1
7.	Business Administration Faculty	Lecturer	1
8.	Faculty of Digital Business	Lecturer	1
9.	Faculty of Communication	Lecturer	1
		Total	9

Source: authors, 2026

Table 3. Semi-Structured Interview Questions

No	Type of Exploratory Question	Remarks	Number
1.	How does a lecturer's proactive behavior support contextual performance?	Interview	1
2.	What forms of proactive behavior are faculty members willing to	Interview	1
3.	engage in?	Interview	1
4.	What additional activities do faculty members perceive as a workload burden?	Interview	1
5.	What factors cause faculty members to limit their involvement in activities outside their primary duties?	Interview	1
6.	What activities outside of your primary duties are you willing to undertake to support the institution?	Interview	1
7.	Are there any additional activities that you feel actually increase your workload? Why?	Interview	1
8.	To what extent are you willing to perform tasks outside your primary responsibilities?	Interview	1
9.	In your opinion, do additional tasks affect your performance or motivation?	Interview	1
	In your opinion, are the extra contributions made still considered meaningful and fair?		
		Total	9

Source: authors, 2026

4. Results

Theme 1. Proactive Behavior Supporting Contextual Performance

Interview results with nine informants indicate that lecturers' proactive work behavior contributes to supporting contextual performance through enhanced collaboration, institutional participation, and contributions to the academic environment. The majority of lecturers stated that behaviors such as assisting colleagues, engaging in institutional activities, and taking the initiative to offer ideas and solutions to academic problems constitute forms of contribution that strengthen the organization's work effectiveness. Informants assessed that proactive behavior is capable of creating a more conducive and collaborative work environment. One informant stated:

"When faculty members take the initiative to help or offer solutions, work gets done faster and working relationships improve."

Additionally, interview results indicate that the most common forms of proactive behavior among faculty members include assisting colleagues, providing input on campus activities, mentoring students, participating in accreditation processes, and contributing to program development. The majority of faculty members expressed greater willingness to engage in additional activities if such activities are directly related to academic duties and institutional development.

Theme 2. Additional Workload as a Limiting Factor

Research findings indicate that most faculty members view additional administrative activities and tasks outside the Tri Dharma of Higher Education as an added workload. The activities most frequently perceived as burdensome include recurring committee duties, preparing administrative reports, technical work outside their area of expertise, and sudden tasks with tight deadlines. One informant explained:

"If the additional tasks are too administrative and have many overlapping deadlines, that's quite burdensome."

Additionally, several factors were identified as limiting faculty members' involvement in additional activities, including time constraints, heavy teaching loads, demands for research and community service, lack of institutional support, and minimal recognition of faculty members' additional contributions. The majority of informants assessed that work-life balance is the primary factor influencing faculty members' willingness to engage in activities beyond their primary duties.

Theme 3. Organizational Support and Willingness to Perform Extra Roles

Although faculty members face various constraints, most informants stated they are still willing to undertake additional activities that support institutional development, such as serving on academic event committees, mentoring students, assisting with the accreditation process, and participating in campus development activities. However, faculty members tend to consider the relevance of tasks to their fields of expertise and academic responsibilities.

Interview results also indicate that faculty members' willingness to accept additional tasks is influenced by the presence of organizational support and certain forms of compensation. The most commonly expected forms of support include reimbursement for transportation costs, research assistance, work facilities, and administrative support. One informant stated:

"I am willing to accept additional tasks as long as there is adequate support, such as research assistance or work facilities."

On the other hand, some respondents felt that additional duties could enhance their work experience and motivation, while others believed that excessive additional duties could reduce their focus on their primary teaching responsibilities.

Theme 4. Meaning and Fairness of Extra-Role Contributions

The majority of faculty members consider extra-role contributions to remain of significant importance for the development of higher education institutions. Informants view faculty involvement in various institutional activities as a form of social and academic contribution that supports the organization's sustainability. However, nearly all respondents highlighted the existence of inequity in the distribution of additional duties among faculty members. One informant stated:

"Additional tasks are actually important for the progress of the campus, but their distribution is sometimes uneven."

Some faculty members feel that certain individuals bear a heavier burden of additional duties compared to other faculty members. This situation affects faculty members' perceptions of organizational fairness and may influence their motivation to participate in additional activities in the future.

Based on interviews with nine lecturers from three private universities in Bengkulu Province, this study shows that proactive work behavior contributes to supporting contextual performance by enhancing cooperation, organizational participation, and lecturers' academic contributions to the institution. However, the sustainability of such behavior is influenced by lecturers' perceptions of workload, organizational support, compensation, and the fairness of additional task distribution.

Based on the interview results and the coding process, this study identified several categories and main themes that describe lecturers' proactive work behavior in supporting contextual performance. The results of the coding process are presented in Table 4.

Table 4. Interview Coding Matrix

Respondent Statements	Open Coding	Category	Theme
"I often help my peers with their academic work."	Helping peers	Social support	Proactive behavior in supporting contextual performance
"I often contribute ideas for department activities."	Offering ideas	Work initiative	Proactive behavior in supporting contextual performance
"I am willing to participate in accreditation activities."	Institutional participation	Organizational involvement	Forms of proactive behavior
"I am willing to mentor students outside of class hours."	Student mentoring	Academic support	Forms of proactive behavior

Continuation of Table 4

"There is too much administrative work, which adds to the workload."	Administrative burden	Additional workload	Activities perceived as a burden
"Many unexpected tasks that disrupt primary work."	Last-minute tasks	Work pressure	Activities perceived as a burden
"My teaching and research schedules are already quite packed."	Time constraints	Barriers to engagement	Factors limiting engagement
"Sometimes there is a lack of appreciation for additional tasks."	Lack of appreciation	Organizational support	Factors limiting engagement
"I'm still willing to help with campus activities."	Willingness to help	Organizational contributions	Additional activities I am still willing to do
"Additional tasks sometimes reduce focus on primary work."	Reduces focus	Impact on work	Impact of additional tasks
"I'm willing to take on additional tasks if there's transportation reimbursement."	Transportation compensation	Financial support	Willingness to accept additional tasks
"Research assistance can boost motivation."	Research assistance	Institutional support	Willingness to take on additional tasks
"Adequate work facilities are also important."	Work facilities	Resource support	Willingness to take on additional tasks
"Additional contributions are important for the campus."	Meaning of contribution	Value of work	Meaning of extra-role contributions
"The distribution of additional tasks is not yet equitable."	Inequity in distribution	Organizational fairness	Meaning of extra-role contributions

Source: authors, 2026

Based on the data categorization and reduction process, this study identified several main themes that explain the dynamics of faculty members' proactive work behavior, additional workload, organizational support, and perceptions of extra-role contributions. A summary of the theme reduction results is presented in Table 5.

Table 5. Reduced Themes of Research Findings

Theme	Key Findings
Proactive behavior in supporting contextual performance	Faculty members actively assist colleagues, offer ideas, and foster academic collaboration
Forms of proactive behavior	Faculty members demonstrate engagement in academic activities and institutional development
Activities perceived as a burden	Administrative tasks and sudden additional duties are seen as increasing work pressure

Table 5 Continued

Factors limiting engagement	Time constraints, high workloads, and a lack of recognition affect faculty engagement
Willingness to accept additional tasks	Faculty members are willing to accept additional tasks if there is institutional support and adequate compensation
Meaning of extra-role contributions	Additional contributions are considered important to the institution, but the distribution of tasks is deemed not yet fully fair

Source: authors, 2026

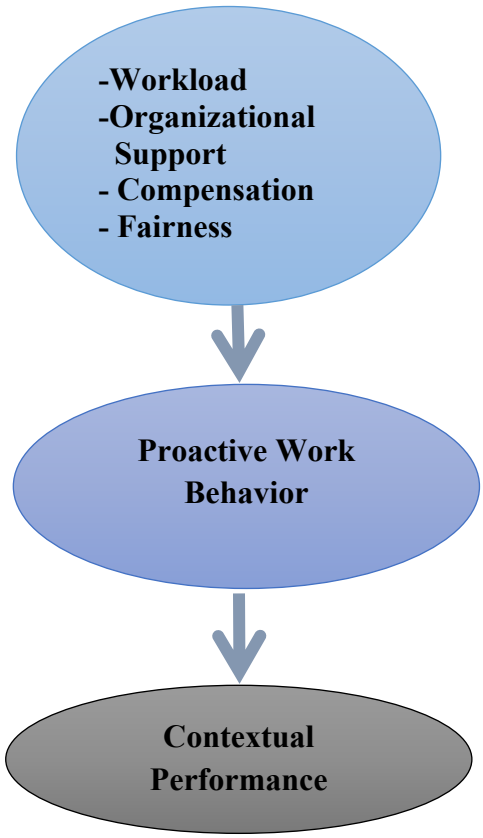


Figure 1. Conceptual Model of Research Findings

5. Discussion

The research results indicate that lecturers' proactive work behavior plays a crucial role in supporting contextual performance at private universities. Proactive behavior is reflected in lecturers' willingness to assist colleagues, offer ideas and solutions, and participate in various institutional activities. These findings suggest that lecturers not only fulfill the formal duties of the Tri Dharma of Higher Education but also demonstrate extra-role behaviors that support organizational effectiveness. These research results align with the views of Borman and

Motowidlo, who state that contextual performance is related to individual behaviors that support the organization's social and psychological environment. In the context of higher education, such behaviors are evident through faculty members' contributions to institutional development, academic collaboration, and involvement in campus organizational activities.

This study also found that lecturers' proactive work behavior is influenced by their perceptions of additional workload and organizational support. Most lecturers believe that excessive administrative tasks, sudden assignments, and uneven task distribution can reduce their involvement in additional activities beyond their primary duties. These findings support the Job Demands-Resources Model developed by Bakker and Demerouti, which posits that high job demands can affect an individual's motivation and engagement if not balanced by adequate organizational resources. In this study, organizational support such as research assistance, work facilities, administrative support, and certain forms of compensation were perceived as capable of increasing faculty members' willingness to make extra-role contributions.

Furthermore, the results indicate that faculty members continue to view extra-role contributions as a crucial component in supporting institutional development. However, nearly all informants emphasized the importance of fairness in the distribution of additional tasks among faculty members. Uneven task distribution is perceived as potentially affecting motivation and perceptions of organizational justice. These findings indicate that faculty members' proactive behavior is influenced not only by individual factors but also by the organizational environment and institutional policies. Thus, this study demonstrates that the sustainability of faculty members' proactive work behavior requires fair organizational support, recognition of additional contributions, and more balanced workload management within the private higher education environment.

Unlike previous studies that primarily focused on individual determinants of proactive behavior, this study reveals that lecturers' proactive work behavior is strongly influenced by perceptions of organizational fairness and workload distribution.

