

# Strengthening the Panca Budhi Indriya through Local Wisdom for the Competitiveness of Tourism MSMEs

I Gusti Putu Agung Widya Goca<sup>1\*</sup>, Ni Nyoman Sudiyani<sup>2</sup>, Putu Gede Denny Herlambang<sup>3</sup>, Luh Ayu Susila Wati<sup>4</sup>, Khoirunnisa Etta Argiatna<sup>5</sup>

Universitas Ngurah Rai, Bali, Indonesia<sup>1,2,3,4,5</sup>

[widya.goca@unr.ac.id](mailto:widya.goca@unr.ac.id)<sup>1\*</sup>, [nyoman.sudiyani@unr.ac.id](mailto:nyoman.sudiyani@unr.ac.id)<sup>2</sup>, [denny.herlambang@unr.ac.id](mailto:denny.herlambang@unr.ac.id)<sup>3</sup>,

[ayuluh192@gmail.com](mailto:ayuluh192@gmail.com)<sup>4</sup>, [khoirunnisaetta@gmail.com](mailto:khoirunnisaetta@gmail.com)<sup>5</sup>



## Article History:

Received 20 August 2025

1st Revision 29 August 2025

2nd Revision 01 September 2025

3rd Revision 15 September 2025

Accepted on 07 October 2025

## Abstract

**Purpose:** This study aims to develop a model that links the local wisdom values of *Panca Budhi Indriya* with innovation capability to improve the competitive advantage of tourism SMEs in Bali. This study focuses on how cultural values foster innovation and strengthen market positioning.

**Methodology/approach:** The study will be conducted in three districts/cities in Bali, involving 150 tourism SMEs in the culinary, handicraft, and local accommodation sectors. A quantitative approach with an explanatory survey design was used. Data will be collected through questionnaires developed from the literature and validated by experts. Structural Equation Modeling (SEM) with SmartPLS or AMOS will be applied to test relationships and mediation effects.

**Results/findings:** The expected results are as follows: (1) local wisdom values have a significant positive effect on innovation capability; (2) innovation capability enhances competitive advantage; and (3) innovation capability mediates the relationship between local wisdom and competitive advantage. This study generates a tested conceptual model of culture-based SME competitiveness.

**Conclusions:** Panca Budhi Indriya, as part of Balinese cultural heritage, represents not only tradition but also a strategic resource that strengthens competitiveness when integrated with innovative capability.

**Limitations:** The study is limited to SMEs in the tourism sector in Bali and relies on self-reported data, which may contain biases.

**Contributions:** This study enriches the Resource-Based View (RBV) theory from a cultural perspective and provides practical guidance for SMEs, policymakers, and tourism programs to integrate cultural values into innovation strategies.

**Keywords:** *Competitive Advantage, Innovation Capability, Local Wisdom, Panca Budhi Indriya, Tourism SMEs*

**How to Cite:** Goca, I.G.P.A.W., Sudiyani, N.N., Herlambang, P.G.D., Wati, L.A.S., Argiatna, K.E. (2026). Strengthening the Panca Budhi Indriya through Local Wisdom for the Competitiveness of Tourism MSMEs. *Jurnal Akuntansi, Keuangan, dan Manajemen*. 7(2) 123-137.

## 1. Introduction

The tourism sector is one of the main drivers of Indonesia's economy. Before the COVID-19 pandemic, tourism contributed more than 5% to the national Gross Domestic Product (GDP), while also creating millions of jobs and increasing community income. Tourism generates foreign exchange and strengthens the nation's cultural identity in the eyes of the world. Bali, Indonesia's most popular international tourist destination, plays a central role in the national tourism ecosystem. Bali's natural wealth, arts, and culture are its main attractions, making it a global icon. Micro, Small, and Medium Enterprises (MSMEs) play an important role in Bali's tourism success. Tourism MSMEs cover various

sectors, ranging from culinary, handicrafts, and local accommodations to tourism services. The presence of MSMEs not only supports the tourism industry's value chain but also acts as a guardian of local cultural preservation. The products and services offered by MSMEs often contain cultural values, providing authentic tourism experiences and distinguishing Bali from other destinations. Thus, Bali's tourism MSMEs have a dual function: supporting economic growth and preserving cultural identity. Collaboration among local governments, MSMEs, and communities has supported the improvement of tourism services and promotion ([Perdana, Riyadi, & Yuliari, 2025](#)).

According to [Mahendra \(2024\)](#), MSMEs' success in the tourism sector is highly influenced by their ability to adapt cultural values into modern business strategies. This integration is believed to enhance the quality of tourist experiences, strengthen the destination image, and create added value that differentiates Bali from other destinations. This is also emphasized by [Gunawan, Syarief, Nurhayati, Asnawi, and Joewono \(2023\)](#) who found that socially responsible practices based on local wisdom enhance business reputation while fostering customer loyalty among Bali's MSMEs.

In Bali, local wisdom is not only a cultural heritage but also a strategic asset that can strengthen business competitiveness. One prominent form of local wisdom is Panca Budhi Indriya, which consists of five core values rooted in Balinese Hindu teachings: Sraddha (faith): belief and devotion as the foundation of ethics, Virya (energy): diligence and perseverance in business, Smrti (awareness): sensitivity to social and cultural environments, Samadhi (focus): consistency and dedication in achieving goals, and Prajna (wisdom): the ability to make wise decisions for sustainability. These values are believed to shape sustainability-oriented entrepreneurial behavior.

