

## Determinants of Sustainable MSME Involvement in The MICE Business: Evidence from Yogyakarta

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### Abstract

The sustainability of MICE businesses increasingly depends on effective collaboration between event organizers and micro, small, and medium enterprises (MSMEs). However, operational challenges, particularly related to financial arrangements and resource constraints, remain underexplored. This study aims to examine the key determinants of MICE business sustainability and to investigate the moderating role of payment in shaping these relationships. This study adopts a mixed-method approach by integrating qualitative and quantitative techniques. In the first stage, in-depth interviews with MSME actors were conducted to explore key issues and inform the development of the research model. 15 voluntary business respondents were interviewed. In the second stage, quantitative data were collected from [n = 147] respondents who representative the company and analysed using Structural Equation Modelling (SEM). The results indicate that commitment, innovation, production capacity, and product quality have significant positive effects on MICE business sustainability. Among these, production capacity and product quality demonstrate the strongest practical relevance, as they directly influence the ability of MSMEs to meet event requirements. In contrast, time does not have a significant direct effect, suggesting that tight deadlines are a normalized condition within the MICE industry. However, payment plays a significant moderating role, strengthening the relationships between production capacity, product quality, and time with business sustainability. These findings highlight that financial reliability is a critical factor in ensuring effective operational performance. Payment functions as an enabling mechanism that allows MSMEs to mobilize resources, maintain quality standards, and meet time constraints. This study contributes to the literature by emphasizing the role of payment as a key moderating variable and offers practical implications for improving financial governance in MICE-related collaborations.

**Keywords:** MICE; entrepreneurship; sustainable business; MSME; tourism



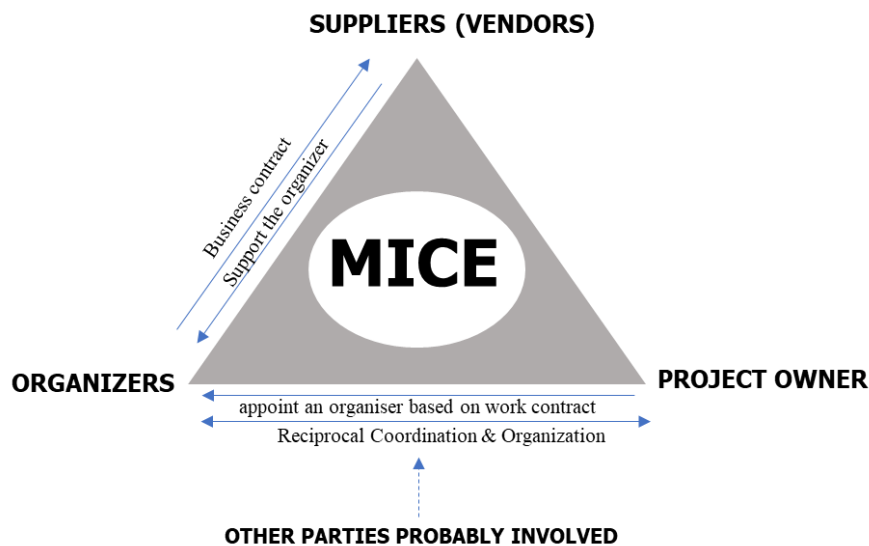
## INTRODUCTION

### Background

Several recent studies in Indonesia related to MICE (Meeting Incentive Conference Exhibition) mention that MICE plays a significant role in driving the growth of MSMEs (Micro, Small and Medium-Sized Enterprises), particularly in the creative economy sector (Maulana et al., 2024, Syahputra, 2022, Pratama and Susanto, 2024, Delen, 2023, Rahjasa, 2025, Fernali, 2024). In another study, it is mentioned that MICE is given significant priority in tourism development due to its various roles in boosting the economy (Spencer and Bavuma, 2018, Yuniati, 2022), involved in labor-intensive businesses; absorbing a large number of workers,

especially during many events (Ugli, 2025).

Among those studies, none have discussed how MSMEs are involved in various MICE activities, including the labour factors integrated into MSME business units. MICE activities are a business system that is driven by stakeholders which consists of Organisers; Suppliers or commonly referred to as Vendors, the majority of whom are MSMEs; and Project Owners whether governmental, private, or other institutional forms (see Fig. 1). In some cases, MICE activities also involve sponsors and other parties such as academics, researchers, the media, and experts from various fields. These parties each have their own roles to play in supporting the success of MICE activities.



**Figure 1.** The relationship between parties in the MICE industry in Indonesia

One of the criteria for good MICE activities from a tourism business perspective is that they are sustainable events (Astawa et al., 2024, Trisnayoni et al., 2022, Kim, 2023). The event is held periodically, thus also supporting the sustainability of the businesses of the parties involved, particularly the suppliers, who are predominantly micro, small and medium-sized enterprises (Kumar et al., 2024, Nure et al., 2020). The involvement of MSME in

organizing MICE activities is one of the factors that makes MICE Tourism a pillar for providing tourism employment (Nure et al., 2020).