6. Conclusion, Implications, and Recommendations

This study demonstrates that faculty members' proactive work behavior contributes to supporting contextual performance through enhanced collaboration, organizational participation, and academic contributions to private higher education institutions. Proactive behavior is reflected in faculty members' willingness to assist colleagues, offer ideas, mentor students, and engage in various institutional activities. However, the sustainability of such behavior is influenced by faculty members' perceptions of additional workloads, organizational support, compensation, and the fairness of task distribution. The results of this study indicate that faculty members' proactive work behavior is influenced not only by individual factors but also by organizational conditions and the academic work environment. The study suggests that fostering proactive work behavior among lecturers requires not only individual initiative but also organizational conditions that promote fairness, support, and manageable workloads.

Theoretically, this study contributes to the development of organizational behavior research in the context of higher education, particularly regarding the relationship between faculty members' proactive work behavior and contextual performance. This study demonstrates that faculty members' proactive behavior develops through the interaction between individual factors and organizational support. Practically, the findings of this study have implications for private university administrators to create a work environment that supports faculty

engagement through more balanced workload management, institutional support, and a fairer distribution of additional tasks. Such support is crucial for maintaining faculty motivation and the sustainability of their extra-role contributions to institutional development.

This study has several limitations. First, the research involved only nine lecturers from private universities in Bengkulu Province, which may limit the transferability of findings to other higher education contexts in Indonesia. Second, the study employed a qualitative approach that focuses on understanding participants' experiences rather than generalizing findings. Future studies may incorporate larger samples and mixed-method approaches to validate and extend the findings.

Future research is recommended to explore faculty members' proactive work behavior using quantitative or *mixed-methods* approaches so that relationships among variables can be tested more comprehensively. Additionally, subsequent studies could expand the scope of respondents across various higher education regions in Indonesia to gain a more comprehensive understanding of faculty members' proactive behavior within the higher education context. For higher education institutions, it is recommended to enhance organizational support, improve the system for distributing additional tasks, and reduce administrative burdens that are irrelevant to faculty members' primary duties so that proactive work behavior and contextual performance can develop optimally.

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From Silos to Synergy: A Bibliometric Analysis of Internal Audit and Enterprise Risk Management Integration (1990–2025)

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This study aims to provide a comprehensive overview of the scientific literature regarding the interconnections among internal audit (IA), risk management (RM), and enterprise risk management (ERM). The authors systematically analyzed 333 relevant documents published from 1990 to 2025, utilizing a dual-database methodology that incorporated Scopus and Web of Science. The methodological design combined the PRISMA guidelines for systematic data extraction with the Biblioshiny technique for bibliometric analysis. The findings indicate that scholarly interest in this domain began in the early 1990s and has grown substantially over the past decade, particularly in the United States, Romania, and the United Kingdom. Co-authorship patterns show that most collaborative projects have two authors and few cross-national projects. The analysis also finds four main research areas: internal audit, corporate governance, risk management, and enterprise risk management. It also finds four new thematic areas: IA leadership in RM/ERM, the effect of IA characteristics, the influence of IA effectiveness, and the extent of IA involvement in RM/ERM. The research addresses a significant deficiency in the literature by delineating the intellectual framework and progression of this domain. It also serves as a foundational reference for subsequent empirical investigations, theoretical advancement, and practical applications in governance and risk management.

Keywords: Internal Audit, Risk Management, Enterprise Risk Management, Bibliometric Analysis.

The Influence of Utilizing Web Monitoring Tools, Social Media Monitoring Tools, and Search Engine Optimization on Marketing Planning and Enhancement at Tri Bhakti Business School.

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Abstract

The increasing intensity of competition among private higher education institutions requires universities to adopt data-driven digital marketing strategies. This study aims to analyze the influence of Web Monitoring Tools, Social Media Monitoring Tools, and Search Engine Optimization (SEO) on Marketing Planning and Enhancement at Tri Bhakti Business School. This research employed a quantitative explanatory approach with a cross-sectional survey design. The population consisted of internal stakeholders at Tri Bhakti Business School, including students, lecturers, and educational staff. A saturated sampling technique was applied, involving 50 respondents. Data were collected through a structured questionnaire using a five-point Likert scale and analyzed using SPSS through validity testing, reliability testing, multiple linear regression, t-test, F-test, and coefficient of determination. The results show that Web Monitoring Tools have a positive and significant effect on Marketing Planning and Enhancement. Social Media Monitoring Tools also have a positive and significant effect and appear as the most dominant variable. SEO has a positive and significant effect on Marketing Planning and Enhancement. Simultaneously, the three independent variables significantly influence Marketing Planning and Enhancement, with an R Square value of 0.721. This indicates that 72.1% of the variation in Marketing Planning and Enhancement can be explained by Web Monitoring Tools, Social Media Monitoring Tools, and SEO. The findings imply that integrated digital analytics are crucial for improving data-driven marketing planning in private higher education institutions.

Keywords: web monitoring tools; social media monitoring tools; search engine optimization; marketing planning; digital marketing; higher education

1. Introduction

The development of information and communication technology has fundamentally changed the competitive landscape in higher education. Higher education institutions can no longer rely solely on conventional marketing methods such as distributing physical brochures, in-person school visits, or installing billboards. The shift in prospective student behavior, with students increasingly accessing information through digital platforms, is encouraging universities to integrate digital-based marketing communication strategies into their marketing

planning systems in a more targeted and sustainable manner (Dwivedi et al. 2021). In this context, private universities like Tri Bhakti Business School face increasingly complex challenges, particularly in building visibility, reputation, and a digital presence amidst increasingly fierce competition among higher education institutions (Comai 2024) .

Effective digital marketing execution cannot be based solely on managerial intuition but must be supported by a data-driven approach. Digital data enables institutions to understand audience behavior, evaluate the effectiveness of promotional channels, measure public engagement, and optimize marketing communication strategies more objectively. Within a data-driven marketing framework, the use of digital instruments such as web monitoring tools, social media monitoring tools, and search engine optimization (SEO) is crucial because all three serve as sources of strategic information in the marketing decision-making process (Hidayati et al. 2024).

Web monitoring tools, such as Google Analytics and Google Search Console, are used to monitor the performance of an institution's official website, analyze prospective students' search behavior, evaluate digital traffic sources, and measure the effectiveness of the registration page in real time. Data generated from web monitoring tools provides an empirical basis for marketing teams in designing content strategies, improving user experiences, and increasing digital conversion effectiveness (Meireles and Baluz 2024; Sakas et al. 2023) . Meanwhile, social media monitoring tools play a role in tracking engagement, analyzing public sentiment, understanding audience responses, and identifying communication trends relevant to the university's target market (Laradi et al. 2023; Pawar 2024).

In addition to website and social media monitoring, SEO is a crucial pillar of digital marketing because it determines the level of visibility of an institution's website in organic search results. Proper SEO implementation through keyword optimization, content quality, site technical structure, and user experience can increase the chances of an institution's website appearing on the first page of search engines. Strong organic visibility contributes to increased traffic, credibility, and brand awareness for an institution (Erdmann, Arilla, and Ponzoa 2022; Nanul and Islamiyah 2024).

Although these three digital instruments play a strategic role, in practice, digital data utilization is often partial and not fully integrated into institutional marketing planning systems. As a result, increased marketing effectiveness is not always optimally achieved. Most previous research focuses on digital marketing in a commercial business context, while empirical studies specifically examining the influence of web monitoring tools, social media monitoring tools, and SEO on marketing planning and enhancement in private higher education institutions are still relatively limited (Benslama and Jallouli 2022; Figueiredo, Gonçalves, and Teixeira 2021; Saura, Ribeiro-Soriano, and Palacios-Marqués 2021).

Based on the research gap, this study aims to analyze the influence of the use of Web Monitoring Tools, Social Media Monitoring Tools, and Search Engine Optimization on Marketing Planning and Enhancement at Tri Bhakti Business School, both partially and simultaneously. Specifically, this study answers four main questions, namely whether Web Monitoring Tools have an effect on Marketing Planning and Enhancement, whether Social Media Monitoring Tools have an effect on Marketing Planning and Enhancement, whether SEO has an effect on Marketing Planning and Enhancement, and whether the three variables simultaneously have an effect on Marketing Planning and Enhancement at Tri Bhakti Business School.

2. Literature Review and Hypothesis Development

2.1 Web Monitoring Tools

Web monitoring tools are technology-based instruments used to track, measure, analyze, and report user activity data on websites. In the context of digital marketing, web

monitoring tools are not only used to monitor the availability of site services but also serve as analytical tools that help organizations understand user behavior more deeply (Adwan et al. 2023). Through data such as the number of visitors, traffic sources, visit duration, most-accessed pages, and conversion rates, institutions can evaluate the effectiveness of their websites as marketing communications.

For universities, official websites are the primary channels for providing academic information, study programs, tuition fees, facilities, the registration process, and institutional activities. Therefore, website monitoring is crucial to ensure the information provided is relevant to the needs of prospective students. Web monitoring tools enable institutions to identify effective pages, improve less engaging content, and optimize the user journey from information search to enrollment (Meireles and Baluz 2024; Sakas et al. 2023).

2.2 Social Media Monitoring Tools

Social media monitoring tools are tools used to monitor, collect, and analyze user interactions on social media platforms. In higher education marketing, social media serves as a strategic communication platform between institutions, prospective students, current students, alumni, and the community. Through social media, institutions can build their image, expand their reach, manage relationships with their audiences, and monitor public perception in real time (Laradi et al. 2023).

Social media monitoring includes engagement analysis, sentiment analysis, mention tracking, feedback analysis, and trend monitoring. This information can be used to create more relevant content, refine communication messages, and respond more quickly to audience needs. In the context of higher education, social media monitoring tools are crucial because young prospective students tend to use digital platforms as their primary source of information when choosing a college (Pawar 2024; Song et al. 2023).

2.3 Search Engine Optimization

Search Engine Optimization is a systematic process of improving the quality and quantity of website visits through organic search results on search engines. SEO aims to ensure that websites are easily found by users when they search for specific information. In the context of higher education, SEO helps universities increase digital visibility for relevant keywords, such as program name, campus location, tuition fees, accreditation, and career opportunities for graduates (Erdmann et al. 2022).

SEO encompasses three main dimensions: on-page SEO, off-page SEO, and technical SEO. On-page SEO relates to content quality, keyword usage, heading structure, and information relevance. Off-page SEO relates to a site's external reputation through backlinks from credible sources. Technical SEO encompasses site speed, security, URL structure, and mobile-friendly design. Proper SEO implementation can help institutions achieve more stable and sustainable organic traffic without relying entirely on paid advertising (Nanul and Islamiyah 2024).

2.4 Marketing Planning and Enhancement

Marketing planning is a systematic process of formulating marketing objectives, determining market segmentation, setting targets, selecting communication strategies, allocating resources, and evaluating marketing results. In the digital era, marketing planning is no longer based solely on assumptions or experience but needs to be supported by empirical data from various digital channels (Vollrath and Villegas 2022).