According to [Budianto et al. \(2023\)](#), technological innovation is an important factor in enhancing MSMEs' competitiveness in both domestic and global markets. In line with the Buddhi Citta value in Panca Budhi Indriya, the ability to think creatively and adaptively to technological developments is a key factor for tourism MSMEs in facing changes in the business environment. The rapid growth of Indonesia's tourism sector, including in Bali, is often accompanied by various challenges, such as environmental degradation and weakening local cultural values. Therefore, approaches based on local wisdom values, such as Panca Budhi Indriya, are needed to guide tourism MSMEs in maintaining a balance between economic, social, and environmental aspects ([Apriani, Kamsariaty, Nia, Hilda, & Sukmayadi, 2024](#)).

However, in a competitive global era, relying solely on cultural heritage is inadequate. Tourism market dynamics show shifting tourist behaviors that increasingly demand innovation, digitalization and service personalization. Modern tourists seek not only traditional products but also experiences that are easily accessible through digital platforms, modern payment systems, and fast, responsive services. Therefore, Bali's tourism MSMEs must build innovation capabilities that are relevant to contemporary market needs. These innovation capabilities include the ability to generate new ideas, develop innovative products and services, and implement them effectively ([Joseph F Hair, Hult, Ringle, & Sarstedt, 2017](#)).

In the context of culture-based tourism, innovation has a unique advantage because it creates authentic differentiation. [Firmansyah, Rafdinal, Sayuti, Juniarti, and Hardiyanto \(2024\)](#) showed that products or services that combine cultural values with modern elements have greater appeal than homogeneous products without cultural touches. For example, handicraft businesses combine traditional Balinese motifs with contemporary designs, making their products attractive to both domestic and international tourist.

Nevertheless, empirical studies show a gap in the literature. Recent research proves that the local wisdom of Panca Budhi Indriya plays a significant role in enhancing the innovation capabilities of MSMEs in Bali's tourism sector. This finding is consistent with [Firmansyah et al. \(2024\)](#), who state that unique resources can form the basis of competitive advantage. However, the influence of innovation capability on competitive advantage remains relatively small. This indicates that the innovations carried out by Bali's MSMEs have not yet been fully optimized as a competitive strategy but are still at the

level of symbolic differentiation and not functional. This phenomenon was also observed in Thailand [Srisathan, Ketkaew, and Naruetharadhol \(2020\)](#), where culture-based innovation is more often used to strengthen symbolic identity rather than as a sustainable business strategy. In other words, although Balinese culture already serves as a significant differentiator, without sustainable innovation, this advantage risks stagnation in the face of increasingly intense global competition.

To explain how local wisdom can become a source of competitive advantage, this study uses two theoretical foundations: Resource-Based View (RBV) and Dynamic Capabilities. According to RBV, a sustainable competitive advantage can be achieved if a firm possesses resources that are Valuable, Rare, Inimitable, And Non-Substitutable (VRIN). In the context of Bali, Panca Budhi Indriya meets these criteria because it originates from a unique culture, is difficult to imitate, and cannot be replaced by other resources. Therefore, Panca Budhi Indriya can be viewed as a strategic asset that supports tourism MSMEs' competitive advantage. Collaboration among stakeholders is the key to developing sustainable ecotourism. The involvement of the government, private sector, academia, NGOs, and local communities is essential to ensure the success of ecotourism programs.

In addition to RBV, the Dynamic Capabilities theory ([Teece, Pisano, and Shuen \(1997\)](#)) is also relevant in this context. This theory emphasizes an organization's ability to integrate, build, and reconfigure internal and external competencies to respond to rapidly changing business environments. In practice, dynamic capabilities can be manifested through MSMEs' ability to detect new opportunities (sensing), exploit those opportunities (seizing), and reconfigure resources (reconfiguring). For example, Bali's tourism MSMEs, which previously relied solely on local markets, are now entering international markets by adapting their products to global tastes without losing their cultural identity. This demonstrates that the integration of local wisdom and innovation capabilities is crucial for meeting the demands of a constantly changing market. However, most previous studies on Balinese local wisdom have been limited to cultural preservation aspects, with few empirically examining their role in building innovation capabilities for tourism MSMEs.

Quantitative studies examining the relationship between Panca Budhi Indriya, innovation capabilities, and competitive advantage using Structural Equation Modeling (SEM) are also rare. Therefore, this study aims to fill this gap by empirically analyzing the influence of local wisdom on innovation capabilities and its impact on the competitive advantage of Bali tourism MSMEs. The SEM-PLS approach was chosen because it can comprehensively validate the relationships between variables, including testing the mediating role of innovation capabilities. With this foundation, this study contributes not only to the development of RBV and Dynamic Capabilities theory in the context of local culture but also provides practical contributions to the development of Bali's tourism MSMEs. The results are expected to serve as a basis for governments, academics, and practitioners in designing strategies to strengthen MSMEs based on local wisdom that is innovative, competitive, and sustainable ([Tajeddini, Gamage, Tajeddini, & Kallmuenzer, 2023](#)).