The main problem is that not all suppliers perceive the importance of MICE as a prestigious activity with a significant impact on the economic and political environment (Rumerung et al., 2024). This will certainly impact the performance of the suppliers, which will be less than optimal,

ultimately leading to dissatisfaction from the organizer and project owner. This also impacts to the business continuity of the suppliers themselves. The study mentions that among the classic problems of MSME are innovation, quality control, digitalization, human resources, and access to funding (Caputo et al., 2024, Meilariza et al., 2024, Jalunggono et al., 2023). Another study also mentioned that MICE activities, which are synonymous with time limits, often lead to less than optimal performance by the parties involved (Setiadi, 2023, Satpathy et al., 2025).

Cooperation and commitment from all stakeholders are essential to maintaining the sustainability of the MICE business. However, to date, there has been no specific research examining how MSME involvement contributes to this sustainability. Some studies only briefly mention the role of MSMEs in the MICE industry, while others discuss MSMEs more generally without linking them to MICE activities. As a result, it is still not clearly understood which factors influence the sustainability of the MICE industry and how MSMEs function as one of the main supporting pillars of MICE activities in Indonesia.

Yogyakarta is one of the centers of MSME activity, with more than 400 vendors frequently serving various local and national events, as well as more than 100 small- and medium-scale organizers (IECA, 2025). Yogyakarta is also one of Indonesia's most popular MICE destinations, alongside Jakarta and Bali, and regularly hosts national events such as exhibitions, seminars, conferences, concerts, and cultural events.

### Research Objectives

To identify the determinants affecting MSMEs in the MICE industry and to support the sustainability of the MICE business, this research has three main objectives: (1) To qualitatively explore the

key factors influencing MSMEs in the MICE business; (2) To develop a relational model between MSMEs and MICE business sustainability; (3) To quantitatively test the proposed model using Structural Equation Modeling (SEM) involving MICE business actors.

## LITERATURE REVIEW

### *Mandatory MICE Tourism Business in Indonesia*

A study once stated that MICE is different from Events, but another study found that Events are the core activity of MICE, which can take the form of meetings such as seminars, conferences, workshops, congresses, as well as non-meeting activities like exhibition, bazaar, exchange, expo, and even concerts and sports competitions at various regional levels (Disimulacion, 2024, Kim, 2023). MICE is also an activity where a group of people gather for a specific mission, discussion, problem-solving, celebration, or even product sales to consumers (Getz and Page, 2016).

In Indonesia, MICE industry is regulated through a series of policies issued by the Ministry of Tourism and Creative Economy of the Republic of Indonesia (Yuniati, 2024). These include Regulation No. 28 of 2024 concerning MICE Service Business Standards, Regulation No. 2 of 2017 on MICE Venue Guidelines, and Regulation No. 5 of 2017 regarding the Guidelines for Developing MICE Tourism Destinations. Collectively, these regulations are designed to provide a comprehensive framework for the development and management of MICE activities, ensuring that destinations across Indonesia implement MICE operations in a structured and sustainable manner.

In terms of event organization, MICE is handled by organizers. There are several types of organizers, such as Professional Conference Organizers (PCOs), Professional Exhibition Organizers (PEOs), and General Event Organizers, commonly referred to as EOs. In practice,

many EO models operate on a small, medium, and large business scale. The business scale will determine the scale of events that can be handled. Included in small-scale EOs are Wedding Organizer (WO) services found within the community and event subcontractors who handle small-scale events such as Gala Dinners, Opening Ceremonies, Gatherings, and private parties.

MICE in the form of large-scale events involving international relations, such as High-Level Meetings, Ministerial-Level Meetings, or International Cooperation Meetings, are largely under government authority, with their organization based on predetermined regulations. One of the basic rules for organizing events is to use local products (Indonesian National Standard / SNI) that have characteristics unique to Indonesia or the host destination (Rosyidi et al., 2023). The goal is to empower local entrepreneurs so they can promote their businesses.

However, the use of these local products often faces various and diverse challenges, ranging from innovation, production capacity, labor, capital, product quality, to high-standard specifications suitable for showcasing to delegates (Fahma et al., 2019). A frequently raised issue is that local entrepreneurs are often not qualified enough to provide support to event organizers (Kumar et al., 2024, Setiadi, 2023). Products that do not meet international quality standards and unstable business performance are considered important reasons.

It is necessary to align perceptions among MICE stakeholders so that they can synergize to make MICE a sustainable business activity. Good performance will be reflected in minimal complaints, media appreciation, and testimonials from delegates about the event. The success of MICE will impact Indonesia's reputation as a trusted destination capable of hosting prestigious and world-class events.

### *MSME Involvement in MICE Activities in Indonesia and Key Sustainability Issues*

The success of MICE activities is inseparable from the role of local entrepreneurs, whether acting as organizer or suppliers. Most of the stakeholder events included in the MSME are vendors/supplier, such as souvenir entrepreneurs, batik producers, goodie bag makers, catering services, transportation services, vehicle rentals, printing services, t-shirt screen printing, offset printing services, freight forwarders or shipping agents, and even event performers like traditional art performances. The form of MSME involvement in MICE activities by providing various event needs, both local and international, through collaboration with organizers. The provision of services is in accordance with the supplier's expertise.

The high dynamics of MICE activities demand high performance from the parties involved, and MSMEs as suppliers play a crucial role in the success of MICE activities. All the organisers' needs must be provided by the suppliers. So far, not many have delved into the fundamental problems faced by suppliers. There is not much literature directly linking MICE and the factors affecting MSME businesses; therefore, a general study will serve as the foundation for thinking about various sustainability issues in MSME businesses.