Marketing Enhancement refers to the process of continuously improving marketing effectiveness, whether through increased brand awareness, promotional cost efficiency, increased audience engagement, or increased enrollment conversions. In the context of higher education, Marketing Planning and Enhancement reflects an institution's ability to design,

implement, and evaluate marketing strategies to attract prospective students and strengthen its competitiveness (Gupta et al. 2021; Hidayati et al. 2024).

2.5 Hypothesis Development

Utilizing web monitoring tools provides valuable data on website user behavior, the effectiveness of information pages, and the performance of digital channels. This data can strengthen marketing planning and improve the quality of strategy evaluation. Therefore, the first hypothesis is formulated as follows:

H1: Web Monitoring Tools have a positive and significant impact on Marketing Planning and Enhancement.

Social media monitoring tools enable institutions to understand audience engagement, sentiment, trends, and responses in real-time. This capability can strengthen marketing communication strategies and increase the effectiveness of digital campaigns. Therefore, the second hypothesis is formulated as follows:

H2: Social Media Monitoring Tools have a positive and significant impact on Marketing Planning and Enhancement.

SEO helps institutions increase website visibility in search engines, expand the reach of information, and increase the potential for organic visits from prospective students. Therefore, the third hypothesis is formulated as follows:

H3: Search Engine Optimization has a positive and significant impact on Marketing Planning and Enhancement.

These three digital tools complement each other in building a data-driven marketing system. The integration of web analytics, social media analytics, and SEO is believed to strengthen institutional marketing planning and improvement. Therefore, the fourth hypothesis is formulated as follows:

H4: Web Monitoring Tools, Social Media Monitoring Tools, and Search Engine Optimization simultaneously have a positive and significant effect on Marketing Planning and Enhancement.

3. Research Methodology

3.1 Research Design

This study employed a quantitative approach with an explanatory research design. This approach was chosen because it aimed to measurably test the causal relationship between independent and dependent variables through statistical analysis. The research focused on the influence of Web Monitoring Tools, Social Media Monitoring Tools, and Search Engine Optimization on Marketing Planning and Enhancement at Tri Bhakti Business School. Data were collected over a specific period using a cross-sectional method using a structured questionnaire (Ghozali 2021; Sugiyono 2022) .

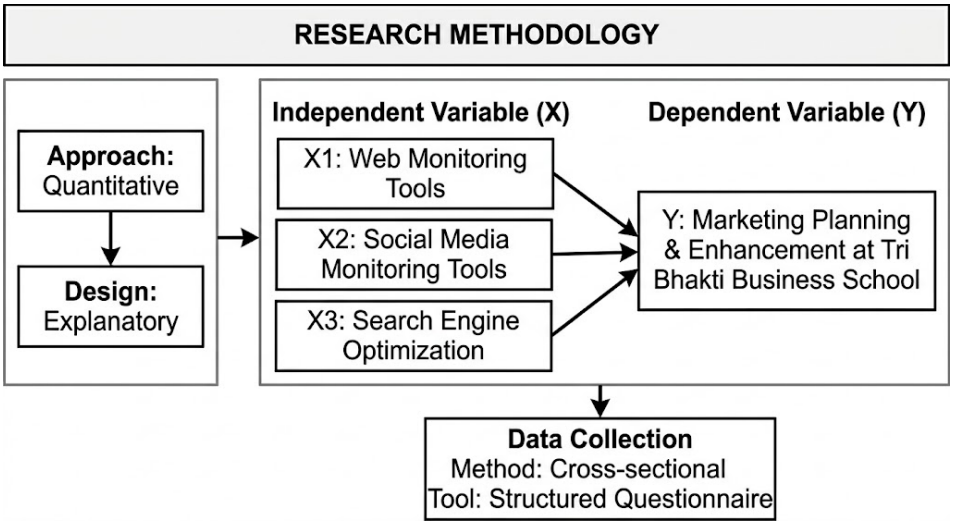


Figure 1. Research Framework

3.2 Population and Sample

The population in this study were internal stakeholders within Tri Bhakti Business School who are related to academic activities, communication, admissions, information technology, and institutional marketing. The sampling technique used was non-probability sampling with a saturated sampling method. This technique was used because the relevant population size was relatively limited and all members of the population were used as research respondents. The sample size in this study was 50 respondents, consisting of 30 students, 10 lecturers, and 10 educational staff.

3.3 Data Collection Techniques

Primary data was collected through a structured questionnaire distributed to respondents. Each statement item was measured using a five-point Likert scale: 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, and 5 for strongly agree. The Likert scale was used because it can quantitatively measure respondents' perceptions of the use of digital marketing instruments and allows for statistical analysis.

3.4 Operational Definition of Variables

The Web Monitoring Tools (X1) variable is defined as the use of digital tools to monitor and analyze the performance of an institution's website. Indicators for this variable include ease of site monitoring, visitor traffic analysis, site performance monitoring, user behavior analysis, and traffic source evaluation.

The Social Media Monitoring Tools (X2) variable is defined as the use of social media monitoring tools to measure interactions, feedback, trends, and the effectiveness of an institution's digital communications. Indicators include social media engagement, audience feedback analysis, social media effectiveness, audience trend monitoring, and digital interaction management.

The Search Engine Optimization (X3) variable is defined as a strategy for optimizing a website to ensure it's easily found in organic search engine results. Indicators for this variable include keyword optimization, website loading speed, mobile-friendly design, content quality, and search engine ranking.

The Marketing Planning and Enhancement (Y) variable is defined as an institution's ability to effectively develop and improve marketing strategies. Indicators include targeting and segmentation, budget allocation efficiency, brand awareness enhancement, and conversion or student enrollment growth.

3.5 Data Analysis Techniques

Data analysis techniques were performed using SPSS software. The analysis stages included validity testing, reliability testing, multiple linear regression analysis, t-test, F-test, and coefficient of determination. Validity testing was performed by comparing the calculated r-value and r-table. Reliability testing was performed by observing the Cronbach's Alpha value. Multiple linear regression analysis was used to examine the effect of Web Monitoring Tools, Social Media Monitoring Tools, and SEO on Marketing Planning and Enhancement. The regression equation used is as follows:

$$\mathbf{Y = a + \beta 1X1 + \beta 2X2 + \beta 3X3 + e}$$

Description: Y is Marketing Planning and Enhancement, a is a constant, β1–β3 are the regression coefficients of each independent variable, X1 is Web Monitoring Tools, X2 is Social Media Monitoring Tools, X3 is SEO, and e is the error term. The t-test is used to test partial effects, the F-test is used to test simultaneous effects, while the coefficient of determination is used to determine the contribution of independent variables in explaining variations in the dependent variable.

4. Research Results

4.1 Respondent Description

Respondent characteristics were analyzed to obtain a general overview of the research sample profile. The study included 50 respondents from Tri Bhakti Business School. Respondents were grouped by stakeholder category, gender, and age range.

Table 1. Demographic Profile of Respondents

Characteristics	Category	Amount	Percentage
Respondent categories	Student	30	60%
	Lecturer	10	20%
	Educational staff	10	20%
Gender	Man	22	44%
	Woman	28	56%
Age range	18–25 years	30	60%
	26–40 years	8	16%
	> 40 years	12	24%
Total		**50**	**100%**

Source: Processed primary data, 2026.

Based on Table 1, the majority of respondents were students, 30 people (60%). Lecturers and educational staff each comprised 10 people (20%). In terms of gender, 28 respondents were female (56%), while 22 respondents were male (44%). In terms of age, the 18–25 age group was the dominant group, accounting for 60%.

4.2 Validity Test Results

A validity test was conducted to determine whether each statement item was able to measure the construct being studied. With 50 respondents, the r-table value at a 5% significance level was 0.278. An item is declared valid if the calculated r-value is greater than the r-table value.

Table 2. Results of Instrument Validity Test

Variables	Item	r-count	r-table	Information
Web Monitoring Tools (X1)	X1.1	0.712	0.278	Valid
	X1.2	0.785	0.278	Valid
	X1.3	0.698	0.278	Valid
	X1.4	0.743	0.278	Valid
	X1.5	0.721	0.278	Valid
Social Media Monitoring Tools (X2)	X2.1	0.764	0.278	Valid
	X2.2	0.812	0.278	Valid
	X2.3	0.735	0.278	Valid
	X2.4	0.791	0.278	Valid
	X2.5	0.704	0.278	Valid
Search Engine Optimization (X3)	X3.1	0.749	0.278	Valid
	X3.2	0.689	0.278	Valid
	X3.3	0.715	0.278	Valid
	X3.4	0.762	0.278	Valid
	X3.5	0.801	0.278	Valid
Marketing Planning and Enhancement (Y)	Y.1	0.755	0.278	Valid
	Y.2	0.734	0.278	Valid
	Y.3	0.821	0.278	Valid
	Y.4	0.788	0.278	Valid

Source: Processed primary data, 2026.

Based on Table 2, all statement items had r-values above 0.278. Thus, all instrument items were declared valid and suitable for use in further analysis.

4.3 Reliability Test Results

Reliability testing was conducted to determine the instrument's consistency in measuring each research variable. A variable is considered reliable if its Cronbach's Alpha value is greater than 0.700.

Table 3. Reliability Test Results

Variables	Cronbach's Alpha	Critical Limit	Information
Web Monitoring Tools (X1)	0.821	0.700	Reliable
Social Media Monitoring Tools (X2)	0.856	0.700	Reliable
Search Engine Optimization (X3)	0.834	0.700	Reliable
Marketing Planning and Enhancement (Y)	0.872	0.700	Reliable

Source: Processed primary data, 2026.

Based on Table 3, all variables have Cronbach's Alpha values above 0.700. This indicates that the research instrument has good internal consistency and can be used as a reliable measuring tool.

4.4 Results of Multiple Linear Regression and t-Test

Multiple linear regression analysis was used to determine the effect of Web Monitoring Tools, Social Media Monitoring Tools, and SEO on Marketing Planning and Enhancement. The test results are shown in Table 4.

Table 4. Results of Multiple Linear Regression and t-Test

Variables	Coefficient B	t-count	Sig.	Information
Permanent	1.987	2.135	0.042	Significant
Web Monitoring Tools (X1)	0.312	2.987	0.004	Positive and significant
Social Media Monitoring Tools (X2)	0.428	4.115	0.001	Positive and significant
Search Engine Optimization (X3)	0.287	2.756	0.008	Positive and significant

Source: Processed primary data, 2026.

Based on Table 4, the multiple linear regression equation in this study is:
Y = 1.987 + 0.312X1 + 0.428X2 + 0.287X3
The equation shows that all independent variables have positive coefficients. Web Monitoring Tools has a coefficient of 0.312 with a significance of 0.004, so H1 is accepted. Social Media Monitoring Tools has a coefficient of 0.428 with a significance of 0.001, so H2 is accepted. SEO has a coefficient of 0.287 with a significance of 0.008, so H3 is accepted. Social Media Monitoring Tools is the most dominant variable because it has the highest regression coefficient and t-test values.