Several studies have highlighted the importance of local wisdom in tourism MSMEs. For example, studies on Tri Hita Karana and community participation demonstrate the contribution of local culture to maintaining business sustainability. However, most studies are still descriptive and focus on preserving culture. Few studies have empirically examined the relationships between Panca Budhi Indriya, innovation capabilities, and competitive advantage. In addition, quantitative approaches using Structural Equation Modeling (SEM) are still rare, although SEM can provide strong empirical validation of causal relationships between variables, including the mediating role of innovation capabilities. Therefore, there is a significant research gap: local wisdom is often positioned merely as a cultural identity rather than as a strategic resource that can be managed to build sustainable innovations.

## 2. Literature Review and Hypothesis Development

The Resource-Based View (RBV) theory serves as the primary foundation for understanding how organizations can create sustainable competitive advantages. According to [Barney \(1991\)](#), resources that are Valuable, Rare, Inimitable, and Non-Substitutable (VRIN) generate added value that is difficult for competitors to imitate. In the context of Bali's tourism MSMEs, culture and local wisdom are highly

valuable intangible assets. Cultural values such as Panca Budhi Indriya can shape behavior, ethics, and business orientation, which form the basis of a long-term competitive advantage.

This theory also emphasizes that such unique resources must be effectively managed to create capabilities. While RBV focuses on the existence of resources, Dynamic Capabilities Theory ([Teece et al. \(1997\)](#)) explains how these resources can be integrated, reconfigured, and utilized to respond to changes in the business environment. [Teece et al. \(1997\)](#) describes three main dynamic capabilities: sensing (detecting opportunities and threats), seizing (exploiting opportunities), and transforming/reconfiguring (adapting resources to remain relevant). The integration of RBV and Dynamic Capabilities is highly relevant in explaining the context of Bali's tourism MSMEs. Panca Budhi Indriya functions as a cultural resource within the RBV framework, while innovation capability represents a form of dynamic capability that enables MSMEs to adapt to global markets. The combination of both produces a sustainable competitive advantage.

Recent studies have supported this relationship. [Thamrin, Rahmawati, Juniar, and Nuryadin \(2025\)](#) found that firms embedding cultural values into innovation strategies gain long-term competitiveness. [Fitriati, Purwana, and Buchdadi \(2020\)](#) also emphasized that dynamic capabilities play an important mediating role in the influence of local wisdom on innovation performance among Southeast Asian MSMEs. Thus, RBV and Dynamic Capabilities theories form the conceptual basis for understanding how Panca Budhi Indriya drives innovation and competitive advantage in tourism MSMEs.

### **2.1. Local Wisdom and Panca Budhi Indriya**

Local wisdom represents a form of knowledge, values, and practices passed down through generations, shaping the social and cultural identity of a community. In the context of entrepreneurship, local wisdom often serves as a value base that influences decision-making, work ethic, and patterns of interaction with the environment. In Bali, the concept of Panca Budhi Indriya is one of the main manifestations of local wisdom. Its five core elements—Sradha (faith), Virya (spirit), Smrti (awareness), Samadhi (perseverance), and Prajna (wisdom)—function as spiritual values and shape the entrepreneurial character. For example, Virya fosters enthusiasm and perseverance in business, Smrti nurtures social and environmental awareness, and Prajna generates wisdom in making strategic business decisions.

According to [Sudiyani, Goca, Putri, Dwijayanthi, and Putra \(2025\)](#), these values create sustainable entrepreneurial ethics that strengthen customer loyalty and social relationships. [Gunawan et al. \(2023\)](#) also emphasized that internalizing cultural values into business strategies enhances social reputation and the attractiveness of local products. Internationally, [Shrestha, L'Espoir Decosta, and Whitford \(2025\)](#) demonstrate that local spiritual values play a significant role in driving innovation and sustainability orientation among tourism MSMEs in Nepal.

Based on RBV theory, Panca Budhi Indriya can be categorized as an intangible resource (intangible cultural capital) that fulfills the VRIN criteria.

1. Valuable: provides ethical direction and business motivation,
2. Rare: unique to the Balinese cultural context,
3. Inimitable: difficult for external competitors to imitate,
4. Non-substitutable: cannot be replaced by other resources.

Thus, the values of Panca Budhi Indriya are not merely cultural symbols but also have the potential to become strategic intangible resources capable of driving innovation and creating competitive advantages.

### **2.2. Innovation Capability as Competitive Advantage**

Innovation capability is the ability of an organization to develop new ideas and implement them into products, services, or processes that are useful and provide added value to customers ([Joseph F Hair et al., 2017](#)). This capability includes not only creativity in generating ideas but also the ability to implement them effectively in the market. Previous studies indicate that innovation grounded in cultural values has advantages that are difficult for competitors to imitate because it is unique and closely tied to the local identity ([Firmansyah et al., 2024](#)).

Within the Resource-Based View (RBV) framework, sustainable competitive advantage can be achieved when a firm possesses resources that are valuable, rare, inimitable, and non-substitutable ([Barney, 1991](#); [Peteraf, 1993](#)). Local cultural values such as Panca Budhi Indriya meet these criteria because they originate from cultural heritage not owned by external competitors and are difficult to replicate. Several studies emphasize that MSMEs capable of leveraging local cultural values in their innovation strategies tend to be more competitive.