In the context of MSME, commitment serves as a key relational governance mechanism that ensures the effectiveness of business agreements beyond formal contractual arrangements. Empirical evidence suggests that commitment enhances trust, facilitates collaboration, and improves organizational performance and innovation outcomes (Games et al., 2022). On the other hand, the dynamic organization of MICE activities often demands product innovation, such as alignment with event requests and novelty, for example, in the use of technology that enhances performance. Many traditional business owners, as seen in the profile of MSMEs in Indonesia, do not master innovations related to

market digitalization, making it difficult for SMEs to seize many business opportunities (Meilariza et al., 2024, Yuliantari and Pramukki, 2022, Istamarina et al., 2025).

A number of constraint factors regarding the role and position of MSMEs are a classic problem and a challenge for MSME business activities worldwide, including Indonesia (Meilariza et al., 2024, Jalunggono et al., 2023, Setiadi, 2023). Another issue in organising MICE is the time constraint. MICE events are inherently characterized as temporal and time-bound phenomena, occurring within a limited duration and requiring intensive planning and coordination (Getz and Page, 2016, Getz, 2008). Thus, Time also becomes an important issue related to coordination with suppliers, especially SMSE.

The other challenge is that suppliers are not always corporate entities as business organizations, but rather household production, so their performance is not well-measured (Jamgade, 2018, Seong-bin and Kwang-min, 2022). This is then reflected in the production capacity of the business as well as the quality of the products produced. A common issue faced by small and medium-sized enterprises (SMEs) is the limitation of human resource quality, particularly in terms of skills, training, and managerial capabilities. Previous studies indicate that SMEs often operate with informal and unstructured human resource management systems due to resource constraints, which hinders their ability to achieve optimal performance and innovation (Ayoko, 2021).

Furthermore, SMEs frequently encounter limited access to financial and technological resources, restricting their capacity to invest in equipment, research and development, and quality control systems. As a result, their innovation capability remains low and production processes tend to be inefficient and suboptimal (Wang et al., 2025, Hidayat and Pok, 2025). Inefficient suppliers will certainly hinder the performance of the organizer,

which will also impact the overall event execution performance. Organizers are also often unable to build long-term partnerships because suppliers are incompetent or do not last long enough due to various technical and operational factors.

Business sustainability heavily relies on working capital and governance, where MSME actors generally mix business affairs with personal interests (Purnomo et al., 2024). Regarding the issue of capital, almost all research in Indonesia addresses this topic as a core problem for MSMEs (Purnomo et al., 2024, Ritonga et al., 2025, Meilariza et al., 2024, Jalunggono et al., 2023, Setiadi, 2023, Purba and Sirait, 2025). In the context of MICE activities in Indonesia, the MSMEs involved also face similar problems, namely working capital. On the other hand, the organizers are not fully committed to this. Many large vendors or event organisers are late with payments, making it difficult for small suppliers to fulfil their roles effectively.

Based on the research results discussed above, at least a number of issues can be identified that are closely related to MSMEs in general, but also intersect with MSMEs related to the MICE business. The issues are 1) commitment in the form of work contracts that are often neglected by the parties, 2) the innovation capability of MSMEs, which is hampered by human resources that are unable to accelerate user needs, 3) production capacity due to limited equipment and resources, 4) time in MICE activities which is always on a tight schedule, 5) capital related to payment irregularities that hinder the performance of MSMEs as event suppliers.

## METHOD

To address the above issues, the method used in this study will be mixed methods. According to Creswel and Creswel (2018), this method can combine qualitative and quantitative research simultaneously to produce a more

comprehensive research analysis. This is a mixed methods research type with exploratory sequential design, which involves first by researching and observing qualitative data, then followed by further research on quantitative data.

*Step 1: Qualitative Stage to Identify Key Determinants in MSMEs Impacting the MICE Business*

Operationally, at this stage, the initial method is conducted through in-depth interviews with both organisers and suppliers as business actors. In determining the respondents to be interviewed, the researcher sent a proposal and a list of questions to around 30 companies representing their respective fields of business. However, only 15 voluntary respondents were willing to be interviewed (Table 1.). The respondents are representatives from companies in different fields. The interview instrument was designed in a semi-structured manner, allowing for in-depth exploration as the interview progressed. The main issues discussed are the obstacles and key success factors in managing MICE activities.

**Main points of the interview guide (before further elaboration)**

1. How is the mechanism for organizing events that have been running so far, is it in accordance with the proper regulations? What is your opinion, explain!
2. How is the collaboration system with the relevant parties? Is there a clear work contract?
3. What is the model of cooperation with the parties that have been involved in supporting the organization of the events held?
4. Mention the criteria related to the success of an event.
5. How has the experience gained so far been related to the key success factors? and factors that may lead to failure/less success?
6. Are there any factors that could affect long-term cooperation with vendors/owners?
7. What is your perspective on the performance of the vendors used in terms of experience, competence, order fulfilment, or other aspects? Is it good enough, lacking, and what is expected?
8. What are the main issues that need to be addressed to support the smooth running of future events?
9. Give your opinion on the following matters:
  - a) The commitment of the parties?
  - b) Are the product innovations from the vendors in line with the organizer's expectations?
  - c) Production capacity and fulfilment of order requests d. Vendor product quality control, is it up to standard? e. Event execution time and contract consequences for the vendor?
  - d) Is there any issue with the payment mechanism by the owner?