4.5 F-Test Results

The F test is used to determine the influence of Web Monitoring Tools, Social Media Monitoring Tools, and SEO simultaneously on Marketing Planning and Enhancement.

Table 5. Simultaneous F-Test Results

Model	F-count	Sig.	Information
Regression	28.763	0.000	Significant simultaneous

Source: Processed primary data, 2026.

Based on Table 5, the F-value is 28.763 with a significance level of 0.000. Since the significance level is less than 0.05, H4 is accepted. This means that Web Monitoring Tools, Social Media Monitoring Tools, and SEO simultaneously have a positive and significant effect on Marketing Planning and Enhancement at Tri Bhakti Business School.

4.6 Coefficient of Determination

The coefficient of determination is used to determine the extent of the contribution of the independent variable in explaining the variation in the dependent variable.

Table 6. Results of the Determination Coefficient

Model	R	R Square	Adjusted R Square	Information
1	0.849	0.721	0.703	Strong influence

Source: Processed primary data, 2026.

The R value of 0.849 indicates a strong relationship between Web Monitoring Tools, Social Media Monitoring Tools, SEO, and Marketing Planning and Enhancement. The R Square value of 0.721 indicates that 72.1% of the variation in Marketing Planning and Enhancement can be explained by the three independent variables. Meanwhile, the remaining 27.9% is explained by other factors outside the research model, such as content marketing, brand positioning, customer relationship management, institutional reputation, digital service quality, or marketing budget.

5. Discussion

5.1 The Influence of Web Monitoring Tools on Marketing Planning and Enhancement

The results of the study indicate that web monitoring tools have a positive and significant impact on marketing planning and enhancement. This finding is demonstrated by a regression coefficient of 0.312, a t-value of 2.987, and a significance value of 0.004. Therefore, the better the utilization of website monitoring tools, the higher the quality of an institution's marketing planning and effectiveness.

Empirically, the use of web monitoring tools such as Google Analytics and Google Search Console can help institutions understand website visitor behavior, digital traffic sources, visit duration, most frequently accessed pages, and the potential for conversion from visitors to prospective students. This data is crucial because higher education marketing needs to be supported by objective digital evidence. Through systematic website monitoring, Tri Bhakti Business School management can identify the most effective promotional channels, the most engaging information pages, and website sections that need improvement to increase new student enrollment.

These findings align with Adwan et al. (2023), who stated that data analysis in digital marketing plays a crucial role in tracking campaign effectiveness and formulating more precise marketing strategies. These findings are further supported by Meireles and Baluz (2024) , who explain that the use of web analytics tools can help organizations make more strategic, measurable, and data-driven marketing decisions.

5.2 The Influence of Social Media Monitoring Tools on Marketing Planning and Enhancement

The results of the study indicate that Social Media Monitoring Tools have a positive and significant effect on Marketing Planning and Enhancement. The regression coefficient value of 0.428, the t-value of 4.115, and the significance level of 0.001 indicate that this variable is the most dominant factor compared to other variables.

The dominance of social media monitoring tools is understandable, as the primary target market for higher education institutions is the younger generation, who are highly active on social media. Platforms like Instagram, TikTok, YouTube, and LinkedIn serve not only as communication channels but also as a platform for prospective students to seek information, compare college options, assess an institution's reputation, and build brand awareness. Therefore, an institution's ability to monitor engagement, comments, audience sentiment, content trends, and public response is crucial for developing a relevant marketing strategy.
The use of social media monitoring tools allows Tri Bhakti Business School to understand the needs of prospective students more quickly and realistically. Digital interaction data can be used to determine the most engaging content types, the most effective publication times, audience responses to promotional campaigns, and public perception of the institution. These results support, who assert that an organization's ability to manage and monitor social media activity influences brand equity strengthening. These findings also align with Pawar (2024) and Song et al. (2023), who state that social media plays a strategic role in higher education marketing.

5.3 The Influence of Search Engine Optimization on Marketing Planning and Enhancement

The results of the study indicate that Search Engine Optimization has a positive and significant effect on Marketing Planning and Enhancement. This is indicated by a regression coefficient of 0.287, a t-test of 2.756, and a significance level of 0.008. Although the SEO coefficient is smaller than the other two variables, SEO still plays a significant role in strengthening an institution's digital marketing.
SEO plays a role in increasing the visibility of Tri Bhakti Business School's official website in search engines. When prospective students search for information about business schools, study programs, tuition fees, campus locations, or academic excellence, the institution's website's position in Google search results is crucial. Websites that appear at the top of the rankings tend to be more accessible, more trustworthy, and more likely to generate prospective applicants. Therefore, a sound SEO strategy can help institutions increase organic traffic, expand the reach of information, and reduce reliance on paid advertising.
These findings support Erdmann et al. (2022) , who explain that SEO is a long-term strategy for increasing digital visibility through the selection of appropriate keywords. These results also align with those of Nanul and Islamiyah (2024), who demonstrated that SEO optimization can strengthen digital marketing and expand audience reach organically.

5.4 The Simultaneous Influence of Web Monitoring Tools, Social Media Monitoring Tools, and SEO on Marketing Planning and Enhancement

The results of the study indicate that Web Monitoring Tools, Social Media Monitoring Tools, and SEO simultaneously have a positive and significant effect on Marketing Planning and Enhancement. This is evidenced by the F-value of 28.763 with a significance level of 0.000. Furthermore, the R-square value of 0.721 indicates that the three independent variables are able to explain 72.1% of the variation in Marketing Planning and Enhancement.
These findings demonstrate that digital marketing effectiveness cannot rely solely on a single tool. Web monitoring tools, social media monitoring tools, and SEO need to be viewed as a complementary ecosystem. Web monitoring tools provide data on website visitor behavior, social media monitoring tools provide information on audience perception and engagement on social media, and SEO helps increase an institution's visibility in search engines. When used in an integrated manner, all three can result in more accurate, responsive, and data-driven marketing planning.

These findings align with Dwivedi et al. (2021), who emphasized the importance of integrating digital marketing and social media in addressing changing digital consumer behavior. These findings are further supported by Gupta et al. (2021), who demonstrated that leveraging marketing analytics can improve organizational marketing performance and agility.

5.5 Theoretical and Practical Implications

Theoretically, this research contributes to the development of digital marketing literature, particularly in the context of private higher education institutions. This research demonstrates that web monitoring tools, social media monitoring tools, and SEO are not merely technical instruments but also sources of strategic capabilities that can influence marketing planning and improvement. Thus, this research enriches the study of data-driven marketing in the higher education sector.

Practically, the results of this study provide guidance for Tri Bhakti Business School management to strengthen its data-driven digital marketing system. Because social media monitoring tools have proven to be the most dominant variable, management needs to pay greater attention to social media management, including content, interaction, sentiment monitoring, and evaluating the effectiveness of digital campaigns. Social media needs to be managed not only as a publication channel but also as a strategic data source to understand the needs of prospective students.

Management also needs to integrate website management, SEO, and social media into a coordinated digital marketing work system. Admissions, public relations, information technology, and marketing teams need to work collaboratively to ensure data from various digital channels can be analyzed in a unified manner. Marketing evaluations should be conducted periodically using indicators such as traffic sources, engagement rate, bounce rate, keyword performance, conversion rate, and new student enrollment growth.

6. Conclusions, Limitations, and Suggestions

6.1 Conclusion

Based on the data analysis and discussion, it can be concluded that web monitoring tools have a positive and significant impact on marketing planning and enhancement at Tri Bhakti Business School. Consistent use of web analytics tools can help institutions monitor prospective students' search behavior, evaluate digital traffic sources, and optimize registration conversion pages.

Social Media Monitoring Tools have a positive and significant impact on Marketing Planning and Enhancement. This variable is the most dominant factor in the study, thus concluding that monitoring social media activity plays a strategic role in increasing the effectiveness of an institution's digital marketing. This aligns with the characteristics of the university's target market, particularly the younger generation, who actively use social media as a source of information and reference when selecting a higher education institution.

Search Engine Optimization has a positive and significant impact on Marketing Planning and Enhancement. Structured SEO implementation can increase the organic visibility of Tri Bhakti Business School's official website in search engines. This increased visibility contributes to strengthening credibility, brand awareness, and making it easier for prospective students to access official campus information.

Simultaneously, Web Monitoring Tools, Social Media Monitoring Tools, and SEO have a positive and significant effect on Marketing Planning and Enhancement. These three variables explain 72.1% of the variation in Marketing Planning and Enhancement, while the remaining 27.9% is influenced by factors outside the research model.

6.2 Research Limitations

This study has several limitations. First, the sample size was limited to 50 internal respondents, consisting of students, lecturers, and administrative staff within Tri Bhakti Business School. Therefore, the results cannot be broadly generalized to all private universities with their varying characteristics.

Second, the scope of the research variables is still limited to three digital marketing instruments: web monitoring tools, social media monitoring tools, and SEO. However, the effectiveness of higher education institutions' marketing planning and improvement can also be influenced by other factors, such as the quality of digital content, academic reputation, branding strategy, user experience, admissions services, alumni relations, and the use of artificial intelligence in marketing activities.

Third, this study used a quantitative approach based on respondents' perceptions through a questionnaire. This approach is effective for statistically testing relationships between variables, but it fails to delve deeply into the managerial dynamics and actual practices of digital marketing decision-making in institutional settings.

6.3 Suggestions

Tri Bhakti Business School is advised to strengthen social media management as a top priority in its digital marketing strategy. Management needs to allocate more proportional resources to creative content production, engagement monitoring, sentiment analysis, audience feedback management, and evaluating the effectiveness of promotional campaigns across various social media platforms.

Tri Bhakti Business School also needs to build an integrated digital monitoring system. Data from Google Analytics, Google Search Console, SEO performance, and social media should not be analyzed separately, but combined into a single digital marketing dashboard. This integration will help management develop data-driven marketing plans, evaluate the effectiveness of promotional channels, identify prospective student behavior, and make faster marketing decisions.

Management needs to improve the capacity of human resources involved in marketing, admissions, public relations, and information technology. Regular training on web analytics, social media analytics, SEO content strategy, and digital campaign evaluation is essential to empower internal teams to critically analyze digital data and transform it into actionable marketing strategies.

For further research, the sample size could be expanded to include several private universities in urban areas such as Greater Jakarta (Jabodetabek). Further research could also include other variables such as Content Marketing Strategy, Artificial Intelligence Marketing, Brand Positioning, Customer Relationship Management, Digital Branding, or Student Engagement to make the research model more comprehensive.