Furthermore, research on tourism MSME and the creative economy sector in Bali revealed that innovation capability plays an important mediating role between entrepreneurial orientation and business performance. These studies show that MSME actors with strong entrepreneurial orientation characterized by creativity, risk-taking, and independence are able to enhance their innovation capabilities, which in turn significantly contributes to business performance, particularly in the post-pandemic context ([Wijaya, Rahmayanti, Darsana, & Wardana, 2023](#)).

This indicates that innovation capability is not merely a complementary element in business processes but is a key factor determining the sustainability of tourism MSMEs amid changes in the external environment. In the era of digitalization and global competition, MSMEs are required to create differentiation that focuses not only on products but also on the experiences offered to consumers. Through innovation rooted in local cultural values, Balinese MSMEs can present a uniqueness that is difficult for competitors to imitate while preserving their regional identity. Thus [Karlicek et al. \(2025\)](#) innovation capability serves as a bridge connecting entrepreneurial orientation with sustainable business performance and as an adaptive strategy for MSMEs to remain relevant in the dynamics of the global tourism market.

### ***2.3. The Relationship between Local Wisdom, Innovation Capability, and Competitive Advantage***

Local wisdom is a unique resource inherent to specific communities and serves as an important foundation for building innovative capabilities. In the context of tourism MSMEs in Bali, local values such as Tri Hita Karana and Panca Budhi Indriya not only function as social guidelines but also inspire the creation of distinctive products and services. Research shows that the cultural capital possessed by the Balinese community positively influences innovation capability, both directly and through community participation, thereby improving MSME welfare ([Sara, Setini, & Tantra, 2022](#)).

Innovation capability is an important mediating factor that bridges local wisdom and competitive advantage. Recent studies on tourism MSMEs and the creative economy in Bali confirm that entrepreneurial orientation combined with innovation can significantly enhance the business performance. The creativity, risk-taking, and independence of entrepreneurs greatly contribute to their ability to transform local cultural values into marketable competitive advantages in the global market ([Wijaya et al., 2023](#)).

Thus, local wisdom provides a strong foundation for MSME differentiation. Products and services based on regional culture possess both emotional and functional appeal, which is difficult for competitors to imitate. For example, handicrafts with distinctive Balinese motifs or tourism packages based on cultural rituals offer unique experiences that can only be found in their places of origin ([Mahrinasari, Bangsawan, & Sabri, 2024](#)). This demonstrates that cultural values are not merely identity markers but also strategic capital for creating sustainable competitive advantages. In addition to serving as intangible resources, local wisdom strengthens business sustainability through social legitimacy. MSMEs that embed cultural values into their innovations are generally more accepted by local communities and are perceived as part of the efforts to preserve cultural heritage. This community support has implications for increased reputation and customer loyalty, ultimately reinforcing that competitive advantage is built not only from products but also from harmonious relationships between business, culture, and the environment ([Mishra & Kiran, 2026](#)).

## 2.4. Research Gap

[Sari, Oktarina, and Kenamon \(2022\)](#) conducted a qualitative study on innovation in traditional MSMEs in the digital era. They found that local wisdom functions as a value and ethical foundation in various aspects of innovation, ranging from products and marketing strategies to digitalization. However, the study was largely descriptive and therefore could not be able to provide strong empirical validation of the relationship between local wisdom, innovation capability, and competitive advantage. This limitation highlights the need for quantitative research using structural approaches, such as SEM-PLS or CB-SEM, which can systematically examine the mediating role of innovation capability in enhancing MSME competitiveness.

Similarly, [Suryono, Astuti, and Respati \(2024\)](#) emphasized that empirical research on MSMEs based on local wisdom, particularly in the food sector, remains relatively limited. Their study showed that market and entrepreneurial orientations are important for building competitive advantages; however, the direct relationship between local wisdom, innovation, and business performance has not been widely explored. [Irijayanti and Lord \(2024\)](#) indicate a research gap in which local wisdom is more often positioned as a cultural attribute or identity rather than as a strategic resource that can be managed to build sustainable innovation.

Both findings confirm that previous research remains limited in examining the contribution of local wisdom to MSMEs' innovation capability and competitive advantage. Within the Resource-Based View (RBV) framework, local cultural values can fulfill the criteria of being valuable, rare, inimitable, and non-substitutable, thus having the potential to become a source of sustainable competitive advantage. Given the limited number of studies positioning local wisdom as a strategic variable in quantitative models, further research is strongly needed to fill this gap ([Wibowo, Widiastuti, & Tampubolon, 2025](#)).

## 2.5. Hypothesis Development

Based on RBV theory and findings from previous studies, the hypotheses proposed in this study are as follows:

The values of Panca Budhi Indriya, such as spirit (virya) and wisdom (prajna), create an entrepreneurial climate that supports creativity and explores new ideas. According to RBV theory, intangible resources, such as cultural values, can strengthen an organization's ability to innovate ([Barney, 1991](#)). The internalization of cultural values increases innovation motivation among Balinese MSME actors. [Shrestha et al. \(2025\)](#) also found that local spiritual values encourage innovative behavior among tourism entrepreneurs in South Asia. Therefore, the higher the implementation of Panca Budhi Indriya values, the stronger the innovation capability of tourism MSMEs is.