The results of the interviewed then processed with NVIVO software to obtain coding, allowing for the identification of appropriate terminology to be used as a theoretical basis. Coding using NVivo plays a crucial role in qualitative data analysis by enabling researchers to systematically organize, categorize, and interpret large volumes of textual data. Through the coding process, themes and patterns can be identified more efficiently, thereby enhancing the depth and rigor of the analysis. In addition, NVivo provides an audit trail that improves the transparency and reliability of the research findings (Bazeley and Jackson, 2013). The coding results can be seen in Figure 2 & Table 2.

Further exploration of this coding process involves constructing a model of the relationships between each determinant or factor and their impact on the MICE business. The coded data were rigorously examined to uncover recurring themes and relationships among key constructs. Through an iterative process of categorization and abstraction, these findings were integrated into a conceptual framework, which was subsequently formulated into a research model for further empirical validation (see at Figure 4).

**Table 1. Interviewed Sources**

<b>Name of Company &amp; Type of Expertise</b>
1. PT. GM (Organizer)
2. PT. KCG (Organizer)
3. PT. KW (Organizer)
4. CV. KS (Organizer)
5. PT. OKCB (Organizer)
6. CV. SS (Organizer)
7. Transportation (Supplier)
8. Souvenir (Supplier)
9. Offset & Publisher (Supplier)
10. Catering Service (Supplier)
11. Stand Contractor (Supplier)
12. Venue Owner (Supplier)
13. Cargo & Shipping (Supplier)
14. Sound & Lighting (Supplier)
15. Art & Performance (Supplier)

\*Abbreviated name for confidential & privacy

*Step 2: Quantitative Stage to Test the Model with SEM (Structural Equation Model).*

The next step is to test the model produced in the previous stage to MICE business actors (organisers and suppliers). The instrument used is a questionnaire with closed-ended questions. The questionnaire distribution method was done through an e-survey using Google Forms. The results were then processed using the SEM dengan software AMOS. Each question is measured using a Likert scale with the following provisions: 5 (Strongly Agree); 4 (Agree); 3 (Neutral); 2 (Disagree); 1 (Strongly Disagree). The questionnaire questions are a detailed explanation of the coding results supported by several theories from previous research findings (See at Table 2).

In this survey, the sample involved was 147 respondents. The determination of respondent sample criteria is business

entities (companies) instead of individuals, with prior correspondence for questionnaire delivery approval or using non-probability sampling, namely purposive sampling. In terms of quantity, the sample is considered representative if refer to Khan et al. (2019), who stated that the sample is more about the purpose and sensitivity of the response to the topic being discussed. Similarly, also quoting from Hair et al. (2021), who stated that the sample is actually sufficient to represent the population. In this case, testing on the sample is only to prove whether the statements regarding the factors influencing the sustainability of MICE business are acceptable or unacceptable to business owners as respondents. Thus, the sample size is not a crucial point to debate in this context. The survey activity was conducted from January 2025 to March 2025.

**Table 2.** The coding results that will be developed as questions in the questionnaire

Folder	Name	Reference
Codes	Production Capacity - Delivery - Fulfilment of Production Quota - Packaging	(Ayoko, 2021) (Jamgade, 2018, Seong-bin and Kwang-min, 2022).
Codes	Commitment - Ability to Fulfil Rights and Obligations - Agreement - Work Contract - Previous Collaboration Experience	(Games et al., 2022)
Codes	Product Quality & Control - Defect of Product - Quality of Product - Quality Control	(Wang et al., 2025, Hidayat and Pok, 2025).
Codes	Payment - Proof of Payment - Clarity of the Payment System - On-Time Payment	(Purnomo et al., 2024, Ritonga et al., 2025, Meilariza et al., 2024, Jalunggono et al., 2023, Setiadi, 2023, Purba and Sirait, 2025).
Codes	Product Innovation - Match the Requirement - Novelty of Product - Various of Product	(Meilariza et al., 2024, Yuliantari and Pramukki, 2022, Istamarina et al., 2025).
Codes	Time - Sufficient on Range Time	(Getz and Page, 2016, Getz,

Folder	Name	Reference
	- Time Ratio & Product Fulfilment - Time Ratio & HRM	2008). Thu
Codes	MSME Involvement Effect by Payment - Business Detrimental - Production Delayed - Operational Burden	(Caputo et al., 2024, Purba and Sirait, 2025, Zaman et al., 2025)
Codes	Sustainable MSME Involvement in MICE Business - Mutual Relationship - Long Term Cooperation - Satisfaction All of The Parties Involved	(Zaman et al., 2025, Trisnayani et al., 2022, Kim, 2023)

## RESULTS AND DISCUSSION

### *Decoding of Determinants of the Sustainable MICE-Business*

The results interviews then processed using the NVIVO tool, generating coding that can be visualized in the form of a word count below (Fig. 2). Word count as in Fig. 2 illustrates that the larger the font, the higher the frequency of that word appearing. A word frequency query using

NVivo was conducted as a preliminary analytical step to explore dominant terms and patterns within the dataset. This technique provided an initial overview of key concepts discussed by participants and supported the development of coding categories. Nevertheless, as word frequency alone does not capture contextual meaning, the findings were subsequently interpreted through in-depth thematic analysis to ensure analytical rigor.