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Stock Valuation of PT DCI Indonesia Tbk. Based on Fundamental Analysis as the Basis for Investment Decisions

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Abstract

This research aims to analyze the role of fundamental analysis in stock valuation and investment decision-making at PT DCI Indonesia Tbk. (DCII) during the period 2021–2025. This research uses a descriptive quantitative approach with secondary data obtained from the company's financial statements, the Indonesia Stock Exchange, and other supporting sources. The analysis was conducted using financial ratios including Earnings per Share (EPS), Return on Assets (ROA), Return on Equity (ROE), Price Earnings Ratio (PER), and Price to Book Value (PBV). The research results indicate that DCII's fundamental performance has experienced positive growth, as evidenced by the increase in EPS, ROA, and ROE during the study period. From a valuation perspective, the calculation of intrinsic value using the EPS × PER and BVPS × PBV approaches shows that the intrinsic value of DCII shares is relatively close to the market price, categorizing the shares as being in fair value condition. Thus, the recommended investment decision for investors who already own DCII shares is to hold, while for potential investors, this stock can still be considered for long-term investment, keeping in mind the high valuation risk and stock price fluctuations. This research emphasizes that fundamental analysis can serve as an important basis for assessing the fairness of stock prices and supporting more rational investment decision-making.

Keyword: *fundamental analysis; stock valuation; investment decision; financial ratios; DCII*

1. Introduction

The development of the capital market in Indonesia in recent years has experienced quite rapid growth, especially in the technology sector, which has attracted investors' attention due to its high growth prospects. One of the technology sector companies that has attracted investors' attention is PT DCI Indonesia Tbk. with the stock code DCII. This company operates in the field of data centers and digital infrastructure services, which play an important role in supporting the development of digital transformation in Indonesia. As the demand for data storage and digital services increases, the performance of data center companies has also experienced significant growth, thereby influencing investors' interest in the company's shares in that sector.



Figure 1. Development of DCII stock prices for the period 2021-2025

The stock price of DCII experienced a significant increase during the period 2021–2025. The increase in the stock price indicates a high market appreciation for the company's growth prospects in the future. However, a high stock price does not always reflect that the stock is in a fair condition. Investors need to conduct fundamental analysis to determine whether the company's stock price is in line with its intrinsic value, so that investment decisions can be made more rationally and measurably. Fundamental analysis becomes important because it can provide an overview of the company's financial condition thru various financial ratios that reflect the company's profitability, efficiency, and valuation.

Fundamental analysis can be conducted using several financial ratios such as Earnings per Share (EPS), Return on Assets (ROA), Return on Equity (ROE), Price Earnings Ratio (PER), and Price to Book Value (PBV). EPS is used to measure the company's ability to generate profit per share, while ROA and ROE are used to assess the company's effectiveness in managing assets and capital to generate profit. Additionally, PER and PBV are used to see how the market values the company's stock compared to its earnings and book value. Thru these ratios, investors can understand the fundamental condition of the company and simultaneously determine the intrinsic value of the stock as a basis for making investment decisions.

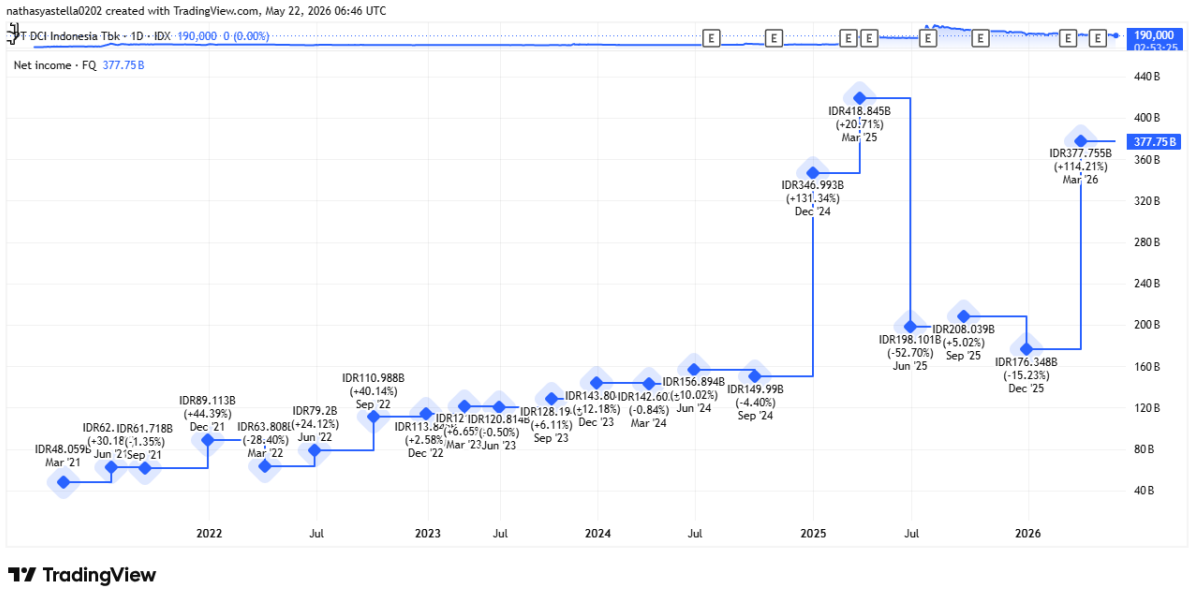


Figure 2. DCII's net profit growth for the period 2021-2025

Based on the financial report data of DCII for the period 2021–2025, the company has shown a continuous increase in net profit and equity every year. This condition reflects that the company has the ability to generate good profitability amid the increasing demand for data center services in Indonesia. On the other hand, DCII's stock price has also experienced fluctuations with a significant upward trend, making it interesting to analyze whether the stock price is still at a fair value, overvalued, or undervalued.

Research on fundamental analysis and intrinsic stock value is important because it can help investors understand the relationship between a company's fundamental performance and its stock price in the market. Additionally, this research is also relevant to the concept of the Fundamental Theory of Value, which states that a stock's intrinsic value is influenced by the company's fundamental conditions, such as profitability, company growth, and future business prospects. Therefore, this research aims to analyze the fundamental condition of DCII's stock using the EPS, ROA, ROE, PER, and PBV ratios, as well as to determine the intrinsic value of the stock as a basis for providing investment decision recommendations for investors.

2. Literature Review

Fundamental Theory of Value

According to the Fundamental Theory of Value proposed by Graham and Dodd in 1934, the true value of a stock is influenced by the company's fundamentals, including its ability to generate profits, performance growth, dividend distribution policy, capital structure, and the level of risk the company possesses (Hou et al., 2022). This theory explains that stock prices in the market do not always reflect their intrinsic value due to the influence of investor sentiment, macroeconomic conditions, and market behavior. Therefore, fundamental analysis is used to determine whether a stock's price is above or below its fair value. In current investment practices, this theory serves as a reference in the use of various financial ratios,

such as EPS, PER, PBV, ROE, and dividends, to assess the prospects and feasibility of investing in a stock (Sari & Putri, 2025).

Analisis Fundamental

Fundamental analysis is used to assess the intrinsic value of a stock by examining macroeconomic conditions, the company's financial performance, and other qualitative aspects. Several indicators commonly used in this approach include EPS, ROA, ROE, PER, and PBV. Additionally, the relative approach using valuation ratios such as PER and PBV is also widely used because it is more practical and easier to apply in capital market activities. The popularity of these methods has encouraged many studies to examine their developments and limitations in the company valuation process (Sunarwijaya et al., 2025). The main objective of fundamental analysis is to determine whether a stock's price is below or above its intrinsic value based on the company's actual financial condition, rather than merely due to short-term market price fluctuations. The research "Stock Fundamental Analysis and Investment Decision Making" shows that many investors in Indonesia use fundamental analysis as a basis for making investment decisions, thus this method is considered to play an important role in investment practices in the capital market (Dwitayanti et al., 2023).

Valuasi Saham

Stock valuation is the activity of estimating the intrinsic or actual value of a stock using financial analysis approaches, either thru absolute methods such as Discounted Cash Flow (DCF) or relative methods that use ratios such as PER and PBV (Pengestika & Christianti, 2021). Thru the valuation process, investors can determine whether a company's stock price reflects its fair value or not. Thus, potential investors can assess whether the stock is in an overvalued or undervalued condition (Perdana & Horman, 2022). In practice, investors often compare the intrinsic value calculation results based on fundamental analysis with the current stock market price as a reference in making investment decisions, whether to buy, hold, or sell the stock.

Keputusan Investasi

Investment decisions are the decision-making processes related to the choice of buying, holding, or selling an asset based on the assessment of the asset's value and its future profit prospects. These decisions are made by allocating funds to certain investment instruments with the hope of obtaining returns in the future (Dwitayanti et al., 2023). In stock investment, investment decisions are generally determined thru fundamental analysis by comparing the intrinsic value of the stock to the prevailing market price. If the intrinsic value is greater than the market price, the stock is considered undervalued and worth buying. Conversely, if the intrinsic value is lower than the market price, the stock is deemed overvalued and more appropriate to sell.

3. Material and Method

This research uses a quantitative approach with a descriptive method because the main focus of the study is to analyze the development of fundamental indicators of PT DCI Indonesia Tbk. (DCII) shares and their implications for investment decisions. The data used in this research are secondary data obtained from the Indonesia Stock Exchange (IDX), the company's annual financial statements, official publications of PT DCI Indonesia Tbk., as well as other supporting sources such as stock market data provider websites.

The research period is focused on the years 2021–2025 because this period reflects the dynamics of post-pandemic economic recovery as well as the development of the technology and data center sectors in Indonesia, which are experiencing significant growth. The population in this study consists of all technology sector companies listed on the Indonesia Stock Exchange (IDX), while the research sample is PT DCI Indonesia Tbk. (DCII), which was selected using purposive sampling technique. The selection of the sample was based on several considerations, including the company having a large market capitalization in the technology sector, demonstrating consistent growth in fundamental performance, and having high stock liquidity in the capital market.

The data collection method in this study was conducted thru documentation methods, namely by collecting financial reports, stock price data, and official company publications related to the performance of PT DCI Indonesia Tbk. during the period 2021–2025. The data that has been obtained is then analyzed using fundamental ratios, namely Earnings per Share (EPS), Return on Assets (ROA), Return on Equity (ROE), Price Earnings Ratio (PER), and Price to Book Value (PBV), to assess the company's fundamental condition and determine the intrinsic value of the stock as a basis for investment decision-making.