*H<sub>1</sub>*: Local wisdom of Panca Budhi Indriya has a positive effect on the innovation capability of tourism MSMEs.

According to [Calantone, Cavusgil, and Zhao \(2002\)](#), innovation is a key factor in creating a sustainable competitive advantage. Innovation enables firms to produce unique products and services, improve their efficiency, and strengthen customer loyalty. In the context of Bali tourism, innovation includes not only technological aspects but also culture-based creativity that enhances tourist experiences. It emphasizes that socially relevant innovation enhances the long-term competitiveness of MSMEs. Thus, the higher the innovation capability of MSMEs, the greater their opportunity to maintain a competitive advantage.

*H<sub>2</sub>*: Innovation capability positively affects the competitive advantage of tourism MSMEs.

Within the RBV framework, cultural values provide an ethical and motivational foundation, whereas within the Dynamic Capabilities framework, innovation functions as a mechanism for transforming these values into tangible advantages. Innovation capability acts as a bridge between cultural values (as resources) and business outcomes (i.e., competitive advantage). [Hodayoun, Salehi, ArminKia, and Novakovic \(2024\)](#) show that the integration of culture and innovation has a significant mediating effect on organizational performance. It also confirms that dynamic capabilities mediate the relationship between cultural values and innovative performance. Based on these arguments, Panca Budhi Indriya can enhance the competitive advantage of MSMEs by strengthening innovation capability as a mediator.

*H<sub>3</sub>*: Innovation capability has a positive effect on the competitive advantage of tourism MSMEs

### 3. Research Methodology

This study adopts a quantitative approach using an explanatory survey method to empirically explain the causal relationships among the research variables. The quantitative approach was chosen because it can provide an objective overview of the influence of the examined variables through numerical data. The explanatory survey design allows researchers to analyze the cause-and-effect relationships between the local wisdom of Panca Budhi Indriya, innovation capability, and competitive advantage among tourism-sector MSMEs in Bali. The selection of the Structural Equation Modeling–Partial Least Squares (SEM-PLS) method was based on the consideration that the research model was complex, involving several latent constructs and mediating paths. This method is also suitable for small to medium sample sizes and does not require normally distributed data ([Joe F Hair, Sarstedt, Ringle, Sharma, & Lienggaard, 2024](#)). Data analysis was conducted using SmartPLS version 3.0 to test the validity, reliability, and structural relationships among the variables in the research model.

1. Population: MSME actors in the tourism sector in Bali Province, including culinary, handicraft, and accommodation businesses.
2. Research Location: Determined purposively in three major tourism areas Ubud (Gianyar), Sanur (Denpasar), and Kuta (Badung) as they represent the characteristics of culture-based tourism MSMEs.
3. Sample Size: 150 respondents.

Justification:

1. Based on the guidelines of [Hair and Hult \(2021\)](#), the minimum sample size for SEM-PLS is 5–10 times the number of indicators (total indicators = 1sample size = 150).
2. This number is considered representative for predictive analysis and is capable of producing stable model estimates.
3. Bali was selected as the research location based on the dominance of the tourism sector and the strong application of local cultural values (Panca Budhi Indriya) in MSME activities.

Sampling Technique: Purposive sampling with the following criteria:

1. MSME actors were active for a minimum of two years.
2. Operating in the culture-based tourism sector:
3. Having at least two permanent employees.
4. They were willing to participate voluntarily as respondents.

The instrument used in this study was a structured questionnaire developed based on theory and previous research findings. All variables were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The use of this scale facilitates respondents in providing measurable assessments for each statement presented. The questionnaire consisted of two main sections. The first section contains respondents' demographic data, such as age, gender, length of business operation, and type of business. The second section contains statements measuring the three main constructs of the study: Panca Budhi Indriya, innovation capability, and competitive advantage. The research was conducted in three main stages over 12 months.

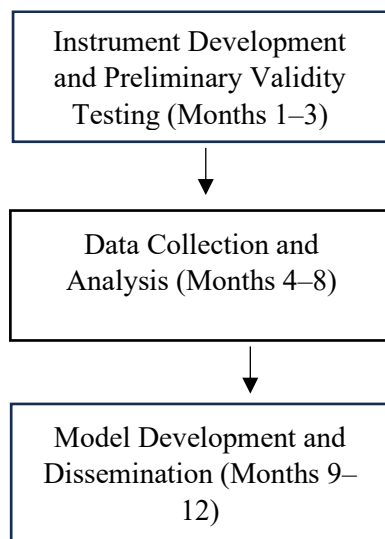


Figure 1. Research stages

1. Stage I – Instrument Development and Preliminary Validity Testing (Months 1–3)
  - a. An in-depth literature review related to the research variables was conducted.
  - b. Development of the research questionnaire.
  - c. Instrument validation was conducted by three experts in management and entrepreneurship.
  - d. Limited pilot testing was conducted on 30 MSME actors to assess reliability (Cronbach’s Alpha > 0.7) and construct validity (KMO > 0.5).
2. Stage II – Data Collection and Analysis (Months 4–8)
  - a. Questionnaires were distributed to 150 selected respondents.
  - b. Data processing was performed using SEM-PLS or CB-SEM software.
  - c. Hypothesis testing and analysis of the relationships among variables, including mediation effects.
3. Stage III – Model Development and Dissemination (Months 9–12)
  - a. Development of an integrative model based on local wisdom.
  - b. Validation workshops with MSME actors, cooperative/MSME offices, and tourism village managers.
  - c. Publication of articles in accredited national journals and national seminar proceedings.