**Figure 2.** Wordcount Visualization by NVIVO  
(Noted: The Interview was conducted in Indonesian)

The NVivo-generated word cloud reveals that “payment” emerges as the most dominant term, followed by “commitment,” “contract,” and “cooperation.” This pattern indicates that financial arrangements and relational governance are central issues in MICE-related collaborations involving SMEs. However, as word frequency does not capture contextual meaning, the findings were further analyzed using thematic coding.

In this section, the author attempts to elaborate on keywords that align with the model in previous researchers' findings as well as claims in a specific case in Yogyakarta, namely 'Pembayaran' interpreted as Payment ; 'Waktu' interpreted as Time; 'Komitmen' interpreted as Commitment, 'Produksi' interpreted as Production Capacity, also related to 'Production Quality & Control, and 'Product Innovation.' These dominant words which were validated through source triangulation based on processing interview data using NVIVO.

Based on the findings from in-depth interviews, payment is better positioned as a moderating variable rather than a direct determinant. Payment does not independently influence performance; instead, it affects how key operational factors translate into outcomes. In particular, payment moderates the relationship between production capacity, production quality and control, and time constraints. Timely and adequate payment enables SMEs to mobilize resources, maintain quality standards, and meet tight deadlines, thereby strengthening the impact of these operational factors. Conversely, delayed or insufficient payment weakens these relationships, leading to reduced production capacity, compromised quality, and delays in delivery. Therefore, payment functions as a critical contextual factor that shapes the effectiveness of SME performance in MICE-related activities.

Given the time-bound nature of events, delayed payments create significant pressure on production timelines, often leading to operational inefficiencies.

Furthermore, while event organizers typically expect high standards of product and service quality, such expectations are not always aligned with the financial support provided. This discrepancy adversely affects quality control and production processes, particularly in the context of limited human resources. In addition, inadequate upfront payments constrain production capacity, as MSMEs face difficulties in mobilizing resources and scaling operations.

Collectively, these findings suggest that payment does not merely function as a transactional element but rather as a critical moderating factor that influences the relationship between operational variables and performance outcomes. Ensuring timely and adequate payment is therefore essential to sustaining MSME operations and enhancing the effectiveness of MICE partnerships.

*Do those determinants truly affect the sustainability of MICE-Business? Developing Hypotheses and Testing.*

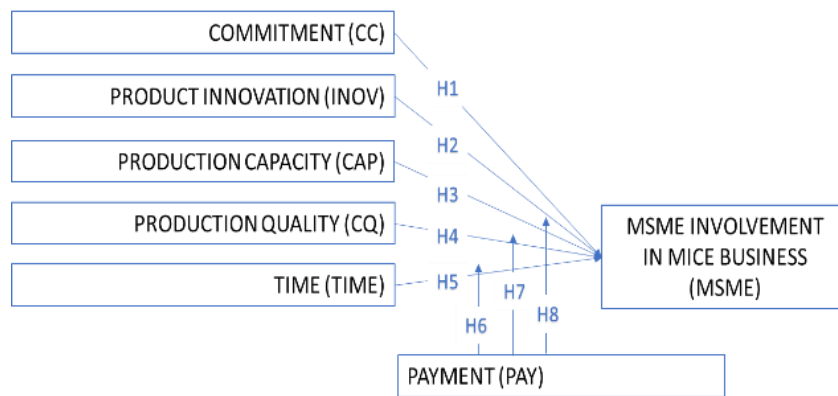
Based on Table 2, the constructs or variables can be explained as follows: Production Capacity (CAP) consists of 3 indicators: Delivery, Fulfillment of Product Quota, Packaging. Commitment (CO) has 4 indicators: Ability to Fulfill Rights & Obligations, Agreement, Work Contract, Previous Collaboration Experience. Product Quality (QC) has 3 indicators: Defect of Product, Quality of Product, and Quality Control. Payment (PAY) has 3 indicators: Proof of Payment, Clarity of The Payment System, On Time Payment. Product Innovation (INOV) has 3 indicators: Match The Requirement, Novelty of Product, and Various of Product. Time has 3 indicators: Sufficient Range Time, Time Ratio & Product Fulfillment, Time Ratio & HRM (Human Resource Management).

In almost every MICE activity, payment is always a crucial issue that has a significant impact on the smooth operation of the activity and working capital. Financing has also been claimed to be a major issue

for SMEs in Indonesia, having a significant impact on business sustainability (Zaman et al., 2025). Payment variables in this study are considered to have a moderating effect, particularly in urgent situations, on product quality and quality, and on production capacity, which typically requires initial capital and more labor support (Caputo et al., 2024). In the case of various business transactions in Indonesia, including MICE, payment is a very important stimulus for

MSME (Purba and Sirait, 2025). Without payment, activities will cease and production will halt, with the worst effect being a loss of trust. Therefore, payment plays an important role as a moderator that drives several key aspects of MICE operational activities.

Based on that statement, the testing model for the above construct can be illustrated in a path diagram as follows:



**Figure 3.** The Construct of The Model & Hypotheses Development

The hypotheses to be tested as independent variables regarding the illustration in Fig. 3 is as follows:

- H1 : Commitment influences MSME involvement in MICE business
- H2 : Product Innovation influences MSME involvement in MICE business
- H3 : Production Capacity influences MSME involvement in MICE business.
- H4 : Production Quality MSME involvement in MICE business
- H5 : Time influences MSME involvement in MICE business
- H6 : Payment has a moderating effect on the Time factor, thus influencing MSME involvement in MICE business.