Data were obtained and then analyzed using fundamental analysis techniques, specifically the calculation and interpretation of financial ratios, including Earnings per Share (EPS) with the formulation below: (Cahyaningrum & Antikasari, 2017)

EPS = Net Income After Tax : Number of Shares Outstanding

Meanwhile, the calculation of Return on Assets (ROA) is computed using the formula: (Herispon & Hade, 2016)

ROA = Net Income : Total Assets x 100%

The measurement of how far a company is able to generate net profit using its own capital can be done with the calculation of Return on Equity (ROE) below: (Herispon & Hade, 2016)

ROE = Net Income : Total Equity x 100%

Price to Earnings Ratio (PER) is used in its calculation to assess the fairness of a stock price with the following formula: (Cahyaningrum & Antikasari, 2017)

PER = Price per Share : Earnings per Share

Meanwhile, the Price to Book Value (PBV) is applied by investors in determining the fair or intrinsic value of a stock using the formula: (Cahyaningrum & Antikasari, 2017)

PBV = Price per Share : Book Value per Share

Final stage, the analysis results are compared with investment valuation standards to determine the feasibility of DCII shares as a form of valuation and instrument in investment decisions. With this approach, the research is expected to provide a comprehensive depiction of the relationship between fundamental performance and investment decisions on DCII shares. The standards are as follows:

Table 1. Standard Value of Financial Ratios

Rasio	Criteria Standard Value
Earning Per Share (EPS)	Continuously increasing consistently
Return On Assets (ROA)	>1.5% (Very Healthy Category)
Return On Equity (ROE)	>15% (Very Healthy Category)
Price To Book Value (PBV)	<1 (Considered Cheap)
Price Earning Ration (PER)	<15x (Relatively Low)

Source: (Setiawan & Manurung, 2025), (Hoerunnisa & Sulistiyo, 2024)

4. Result and Discussion

Based on the results of the fundamental analysis conducted on the financial statements and stock market performance of DCII for the period 2021-2025, information was obtained regarding the development of key financial ratios, including EPS, ROE, ROA, PER, and PBV, which serve as the basis for evaluating the feasibility of DCII shares as an investment instrument.

Earning Per Share (EPS)

Earnings per Share (EPS) is a ratio in measuring the amount of net profit obtained by a company per outstanding share, so EPS describes the level of profit that an investor will receive per share owned (Candy & Yeria, 2022). The standard evaluation used is that the higher the increase in EPS, the better the profit obtained.

Table 2. Earnings Per Share (EPS) DCII Period 2021-2025

Year	Net Profit (Rp)	Outstanding Shares	EPS (Rp)
2021	261,451,000,000	2.383.745.900	109,68
2022	367,842,000,000	2.383.745.900	154,31
2023	514,487,000,000	2.383.745.900	215,83
2024	796,820,000,000	2.383.745.900	334,27
2025	1,001,946,000.000	2.383.745.900	420,32

Source: Processed data, 2026

Based on the calculation of Earnings per Share (EPS) in the table above, the company's EPS value has increased every year. In 2021, EPS was recorded at Rp109.68 per share, then increased to Rp154.31 in 2022. Subsequently, EPS rose again to Rp215.83 in 2023 and reached Rp334.27 in 2024. In 2025, the company's EPS increased further to Rp420.32 per share.

The increase in EPS indicates that the company's ability to generate net profit per share is improving year by year. This condition can be a positive signal for investors as it reflects the company's continuously growing profitability. The higher the EPS value, the greater the potential profits that shareholders can obtain, thus the company is considered to have good financial performance and positive growth prospects in the future.

Return On Assets (ROA)

ROA is defined as a ratio that assesses how effectively a company utilizes all its assets to generate net profit (Candy & Yeria, 2022).

Table 3. Return on Asset (ROA) DCII Period 2021-2025

Year	Net Profit (Rp)	Total Assets (Rp)	ROA (%)
2021	261,451,000,000	2,991,613,000,000	8,74
2022	367,842,000,000	3,217,564,000,000	11,43
2023	514,487,000,000	3,676,484,000,000	13,99
2024	796,820,000,000	4,820,065,000,000	16,53
2025	1,001,946,000.000	6,648,415,000,000	15,07

Sumber : Hasil pengolahan, 2026

Based on the Return on Assets (ROA) calculations in the table above, the company's ROA value has increased from 2021 to 2024. In 2021, the ROA was 8.74%, then it increased to 11.43% in 2022 and further rose to 13.99% in 2023. In 2024, the ROA reached 16.53%, indicating the company's ability to generate profit from total assets is becoming more optimal. However, in 2025, the ROA experienced a slight decline to 15.07%.

Despite the decrease in the last year, the overall ROA value of the company remains at a fairly good level. This shows that the company is able to effectively utilize its assets to generate profit. The higher the ROA value, the more efficient the company is in managing its assets, which can provide a positive signal to investors regarding the company's performance and prospects in the future.

Return On Equity (ROE)

Return on Equity (ROE) measures the company's performance in optimizing shareholders' equity to obtain net profit (Candy & Yeria, 2022).

Table 4. Return on Equity (ROE) DCII Period 2021-2025

Year	Net Profit (Rp)	Total Equity (Rp)	ROE (%)
2021	261,451,000,000	1,214,954,000,000	21,52

2022	367,842,000,000	1,585,197,000,000	23,20
2023	514,487,000,000	2,206,950,000,000	23,31
2024	796,820,000,000	3,003,663,000,000	26,53
2025	1,001,946,000.000	4,005,535,000,000	25,01

Source: Processed data, 2026

Based on the Return on Equity (ROE) calculations in the table above, the company's ROE value tends to increase year by year. In 2021, the ROE was 21.52%, then it increased to 23.20% in 2022 and further rose to 23.31% in 2023. Subsequently, in 2024, the ROE reached 26.53%, indicating an improvement in the company's ability to generate profits from the capital owned by shareholders. However, in 2025, the ROE experienced a slight decline to 25.01%.
Overall, the company's ROE level is still considered high and shows that the company is capable of effectively managing shareholders' capital to generate profits. A high ROE value can be a positive signal for investors as it reflects the company's good performance in providing a return on the investment made by shareholders.

Price To Earnings Ratio (PER)

Price To Earnings Ratio (PER) is defined as the ratio that compares the market price per share with the net profit per share, which investors use to assess future income projections. And whether the stock is fairly priced (Siska et al., 2024).

Table 5. Price To Earnings Ratio (PER) DCII Period 2021-2025

Year	Price per Share (Rp)	Earnings per Share (Rp)	PER (x)
2021	43,975	109,68	400,94
2022	36,825	154,31	238,64
2023	43,000	215,83	199,23
2024	42,100	334,27	125,94
2025	200,000	420,32	475,83

Source: Processed data, 2026

Based on the calculation of the Price Earning Ratio (PER) in the table above, the company's PER value fluctuated during the 2021–2025 period. In 2021, the PER value was 400.94 times, then decreased to 238.64 times in 2022 and further decreased to 199.23 times in 2023. In 2024, the PER decreased again to 125.94 times, indicating that the stock price was relatively lower compared to the earnings per share generated by the company. However, in 2025, the PER value significantly increased to 475.83 times due to a substantial rise in the stock price.

The change in the PER value indicates how the market assesses the company's growth prospects. A high PER value usually reflects investors' expectations of the company's future profit growth. Conversely, a lower PER may indicate that the stock price is relatively cheaper compared to the profits generated by the company. Therefore, the PER can be used by investors as one of the indicators in assessing whether the company's stock is undervalued or overvalued.

Price To Book Value (PBV)

Price To Book Value (PBV) is defined as a ratio that compares the market price per share with the book value per share, used to assess the fair price of a stock; a high PBV indicates that investors believe in the company's performance and prospects (Siska et al., 2024).

Table 6. Price To Book Value (PBV) DCII Period 2021-2025

Year	Price per Share (Rp)	Book Value per Share (Rp)	PBV (x)
2021	43,975	509,68	86,28
2022	36,825	664,99	55,38
2023	43,000	925,82	46,45
2024	42,100	1.259,98	33,41
2025	200,000	1.680,36	119,02

Source: Processed data, 2026

Based on the calculation of the Price to Book Value (PBV) in the table above, the company's PBV value fluctuated during the 2021–2025 period. In 2021, the PBV value was 86.28 times, then decreased to 55.38 times in 2022 and further decreased to 46.45 times in 2023. In 2024, the PBV value decreased again to 33.41 times. However, in 2025, the PBV significantly increased to 119.02 times due to a substantial rise in the company's stock price.

The PBV value indicates how much the market values the company compared to its book value. The higher the PBV value, the higher the investor's assessment of the company's prospects and performance in the future. Conversely, a low PBV can indicate that the stock price is relatively cheaper compared to the company's book value. Therefore, PBV becomes one of the important ratios used by investors to assess the valuation level of a company's stock in the capital market.

Stock Valuation and Investment Decisions

Based on the calculations that have been explained, the following is the stock valuation result and recommendation for making investment decisions by comparing the investment value standards (intrinsic value PER and PBV) and the stock price of DCII to assess the stock's feasibility. In determining the intrinsic value of PER, it can be calculated using the formula: (Pranoto et al., 2024).

Intrinsic Value = EPS x PER

Therefore, the results of the EPS intrinsic value calculation analysis are presented in Table 6 below:

Table 7. Intrinsic Value of Price Earnings Ratio (PER) DCII Period 2021-2025

Year	EPS (Rp)	PER (x)	Intrinsic Value
2021	109,68	400,94	43.975,04
2022	154,31	238,64	36.824,94
2023	215,83	199,23	42.999,39
2024	334,27	125,94	42.099,55
2025	420,32	475,83	200.000,87

Source: Processed data, 2026

Meanwhile, the intrinsic value of PBV can be calculated using the following formula (Pranoto et al., 2024), with the calculation results presented in Table 7:

Intrinsic Value of DCII Stock = Book Value Per Share x PBV

Table 8. Intrinsic Value Price to Book Value (PBV) of DCII for the Period 2021-2025

Year	Book Value Per Share (Rp)	PBV (x)	Intrinsic Value
2021	509,68	86,28	43.975,19
2022	664,99	55,38	36.825,15
2023	925,82	46,45	43.000,34
2024	1.259,98	33,41	42.098,93
2025	1.680,36	119,02	199.999,45

Source: Processed data, 2026

After calculating the fundamental analysis ratios above, the results will then be compared with the DCII stock prices from 2021-2025, so that the feasibility of DCII stock can be determined with valuation status and investment decision recommendations. Based on the comparison criteria, if the intrinsic value is higher than the stock price, the stock is considered Overvalued (expensive). This means the stock price is higher than its fair value, so the recommendation is to sell (Sell). Conversely, if the intrinsic value is lower than the stock price, the stock is considered Undervalued (cheap). This means the stock price is still below its fair value, so the stock can be bought (Buy). However, if the intrinsic value is equal to the stock price, the stock is considered Fair Value or Fair. So the stock can be held or kept. (Azizah et al., 2024)

Table 9. Intrinsic Value Price to Book Value (PBV) DCII Period 2021-2025

Year	Intrinsic Value	Price per Share Stock (Rp)	Valuation Status	Recommendation
2021	43.975,19	43,975	Fair Value	Tahan (Hold)
2022	36.825,15	36,825	Fair Value	Tahan (Hold)
2023	43.000,34	43,000	Fair Value	Tahan (Hold)
2024	42.098,93	42,100	Fair Value	Tahan (Hold)
2025	199.999,45	200,000	Fair Value	Tahan (Hold)

Based on the results of fundamental analysis using the EPS, ROA, ROE, PER, and PBV ratios, it is observed that the valuation of DCII's stock during the 2021–2025 period shows a relatively balanced condition between the stock price and its intrinsic value. The intrinsic value calculation using a relative approach, either thru the EPS × PER method or the BVPS × PBV method, indicates that the market price of DCII's stock is not significantly different from its estimated intrinsic value. Thus, DCII shares can be categorized as being in Fair Value condition.