Analytical Method: SEM-PLS using SmartPLS 3.0 in three main stages:

1. Measurement Model Evaluation (Outer Model)
  - a. Convergent validity testing (outer loading > 0.70; AVE > 0.50).
  - b. Reliability testing (Composite Reliability and Cronbach’s alpha > 0.70).
  - c. Discriminant validity testing (Fornell–Larcker criterion and cross-loading).
2. Structural Model Evaluation (Inner Model)
  - a. Assessing the strength of the relationships among variables (path coefficients and R<sup>2</sup>).
  - b. Calculating effect size (f<sup>2</sup>) and predictive relevance (Q<sup>2</sup>).
3. Mediation and Significance Testing
  - a. Bootstrapping (5,000 resamples) was used to assess the direct and indirect effects.

SEM-PLS is capable of estimating complex models with moderate sample sizes, supports mediation analysis, and is tolerant of data that are not normally distributed (Hair & Hult, 2021). Primary data in this study were collected through online and offline questionnaire surveys from May to June 2025. Data collection was conducted by establishing cooperation with several MSME groups in Bali. The data collection process was carried out through several stages.

1. The researcher requested permission and coordinated with the heads of the MSME groups in each research area.
2. Questionnaires were distributed online via Google Form links and directly to MSME actors encountered at their business locations.
3. The researcher provided a brief explanation of the research objectives and instructions for completing the questionnaire to ensure that the respondents understood.
4. The collected data were coded, screened, and verified for accuracy before analysis.

Throughout the data collection process, the researcher maintained the principles of anonymity and confidentiality of the respondents' data. Participation in this study was voluntary, and respondents had the full right to refuse or withdraw from participation at any time without consequences.

## 4. Results and Discussions

### 4.1. Results

#### 4.1.1 Outer Loadings

The measurement model analysis aimed to test the validity and reliability of the research constructs. The SEM-PLS analysis results show that all indicators have outer loading values above 0.70, indicating that all statement items are valid in measuring their respective constructs. The Average Variance Extracted (AVE) values also exceeded 0.50, indicating that each construct explained more than 50% of the variance of its indicators.

Table 1. Outer loadings

Indicator	Innovation Capability (M)	Local Wisdom (X)	Competitive Advantage (Y)
M1.1	0,727		
M1.2	0,759		
M1.3	0,900		
M1.4	0,819		
M5	0,836		
X1.1		0,787	
X1.2		0,829	
X1.3		0,897	
X1.4		0,839	
Y1.1			0,823
Y1.2			0,929
Y1.3			0,832
Y1.4			0,944
Y1.5			0,845

Table 1 shows that all constructs met the criteria for convergent validity and internal reliability. Therefore, these indicators are suitable for structural model analysis. Discriminant validity was also satisfied, as indicated by the square root of the AVE for each construct being larger than the correlations between constructs, showing that no constructs overlapped ([Hadi et al., 2026](#)).

#### 4.1.2 Construct Reliability and Validity

Reliability testing of latent variables was performed using Cronbach's Alpha and Composite Reliability (CR), while convergent validity was assessed using Average Variance Extracted (AVE). All variables exhibited Cronbach's Alpha and CR values > 0.70 and AVE > 0.50, indicating that the research instrument was reliable and valid.

Table 2. Construct Reliability and Validity

Variable	Cronbach's Alpha	rho_A	Composite Reliability	AVE
Innovation Capabilities (M)	0,868	0,873	0,905	0,657
Local wisdom (Panca Budhi Indriya) (X)	0,859	0,863	0,905	0,704
Competitive Advantage (Y)	0,923	0,929	0,943	0,768

Table 2 shows based on the results in the table above, all constructs have Cronbach's Alpha and rho\_A > 0.70, which indicates that the indicators for each construct have good internal consistency. The Composite Reliability (CR) values > 0.70 for all constructs (0.905, 0.905, and 0.943) indicate that all constructs have excellent reliability. The AVE values > 0.50 for all constructs (0.657, 0.704, and 0.768) mean that each construct can explain more than 50% of the variance in its indicators. Therefore, it can be concluded that all constructs in this study meet the Construct Reliability and Validity criteria. Thus, the constructs of Innovation Capability, Local Wisdom, and Competitive Advantage are considered reliable and valid, and therefore suitable for further structural analysis.

#### 4.1.3 Discriminant Validity

Discriminant Validity was conducted to ensure that each latent variable in the model was distinctly different from the other variables. The results of the discriminant validity test using the Fornell-Larcker criterion show that the square root of the Average Variance Extracted ( $\sqrt{AVE}$ ) for each latent variable is greater than the correlations between the variables, thus meeting the discriminant validity criteria.