- H7 : Payment has a moderating effect on the Production Quality, thus influencing MSME involvement in MICE business.
- H8 : Payment has a moderating effect on the Production Capacity, thus influencing MSME involvement in MICE business

The eight hypotheses above will be testing to key business player (organizers and suppliers/vendors) as the parties who contribute significantly to MICE activities. The respondent profile observed consisted of 26 organizers and 121 suppliers. In this case, both the organizer and the supplier fall into the MSME category in terms of capital. Although they have different business competencies, both are core players whose fundamental ideas are indeed highly sought after. His opinion on this case serves as both a confirmation and

validation of several hypotheses containing determinants that are suspected to influence the sustainability of the MICE business as a whole.

Here is the profile of the respondents who have been surveyed.

**Table 3.** The Profile of Respondent for Hypotheses Testing

Identity of Respondent	N	%
Expertise of Business		
• Organizer (EO/PCO/PEO/WO)	26	18%
• Supplier/Vendor	121	82%
Scale of Business (Turnover)		
• Big (> 1 Mn USD)	2	1%
• Medium (200.000 – 1 Mn USD)	12	8%
• Small (< 200.000 USD)	133	90%
Percentage of Event Handled		
• Local Event	116	79%
• National Event	19	13%
• International Event	12	8%
<b>Total N</b>	<b>147</b>	<b>100%</b>

Based on Table 3. above, it can be explained that according to their business scale, the majority of MICE actors are small businesses with a turnover of less than 2 billion rupiah (under 200,000 USD), and the percentage of events that have been held are mostly local events (79%). This shows that the MICE entrepreneurial profile, particularly in Yogyakarta as the research area, is indeed dominated by small enterprises.

SEM analysis was conducted by first testing the validity of the measurement

model using Confirmatory Factor Analysis (CFA) with a total of 23 items. The analysis was performed using AMOS version 24. CFA was employed to examine the multidimensional theoretical constructs. Instrument validity was assessed based on standardized factor loading values, with a threshold of  $\geq 0.50$ . Construct reliability was evaluated using Composite Reliability (CR) values  $\geq 0.70$ , while convergent validity was assessed using Average Variance Extracted (AVE) values  $\geq 0.50$ .

**Table 4.** Result of Validity & Reliability Testing

Variables	Indicator	Factor Loading	Result	Construct Reliability	Result
Commitment	Co1	0.853	Valid	0,839	Reliable
	Co2	0.666	Valid		
	Co3	0.747	Valid		
	Co4	0.737	Valid		
Product Inovation	Inov1	0.767	Valid	0,840	Reliable
	Inov2	0.717	Valid		
	Inov3	0.765	Valid		
	Inov4	0.763	Valid		
Production Capacity	Cap1	0.814	Valid	0,809	Reliable
	Cap2	0.813	Valid		
	Cap3	0.663	Valid		
Production Quality	QC1	0.782	Valid	0,848	Reliable
	QC2	0.810	Valid		

Variables	Indicator	Factor Loading	Result	Construct Reliability	Result
Time	QC3	0.826	Valid	0,805	Reliable
	Time1	0.738	Valid		
	Time2	0.765	Valid		
	Time3	0.781	Valid		
Payment)	Pay1	0.797	Valid	0,825	Reliable
	Pay2	0.769	Valid		
	Pay3	0.779	Valid		
MSME Involvement in MICE Business	SMSE1	0.692	Valid	0,753	Reliable
	SMES2	0.732	Valid		
	SMSE3	0.706	Valid		

Table 4 shows that each variable has a loading factor greater than 0.50, so it can be said that each item is valid. In the construct reliability test, each variable has a value above 0.7, so it can be said that all variables are statistically reliable.

In the advanced testing, a path diagram was created with 5 independent

variables (CO, INOV, CAP, QC, and TIME), 1 dependent variable (SMSE), and 1 moderating variable (PAY). Visually, the results of developing the theoretical model into a structural equation model are as follows (Fig.4).