This condition indicates that investors believe the price of DCII shares reflects the company's fundamental performance, both in terms of profitability and equity growth. The EPS value shows a very significant increase from Rp109.68 in 2021 to Rp420.32 in 2025. This increase reflects the company's effectiveness in generating increasingly larger net profits for shareholders. In addition, the increase in ROA from 8.74% in 2021 to 15.07% in 2025 indicates that the company is becoming more efficient in utilizing assets to generate profits. The ROE value also shows good performance with an increase from 21.52% to 25.01%, reflecting the company's ability to generate a high return on shareholders' equity.

The results of the fundamental analysis of DCII shares during the 2021–2025 period are in line with the concept of the Fundamental Theory of Value. This theory explains that the intrinsic value of a stock is influenced by the fundamental conditions of the company, such as profitability, company growth, operational efficiency, and the company's ability to generate profits for investors. Research findings indicate that the intrinsic value of DCII shares, calculated using the relative ratio approach, is close to the market price, placing the shares in the Fair Value category. This condition reflects that the market is giving a fair assessment of the company's fundamentals, which continue to experience positive growth.

Meanwhile, the PER and PBV values indicate that the market is giving a relatively high premium to DCII shares, especially in 2025 when the stock price experienced a significant increase. The high PER and PBV suggest that investors have high expectations for the company's growth prospects in the future. Nevertheless, since the intrinsic value of the stock is still close to the market price, the stock remains in the Fair Value category.

The relevant investment decision in a Fair Value condition is Hold for investors who already own DCII shares, as the current market price is considered to reflect its fair value and still has good growth prospects. Meanwhile, for new potential investors, DCII shares are still worth considering as a long-term investment instrument, especially if the company can maintain profit growth, operational efficiency, and positive fundamental performance in the future. Thus, the investment recommendation of Hold for existing investors and Consider to Buy for new potential investors aligns with the concept of the Fundamental Theory of Value, where investment decisions are made based on the alignment between market price and the intrinsic value of the company.

5. Conclusion and Recommendation

Conclusion

The results of the fundamental analysis of DCII shares from 2021 to 2025 using the EPS, ROA, ROE, PER, and PBV ratios indicate that the company has a financial performance that continues to experience positive growth. This is reflected in the increase in EPS value, which shows the company's ability to generate net profit for shareholders improving year by year. Additionally, the relatively high ROA and ROE values indicate that the company is able to effectively utilize assets and capital to generate profits.

From a valuation perspective, the calculation of intrinsic value using the EPS × PER and BVPS × PBV approaches shows that the intrinsic value of DCII shares tends to approach the market price of the shares during the study period. This condition indicates that DCII shares fall into the Fair Value category, meaning the stock price reflects the company's fundamental condition. Thus, the recommended investment decision for investors who already own DCII shares is to Hold while continuing to monitor the company's performance and market conditions. Meanwhile, for potential investors, DCII shares are still worth considering as a long-term investment instrument because the company has good growth prospects and is supported by strong fundamentals.

Overall, DCII shares can be categorized as premium-valued stocks that receive high appreciation from the market. The high PER and PBV values indicate significant investor expectations for the company's growth in the future. For long-term investors, this condition still presents an attractive investment opportunity, whereas for short-term investors, the decision to purchase shares needs to be considered more carefully given the relatively high stock valuation and the quite volatile stock price movements.

Recommendation

Subsequent research is recommended to use other valuation methods such as Discounted Cash Flow (DCF), Dividend Discount Model (DDM), or Residual Income Model to make the intrinsic value estimation of the stock more comprehensive and accurate. In addition, future research can also expand the research object not only to DCII shares but also to other companies in the data center sector or the technology sector, so that a more representative valuation comparison against the industry average can be obtained.

Subsequent research is also recommended to use a longer observation period so that trends in profit growth, profitability, and stock valuation can be analyzed in greater depth. In addition to

the company's fundamental factors, future research could consider external factors such as macroeconomic conditions, interest rates, inflation, developments in the technology industry, and market sentiment that could influence the company's stock price movements.

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Enhancing MSME Capacity and Community Empowerment in Supporting Sustainable Tourism Development in the Puncak Area, Bogor Regency

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Abstract

This study aims to analyze the influence of business capacity and community empowerment on sustainable tourism development. The research method employed a quantitative approach using PLS-SEM analysis. The results showed an R-square value of 0.728, indicating that business capacity and community empowerment were able to explain sustainable tourism development by 72.8%.

In the business capacity variable, the product innovation capability indicator was the most dominant indicator. Meanwhile, in the community empowerment variable, the dominant indicators were participation in decision-making and the improvement of community skills. The findings indicate that product innovation, community participation, and skill enhancement play important roles in supporting sustainable tourism development.

Keyword: *MSME Capacity Enhancement, Community Empowerment, and Sustainable Tourism Development.*

1. Introduction

Tourism is a strategic sector that contributes significantly to economic growth, job creation, and the improvement of local community welfare. In the context of sustainable development, the tourism sector is not only oriented toward increasing tourist visits but also toward community empowerment and strengthening the local economy through the development of Micro, Small, and Medium Enterprises (MSMEs). Empowering MSMEs in tourism areas can enhance village economic growth, strengthen social sustainability, and create community-based tourism destination competitiveness (Purnomo & Purwandari, 2025).

The Puncak area of Bogor Regency is one of the leading tourist destinations in West Java, possessing great potential for the development of nature tourism, culinary tourism, cultural tourism, and the creative economy. The high mobility of tourists in this area provides significant economic opportunities for local communities, particularly through tourism-based MSME activities. Villages in the Puncak area, including those in the Cisarua District, have business potential in the form of local culinary products, accommodations, handicrafts, and tourism services that can be developed to support sustainable tourism. However, this potential has not been fully supported by adequate MSME capacity and quality community

empowerment, particularly in business management, product innovation, digital marketing, and community-based tourism management.

Sustainable tourism development (PPB) requires the active involvement of local communities as the main actors in development. MSMEs play an important role in supporting the sustainability of tourism destinations through innovation, collaboration, and strengthening local identity in tourism products (Dias et al., 2023). In addition, the concept of community empowerment in tourism village development can create economic independence, increase community participation, and maintain the social and cultural sustainability of tourism areas (Rahman & Natalia, 2025).

On the other hand, MSME development in tourism areas still faces various challenges, such as low digital literacy, limited market access, lack of product innovation, weak business branding, and limited adaptability to changing tourist behavior. These conditions have caused many MSMEs to be unable to optimally utilize tourism economic opportunities. Strategies for empowering MSMEs based on capacity building, digital innovation, and collaborative governance are key factors in creating sustainable tourism villages (Zahro & Hartiningsih, 2024).

Community empowerment (PM) is also an important factor in supporting the successful development of tourism areas. Community-based tourism village development can increase community participation in tourism management, strengthen local institutions, and improve the economic welfare of rural communities (Albert et al., 2024). Other studies show that the success of tourism villages is strongly influenced by training programs, business mentoring, strengthening community organizations, and government support in developing local community capacity (Rahman, 2021).

Furthermore, sustainable tourism development also requires collaboration among government institutions, communities, MSME actors, and other tourism stakeholders. Empowering local communities through tourism village development can enhance the economic and social sustainability of communities when supported by integrated and participatory governance (Mujio et al., 2025). Therefore, strengthening MSME capacity and community empowerment has become an important strategy in supporting sustainable and inclusive tourism development in the Puncak area.

Currently, the Puncak area of Bogor Regency is also facing challenges such as traffic congestion, tourist overcrowding, increasing business competition, and shifts toward digital-based tourism and local experience tourism trends. These conditions require communities and MSME actors to possess better adaptability, innovation, and competitiveness in order to survive and grow amid the dynamics of the tourism sector. Therefore, continuous efforts are needed to enhance MSME capacity and community empowerment through entrepreneurship training, strengthening digital marketing, developing local tourism products, and reinforcing collaborative networks among stakeholders.

Based on the above explanation, research on "Enhancing MSME Capacity (PKU) and Community Empowerment (PM) in Supporting Sustainable Tourism Development (PPB) in the Puncak Area, Bogor Regency" is important to conduct. This research is expected to contribute to formulating effective strategies for strengthening MSME capacity and community empowerment in order to support sustainable tourism development, improve local community welfare, and support the achievement of the Sustainable Development Goals

(SDGs), particularly Goal 8 (Decent Work and Economic Growth) and Goal 11 (Sustainable Cities and Communities).

2. Literature Review

2.1 MSME Capacity Enhancement

Micro, Small, and Medium Enterprises (MSMEs) play an important role in supporting local economic growth, creating employment opportunities, and strengthening community economic resilience. In the context of tourism development, MSMEs act as key providers of local-based tourism products and services such as culinary products, handicrafts, homestays, and other tourism-supporting services. According to Tambunan (2019), strengthening MSME capacity is necessary to enable business actors to improve competitiveness, productivity, and business sustainability amid global market competition.

The concept of MSME capacity building includes improving managerial skills, mastering digital technology, product innovation, market access, and the ability to build business networks. Research by Purnomo and Purwandari (2025) shows that enhancing MSME capacity through innovation and digitalization can improve business resilience and support tourism-based local economic development. In addition, digital transformation in MSMEs has been proven to expand market access and improve business operational efficiency, particularly in tourism areas with high tourist mobility (Nugraha et al., 2023).

MSME capacity based on collaboration and social innovation can improve the economic sustainability of tourism village communities through the creation of added value in local products (Dias et al., 2023). Furthermore, entrepreneurship and digital marketing training have a significant effect on improving MSME performance in the tourism sector (Hidayat & Wibowo, 2022).

2.2 Community Empowerment

Community empowerment is a process of enhancing the capacity of communities so that they can independently fulfill their economic, social, and cultural needs in a sustainable manner. Robert Chambers (1995) states that community empowerment is carried out through increasing access to resources, participation in decision-making, and strengthening local capacities. In tourism development, community empowerment becomes an important approach to ensure that local communities directly benefit economically from tourism activities. This concept is known as *Community-Based Tourism* (CBT), which is a tourism development model involving local communities as the main actors in managing tourism destinations (Suansri, 2003).