Table 3. Discriminant validity (Fornell-Larcker criterion)

Variable	Innovation Capability (M)	Local Wisdom (X)	Competitive Advantage (Y)
Innovation Capability (M)	0,811		
Local Wisdom (Panca Budhi Indriya) (X)	0,602	0,839	
Competitive Advantage (Y)	0,507	0,607	0,876

Table 3 shows the discriminant validity test results; the diagonal values ( $\sqrt{AVE}$ ) for each latent variable are higher than the correlations between the variables. Innovation Capability has a  $\sqrt{AVE}$  of 0.811, which is higher than the correlation with Local Wisdom (0.602) and Competitive Advantage (0.507). Local Wisdom has a  $\sqrt{AVE}$  of 0.839, which is higher than the correlation with Innovation Capability (0.602) and Competitive Advantage (0.607). Competitive Advantage has a  $\sqrt{AVE}$  of 0.876, which is higher than the correlation with Innovation Capability (0.507) and Local Wisdom (0.607). Therefore, it can be concluded that all latent variables in this study meet the discriminant validity criteria.

#### 4.1.4 R<sup>2</sup> Value

The R-squared (R<sup>2</sup>) value indicates the extent to which the variability in the endogenous construct (dependent variable) can be explained by the exogenous construct (independent variable) in the model. Meanwhile, the adjusted R-squared is used to correct for bias when the number of predictors differs, making it more accurate.

Table 4. R-Square (R<sup>2</sup>) values

Variables	R Square	R Square Adjusted
Innovation Capability (M)	0,363	0,358
Competitive Advantage (Y)	0,399	0,390

Table 4 shows the analysis results that Innovation Capability has an R<sup>2</sup> of 0.363, and Competitive Advantage has an R<sup>2</sup> of 0.399, which means that both fall into the moderate category (Joseph F Hair et al., 2017).

#### 4.1.5 Effect Size ( $f^2$ )

The effect size ( $f^2$ ) was used to assess the magnitude of the influence of each independent variable on the dependent variable. The results are presented in Table 5.

Tabel 5. Effect size ( $f^2$ )

Variables	Innovation Capability (M)	Local Wisdom (X)	Competitive Advantage (Y)
Innovation Capability (M)		0,052	
Local Wisdom (X)	0,570		0,238

Effect size analysis ( $f^2$ ) shows that the influence of Panca Budhi Indriya on Innovation Capability has a large effect ( $f^2 = 0.41$ ), the influence of Innovation Capability on Competitive Advantage has a moderate effect ( $f^2 = 0.28$ ), and the direct effect of Panca Budhi Indriya on Competitive Advantage has a moderate effect ( $f^2 = 0.19$ ). These findings reinforce that local wisdom values have a substantial impact on the formation of innovation and competitiveness of MSMEs, and innovation acts as a strategic link that transforms cultural values into competitive benefits.

#### 4.1.6 Path Coefficient

Table 6. Path coefficient

Variables	Innovation Capability (M)	Local Wisdom (X)	Competitive Advantage (Y)
Innovation Capability (M)			0,222
Local Wisdom (Panca Budhi Indriya) (X)	0,602		0,473
Competitive Advantage (Y)			

Table 6 shows that the Local Wisdom construct (X) has a positive influence on Innovation Capability (M) with a path coefficient value of 0.602. This indicates that the higher the application of local wisdom, the greater the innovation capability of the entrepreneurs. The Innovation Capability construct (M) positively influences Competitive Advantage (Y) with a path coefficient of 0.222. However, its effect is relatively smaller than that of the local wisdom variable. This means that the innovation carried out can improve competitive advantage, but its contribution is not as significant as that of the local wisdom factor. The Local Wisdom construct (X) also has a direct effect on Competitive Advantage (Y) with a path coefficient of 0.473. This emphasizes that the application of local wisdom values plays a strong role in creating differentiation and competitive advantage.

#### 4.1.7 Structural Model

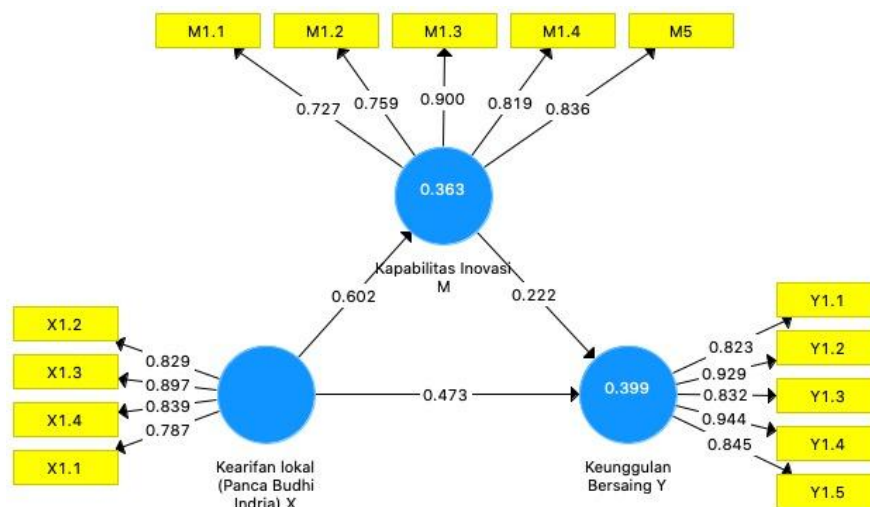


Figure 2. Structural model

## 4.2 Discussion

The results of this study show that:

1.  $H_1$  (Local Wisdom → Innovation Capability) was accepted. The path coefficient of 0.602 indicates a strong and positive relationship. This means that the higher the application of local wisdom values, the greater the MSMEs' innovation capability. This supports the findings of [Firmansyah et al. \(2024\)](#), who found that local culture can be a source of creative ideas.
2.  $H_2$  (Innovation Capability → Competitive Advantage) was accepted with a path coefficient of 0.222. Although positive, its effect is relatively small, meaning that the innovations implemented by MSMEs have not been fully optimized to create a competitive advantage.
3.  $H_3$  (Local Wisdom → Competitive Advantage) was accepted with a path coefficient of 0.473. This value is higher than the effect of innovation capability, indicating that local wisdom has become a key differentiator.

These findings are consistent with the Resource-Based View theory [Barney \(1991\)](#); [Peteraf \(1993\)](#), which suggests that unique resources, such as local wisdom, can form the basis of a competitive advantage that is difficult to imitate.

## 5. Conclusions

### 5.1 Conclusion

This study confirms that the values of local wisdom, particularly Panca Budhi Indriya, significantly influence the innovation capability and competitive advantage of tourism MSMEs in Bali, Indonesia. The five main values—*Sraddha*, *Virya*, *Smrti*, *Samadhi*, and *Prajna*—serve as a moral foundation that encourages MSME actors to innovate sustainably. Innovation capability mediates the relationship between cultural values and competitiveness, showing that innovation acts as a bridge between local wisdom and competitive advantage. This finding strengthens the Resource-Based View and Dynamic Capabilities theories by emphasizing that the integration of local culture and modern innovation is key to sustaining MSME competitiveness in the global era.

### 5.2 Research Limitations

This study has several limitations that should be considered as evaluations and references for future research. First, the scope of this study only covers tourism MSMEs operating in three districts/cities in Bali Province, which has a high concentration of culture-based businesses. Although this provides a strong focus on the local context, the findings may not be directly generalizable to MSMEs in other regions with different cultural characteristics, industry structures, and market dynamics. Therefore, it is important to exercise caution when interpreting the results and applying them outside the context of this study. Second, data were collected through a self-report questionnaire filled out directly by MSME actors. This method is efficient for obtaining large amounts of data, but it has inherent weaknesses, such as potential subjective bias, where respondents may provide answers that are considered "ideal" or "socially desirable," rather than those that reflect actual conditions. This can affect internal validity and reduce the accuracy of capturing the perceptions and actual behaviors of business actors.

Third, the research design used was cross-sectional, meaning that data were collected at one point in time. This approach does not allow researchers to observe the dynamics of variable changes over time, such as how innovation capability evolves with changes in the business environment or how local wisdom is gradually internalized into business practices. However, in the context of capability development and cultural adaptation, this process is often evolutionary and requires more time to be observed fully. Based on these limitations, future research is strongly recommended to expand the study's scope to other regions in Indonesia with different local cultural riches, such as Yogyakarta, Toraja, and Minangkabau, to gain a more comprehensive picture of the role of local wisdom in shaping MSME competitiveness. Additionally, a longitudinal research design would be helpful in capturing the process of change and variable development over the long term, enabling deeper causal relationship analysis.

Furthermore, integrating qualitative methods, such as in-depth interviews, participatory observations, or ethnographic studies, is highly recommended to complement the quantitative findings. This approach can provide a richer contextual understanding of how cultural values, such as Panca Budhi Indriya, are

internalized, interpreted, and practiced by MSME actors in their daily business activities. As such, the results would not only be descriptive but also capable of explaining the underlying mechanisms of the relationships between variables more comprehensively.

### **5.3 Suggestions and Directions for Future Research**

Tourism MSMEs in Bali are advised to strengthen the application of Panca Budhi Indriya values in their product and service innovation strategies to create sustainable competitive advantages. Local governments, fostering institutions, and universities must collaborate to develop local wisdom-based entrepreneurship training programs and support innovations rooted in culture. Future research can expand this model to other sectors to enrich the understanding of the role of cultural values and innovation capabilities in strengthening MSME competitiveness at both the national and global levels.

### **Acknowledgments**

The author expresses gratitude to the Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia for providing funding through the 2025 Basic Research Scheme. Special thanks are also extended to the Faculty of Economics and Business, Universitas Ngurah Rai, the experts who provided valuable input in the development of the research instrument, and all the tourism MSME actors in Bali who took the time to respond.

### **Author Contributions**

IGPAW conceptualized the study, designed the research methodology, and supervised the data collection process. NNS was responsible for data collection and analysis, as well as manuscript drafting. PGDH contributed to the analysis, interpretation of results, and revision of the manuscript. LASW assisted in data collection and provided valuable feedback for the manuscript revision. KEA helped with data analysis, manuscript revision, and final approval. All authors read and approved the final manuscript.

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