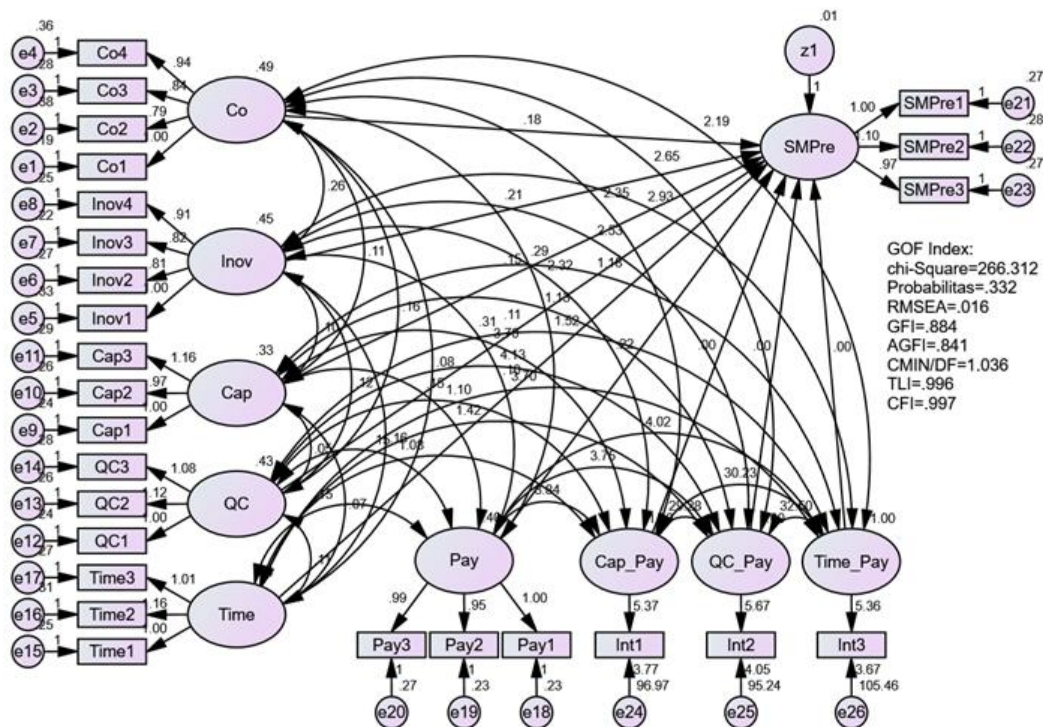


Figure 4. Structural Equation Model with Moderation Variable

In the data normality test using the multivariate critical ratio within the range of  $\pm 2.58$  at a significance level of 0.01 (1%), it was found that the critical ratio of all indicators was lower than 2.58, and the

multivariate value was -1.718, which means the data is normally distributed. Meanwhile, in the outlier test with 23 degrees of freedom and  $p < 0.001$ , the Mahalanobis value was found to be 49.72.

Since the outlier test did not find any Mahalanobis d-squared data above 49.72, it can be concluded that there are no outliers. The Goodness of Fit (GoF) test results

indicate that the research model is approaching a good fit model, with the following results for several test parameters (Table 5).

**Table 5.** Goodness of Fit Index Testing

Index	Reference Value	GoF Result	Comments
X2 chi-square	Expected to be small	266.312	Fit
Probability	> 0,05	0.332	Fit
CMIN/ DF	≤ 2	1.036	Fit
RMSEA	≤ 0.08	0.016	Fit
GFI	≥ 0,90	0.884	Marginal
AGFI	≥ 0,90	0.841	Marginal
TLI	≥ 0,90	0.996	Fit
CFI	≥ 0,90	0.997	Fit

Based on Table 5 above, it can be explained that the goodness-of-fit (GoF) indices indicate that the proposed model demonstrates an overall acceptable fit. The chi-square value is 266.312 with a probability value of 0.332 ( $p > 0.05$ ), suggesting that the model fits the data well. The CMIN/DF value of 1.036 is below the recommended threshold of 2.00, indicating a good fit. Furthermore, the RMSEA value of 0.016 is well below the cut-off value of 0.08, confirming a close fit of the model. Incremental fit indices also show

satisfactory results, with TLI = 0.996 and CFI = 0.997, both exceeding the recommended threshold of 0.90, indicating a very good model fit.

However, the GFI (0.884) and AGFI (0.841) values fall slightly below the recommended threshold of 0.90, suggesting a marginal fit for these indices. Despite this, considering that the majority of fit indices meet the recommended criteria, the overall model can be considered acceptable and suitable for further analysis.

**Table 6.** Hypotheses Testing Result

Hypothesis	Direct Effect & Moderation	Estimate Regression Weight	P*	Comments
H1	CO → SMSE	0.177	0.008	Significant
H2	INOV → SMSE	0.206	0.010	Significant
H3	CAP → SMSE	0.146	0.016	Significant
H4	QC → SMSE	0.108	0.034	Significant
H5	TIME → SMSE	0.097	0.108	Not Significant
H6	CAP → SMSE Moderated by PAY	0.004	0.001	Significant
H7	QC → SMSE Moderated by PAY	0.004	0.000	Significant
H8	Time → SMSE Moderated by Pay	0.003	0.011	Significant

\*Significant if  $p < 0.05$

After all the PLS-SEM requirements are met, the final stage is hypothesis testing (Table 6), which shows that Commitment (CO), Innovation (INOV), Production

Capacity (CAP), and Product Quality (QC) all have a direct and significant effect on MICE Business Sustainability (SMSE). This explains that the better all these

variables are achieved, the higher the level of MICE entrepreneurship sustainability. Meanwhile, the fifth variable is Time, which surprisingly did not have a significant direct influence on MICE entrepreneurship. Referring to the observations made during the interviews, this is influenced by the level of awareness among MICE business actors who have considered time a crucial element that does not need to be debated, as most MICE activities are indeed often held with tight time deadlines. However, it turns out that Time also has a strong influence when moderated by the Payment variable. Regarding the moderating effect where payment truly influences the sustainability of the MICE business, particularly on the variables of Production Capacity, Product Quality, and Time. This explains that production capacity, product quality, and time will not be problematic if payments, especially to suppliers/vendors, are processed smoothly. The payment will cover many operational expenses in terms of production quantity and quality with limited time.