Community empowerment through tourism village development can improve community welfare, strengthen social capital, and preserve local cultural sustainability (Giampiccoli & Mtapuri, 2020). In addition, the success of tourism village development is strongly influenced by community participation, the quality of human resources, and support from local institutions (Mujio et al., 2025). Community empowerment is also related to strengthening the capacity of local organizations and collaboration among stakeholders. Business mentoring, skills training, and strengthening community institutions can increase community participation in sustainable tourism village development (Rahman & Natalia, 2025).

2.3. Sustainable Tourism Development

Sustainable tourism is a tourism development concept that emphasizes a balance among economic, social, cultural, and environmental aspects. According to the United Nations World Tourism Organization (UNWTO, 2021), sustainable tourism refers to tourism development that meets the needs of tourists and local communities in the present without compromising the ability of future generations to meet their own needs.

Sustainable tourism development highlights the importance of local community involvement, environmental preservation, and regional economic sustainability. Community-based tourism and MSME development can create inclusive economic growth and improve the quality of life of local communities (Sutiarso et al., 2024). In addition, the implementation of sustainability principles in tourism destination management can increase tourist attraction and visitor loyalty toward particular destinations (Dias et al., 2023).

In the context of tourism villages, sustainable tourism focuses not only on increasing tourist visits but also on preserving local culture and strengthening the village economy. Community empowerment-based tourism village development can improve local economic resilience and create more inclusive and sustainable development (Albert et al., 2024). Sustainable tourism development also requires support from digital innovation and collaborative governance. Recent studies explain that the use of digital marketing and social media can enhance tourism destination promotion and strengthen MSME competitiveness in tourism areas (Kurniawan & Fauziah, 2023). Therefore, enhancing MSME capacity and community empowerment are strategic factors in supporting sustainable tourism development.

3. Material and Method

This study employed a quantitative approach using a survey method. The research data were collected through the distribution of questionnaires to respondents who met the research criteria. The questionnaire was designed using a 5-point Likert scale, ranging from strongly disagree to strongly agree, to measure respondents' perceptions of the variables examined in the study (Sugiyono, 2019).

The population in this study consisted of all respondents who met the research criteria, while the sampling technique used was purposive sampling, which involves selecting samples based on specific considerations aligned with the research objectives (Sekaran & Bougie, 2016). The sample size was determined based on the requirements of the analysis using Structural Equation Modeling (SEM) based on Partial Least Square (PLS).

3.1 Design Study

This study uses a quantitative research design using an explanatory research approach, which aims to explain the causal relationship between independent variables and dependent variables through hypothesis testing. This approach was chosen because the study focuses on examining the influence among variables analyzed using Structural Equation Modeling based on Partial Least Square (PLS-SEM).

3.2 Data Analysis

The data obtained in this study were analyzed using Structural Equation Modeling based on Partial Least Square (PLS-SEM) with the PLS-SEM 4.0 tool. This analysis method

was chosen because it is more flexible, as it does not require normally distributed data and can be applied to relatively small sample sizes. The analysis was conducted to examine the relationships among business capacity, community empowerment, and sustainable tourism development variables, as well as to identify the most dominant indicators in forming each research variable. Considering that the population size was large and not precisely known, this study employed a sampling technique using the Lemeshow formula, since the population was unknown or infinite. The Lemeshow formula used is as follows:

$$n = \frac{Z\alpha^2 x\ P\ x\ Q}{L^2}$$

$$n = \frac{(1{,}96)^2 x\ 0{,}5\ x\ 0{,}5}{(0{,}1)^2} = 96{,}04$$

The minimum sample size required in this study was 96 respondents.

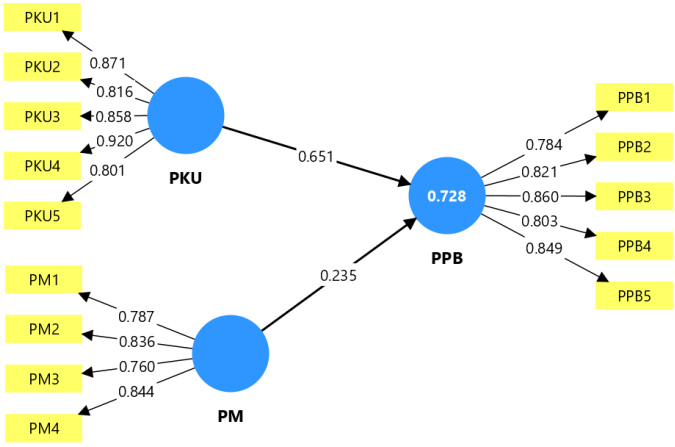


Figure 1. Research Model

4. Result

Based on the PLS-SEM model figure, it can be interpreted that the Business Capacity (PKU) and Community Empowerment (PM) variables influence Sustainable Tourism Development (PPB). The R-square value of the PPB variable is 0.728, indicating that the Business Capacity and Community Empowerment variables are able to explain Sustainable Tourism Development by 72.8%, while the remaining 27.2% is influenced by other variables outside the research model. This value indicates that the research model falls into the strong or substantial category.

In the structural relationship among variables, Business Capacity (PKU) has a path coefficient value of 0.651 toward Sustainable Tourism Development (PPB). This value indicates that Business Capacity has a positive and more dominant influence on Sustainable Tourism Development compared to other variables. This means that the higher the business capacity of MSME actors, the better the sustainable tourism development in the research area.

Meanwhile, the Community Empowerment (PM) variable has a path coefficient value of 0.235 toward Sustainable Tourism Development (PPB). This value indicates that Community

Empowerment also has a positive influence on Sustainable Tourism Development, although its effect is smaller compared to Business Capacity.

Table 1. Fornell-Larcker Criterion

	PKU	PM	PPB
PKU	0,854		
PM	0,812	0,808	
PPB	0,842	0,764	0,824

The discriminant validity test results using the Fornell-Larcker criterion indicate that not all constructs meet discriminant validity requirements. The PM variable has a square root of AVE value of 0.808, which is smaller than its correlation with the PKU variable of 0.812. In addition, the PPB variable has a square root of AVE value of 0.824, which is also smaller than its correlation with the PKU variable of 0.842. Therefore, there are still indications that several constructs have a high degree of similarity, meaning that discriminant validity has not been optimally achieved.

Table 2. R Square

Variable	R-square	R-square Adjusted
PPB	0,728	0,722

The R-square test results show that the PPB variable has an R-square value of 0.728 and an adjusted R-square value of 0.722. This indicates that the exogenous variables in the study are able to explain the PPB variable by 72.8%, while the remaining 27.2% is influenced by other variables outside the research model. Therefore, the research model can be categorized as strong or substantial.

5. Discussion

The highest outer loading value for the Managerial Capacity variable is found in the Product Innovation Capability indicator (PKU4), with a value of 0.920. This indicates that the indicator is the strongest in representing the Business Capacity variable. In other words, product innovation capability has the greatest contribution in explaining the Business Capacity construct compared to the other indicators. Meanwhile, the lowest outer loading value is found in the Digital Marketing Usage indicator (PKU5), with a value of 0.801. Although it has the lowest value, this indicator is still considered valid because its value remains above the minimum convergent validity threshold of 0.70. This means that the digital marketing usage indicator is still able to explain the Business Capacity variable well, although its contribution is relatively lower compared to the other indicators.

The outer loading test results for the Community Empowerment (PM) variable show that all indicators have loading factor values above 0.70, indicating that they meet the convergent validity criteria and are valid in measuring the research construct. In the Community Participation dimension, the indicator of community involvement in tourism activities (PM1) has an outer loading value of 0.787, while the indicator of participation in decision-making (PM2) has a value of 0.836. These results indicate that PM2 has a more dominant contribution in reflecting the community participation dimension. This suggests that community

involvement in decision-making is an important aspect of community empowerment in tourism development.

Furthermore, in the Capacity Development dimension, the indicator of participation in training programs (PM3) has an outer loading value of 0.760, while the indicator of improving community skills (PM4) has a value of 0.844. This value indicates that PM4 is the most dominant indicator in forming the capacity development dimension. Therefore, improving community skills is the main factor supporting the success of community empowerment.

6. Conclusion, Implication, and Recommendation

Based on the research results, the R-square value for the Sustainable Tourism Development (PPB) variable is 0.728, with an adjusted R-square value of 0.722. These results indicate that the Business Capacity and Community Empowerment variables are able to explain Sustainable Tourism Development by 72.8%, while the remaining 27.2% is influenced by other variables outside the research model. Therefore, the research model can be categorized as strong or substantial.

In the Business Capacity variable, the product innovation capability indicator (PKU4) has the highest outer loading value of 0.920, making it the most dominant indicator in representing business capacity. This indicates that product innovation capability is the main factor supporting the enhancement of business capacity in sustainable tourism development. Meanwhile, the digital marketing usage indicator (PKU5) has the lowest outer loading value of 0.801, but it still meets the convergent validity criteria and is therefore still capable of explaining the Business Capacity variable effectively.

Furthermore, in the Community Empowerment variable, all indicators have outer loading values above 0.70 and are therefore considered valid. In the Community Participation dimension, the participation in decision-making indicator (PM2) has a more dominant contribution compared to the community involvement in tourism activities indicator (PM1). This indicates that community involvement in the decision-making process is an important aspect in supporting the success of community empowerment in tourism development.

In the Capacity Development dimension, the improvement of community skills indicator (PM4) has the highest outer loading value compared to the participation in training programs indicator (PM3). Thus, improving community skills is the main factor supporting the effectiveness of community empowerment and sustainable tourism development in the research area.

The theoretical implications of this study reinforce the theories of community empowerment and business capacity development, which state that business innovation, community participation, and skill improvement play important roles in supporting sustainable tourism development. This study also supports the concept of *community-based tourism*, which positions local communities as the main actors in tourism development.

Meanwhile, the practical implications of the study indicate that improving product innovation capability should become a top priority in MSME development in tourism areas. Business actors need to be encouraged to create creative, unique, and value-added tourism products in order to improve the competitiveness of tourism destinations.

In addition, community involvement in decision-making should be strengthened through discussion forums, collaboration among stakeholders, and active community

participation in tourism management. Local governments and tourism managers also need to improve training programs and community skill development so that communities can adapt to the development of the tourism sector and digital technology.

Recommendations for MSME actors include the need for local governments to enhance entrepreneurship training and product innovation programs for MSMEs so that they can create competitive and sustainable tourism products. Strengthening digital marketing should also be carried out through mentoring in the use of social media, marketplaces, and digital platforms to expand MSME market access in tourism areas. Tourism managers and village governments need to increase community participation in decision-making processes related to tourism development in order to create inclusive and community-based tourism development. Community empowerment programs should focus on improving community skills through continuous training, workshops, and business mentoring. Future studies are recommended to include additional variables outside the research model, such as government support, tourism infrastructure quality, tourism digitalization, and community social capital to obtain a more comprehensive research model.

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