The moderating effect of payment is particularly evident in its interaction with production capacity, product quality, and time. When payments are processed smoothly, MSMEs are able to increase production output, maintain quality standards, and meet strict deadlines. However, when payments are delayed or insufficient, these relationships weaken significantly, leading to production bottlenecks, compromised quality, and delays in delivery.

This phenomenon is further reinforced by qualitative findings, which indicate that event organizers often manage multiple events simultaneously. As a result, financial flows become fragmented, and delayed payments to vendors are common. For MSMEs, which typically operate with limited financial reserves, this creates significant operational challenges. In such conditions, payment becomes more critical than time itself, as financial constraints directly determine whether production activities can proceed.

As many studies have already claimed, financial condition is among the most important factors for the sustainability of SMEs, regardless of their business form. Behind the successful impression of the event, there were many SMEs involved in supporting its success. Through transparent and adequate financial support, many things can be developed by business actors, such as compliance technology, regulatory compliance, human resource training, and infrastructure improvements for better service to all parties involved in event organization.

From the results of the hypothesis testing above, the unique aspect is the time factor, where the parties involved in MICE activities do not consider time to be a determinant of sustainability. The short event timeframe is not a hindrance as long as everything else goes well, especially the flow of capital. The short event timeframe is actually seen as efficient, allowing business owners to handle multiple jobs simultaneously.

Time does not exhibit a significant direct effect on MICE business sustainability. This finding can be explained by the contextual nature of the MICE industry, where tight schedules and short deadlines are not perceived as constraints but rather as standard operating conditions. MICE practitioners, including MSMEs and event organizers, have adapted to high time pressure environments, making time a “normalized variable” that no longer differentiates performance outcomes.

Overall, the findings highlight that while operational capabilities such as production capacity and quality are essential, their effectiveness is highly dependent on financial conditions. Time, although critical in theory, becomes less relevant in practice due to industry adaptation. In contrast, payment emerges as a decisive factor that determines whether operational capabilities can be effectively translated into sustainable performance. Therefore, financial reliability, rather than time pressure, constitutes the most critical managerial

concern in MICE-related SME collaborations. In the MICE context, time is expected, but payment determines execution.



**Figure 5.** MSME Activities & Production (ordered from top left: pottery and clay souvenir artisans, t-shirt and fabric artisans, screen printing, offset and printing services, scarf products for souvenirs, batik artisans, event equipment producers, goodie bags, and jersey t-shirt production results) (Source: Author, 2025)

Not only for business actors, understanding the determinants that influence the sustainability of MSMEs in the MICE Business is also important for project owners (government or private) so that the policies implemented support and facilitate this. In Yogyakarta, the government has a program called "Gandeng Gendong," which emphasizes the involvement of MSMEs in every activity, especially those using local government budget including MICE activities and events. *Gandeng* (Javanese) means invitation to MSMEs, *Gendong* (Javanese) means support MSMEs in every various form of challenges.



**Figure 6.** A Slogan as policy support from Government in Yogyakarta to involve MSMEs in every activity and event

## CONCLUSION

This study extends the understanding of MICE business sustainability by moving beyond statistical significance toward a more substantive interpretation of the findings. The results demonstrate that commitment, innovation, production capacity, and product quality are key drivers of sustainability; however, their relative importance differs in practice. Among these, production capacity and product quality emerge as the most managerially relevant factors, as they directly determine the ability of MSMEs to meet event requirements and deliver tangible outcomes. These factors represent the operational core of MICE activities, where performance is immediately visible and directly linked to client satisfaction.

Interestingly, time does not exhibit a significant direct effect on sustainability. This finding reflects the contextual reality of the MICE industry, where tight schedules and short deadlines are normalized and widely accepted as standard working conditions. As such, time functions more as a baseline or hygiene factor rather than a source of competitive advantage, since all actors are already accustomed to operating under time pressure.

In contrast, payment emerges as a critical moderating variable with strong practical implications. The findings indicate that the effectiveness of production capacity, product quality, and even time

management is highly contingent upon the reliability of payment. Timely and sufficient payment enables MSMEs to mobilize resources, maintain workforce stability, and ensure production continuity, whereas delayed or insufficient payment weakens these relationships and leads to operational inefficiencies. This highlights that financial flow, rather than time pressure, constitutes the primary constraint in MICE-related collaborations.

From a managerial perspective, these findings suggest that MICE organizers must prioritize structured and reliable payment mechanisms, such as milestone-based payments or adequate upfront financing, to ensure smooth collaboration with vendors. For MSMEs, strengthening financial planning and selectively engaging with credible partners becomes essential to sustain performance. At the policy level, there is a need to establish clearer governance and protection mechanisms related to payment practices within the MICE industry to safeguard MSME participation.

Overall, this study concludes that while operational capabilities remain fundamental, their effectiveness is largely determined by financial reliability. In the context of MICE, time is expected, but payment determines execution, making it the most critical factor for ensuring sustainable business performance.

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## AI USE STATEMENT

Artificial intelligence (AI) tools, including ChatGPT, SciSpace, and Perplexity, were utilized in a limited capacity during the preparation of this manuscript to enhance language quality, clarity, and

coherence of the text, as well as to support preliminary literature identification. These tools were not used for generating research ideas, conducting data analysis, or drawing conclusions.

The authors confirm that all intellectual contributions, including study design, data analysis, interpretation of results, and final conclusions, were developed independently. The authors assume full responsibility for the content, accuracy, and originality of this manuscript.

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