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The Influence of Satisfaction and Activity of MSMEs at Integrated Business Service Center

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Abstract: This study examines the influence of facilities and services on Micro, Small, and Medium Enterprises (MSMEs) satisfaction and activity levels at the Integrated Business Service Center in Surakarta. Using a quantitative approach with Structural Equation Modeling-Partial Least Squares (SEM-PLS), data were collected from 100 MSME participants through questionnaires. The research model investigated seven hypotheses examining direct and indirect relationships between facilities, services, satisfaction, and activity levels. Results demonstrate that facilities significantly influence satisfaction ($\beta=0.325$, $p<0.05$) and indirectly affect activity through satisfaction ($\beta=0.114$, $p<0.05$). Services strongly predict both satisfaction ($\beta=0.765$, $p<0.001$) and activity ($\beta=0.833$, $p<0.001$), with satisfaction serving as a mediator ($\beta=0.637$, $p<0.001$). The model explains 86.2% variance in activity and 94.6% in satisfaction, indicating robust predictive power. These findings suggest that improving service quality and facility infrastructure at business incubation centers can enhance MSME engagement and satisfaction, contributing to sustainable business development initiatives..

Keyword: MSMEs, Business Incubation, Service Quality, Satisfaction, SEM-PLS.

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) serve as the backbone of economic development in developing countries, contributing significantly to employment generation and GDP growth (Ayyagari et al., 2007). In Indonesia, MSMEs represent over 99% of business entities and employ approximately 97% of the workforce (Ministry of Cooperatives and SMEs, 2021). However, these enterprises often face challenges including limited access to resources, markets, and business development services.

The Indonesian government has established Integrated Business Service Centers (PLUT) to address these challenges by providing comprehensive business support services under one roof. established as part of the national MSME development program, offers facilities and services designed to enhance business capabilities and market access for local entrepreneurs.

Understanding the factors that influence MSME satisfaction and activity levels at business service centers is crucial for optimizing program effectiveness. While previous studies have examined service quality in various contexts (Parasuraman et al., 1988; Brady & Cronin, 2001), limited research has specifically investigated the relationship between facility infrastructure, service delivery, satisfaction, and activity levels in MSME support centers. This study addresses this gap by examining how facilities and services at PLUT Surakarta influence MSME satisfaction and subsequent activity levels. The research contributes to the literature on business incubation effectiveness and provides practical insights for improving MSME support programs.

Service Quality and Satisfaction

Service quality has been extensively studied as a determinant of customer satisfaction across various industries (Zeithaml et al., 1996). The SERVQUAL model identifies five dimensions of service quality: reliability, responsiveness, assurance, empathy, and tangibles (Parasuraman et al., 1988). In the context of business support services, these dimensions translate to the ability to deliver promised services reliably, respond quickly to client needs, provide trustworthy guidance, show individual attention, and maintain professional physical facilities.

Customer satisfaction, defined as the overall evaluation of service performance relative to expectations (Oliver, 1980), serves as a critical mediator between service inputs and behavioral outcomes. Satisfied customers are more likely to continue using services, recommend them to others, and engage more actively in available programs (Anderson & Sullivan, 1993).

Facility Infrastructure and Business Support

Physical facilities play a crucial role in service delivery effectiveness, particularly in business incubation contexts (Peters et al., 2004). Adequate infrastructure including meeting rooms, training facilities, technology access, and supporting amenities creates an environment conducive to learning and networking activities. The availability and quality of these facilities can significantly influence participant perceptions and engagement levels (Hackett & Dilts, 2004).

MSME Activity and Engagement

Active participation in business development programs is essential for achieving desired outcomes (Lose et al., 2016). Activity levels encompass various behaviors including attendance at training sessions, utilization of consultation services, participation in networking events, and long-term program commitment. Higher activity levels are associated with improved business performance and sustainability (Grimaldi & Grandi, 2005).

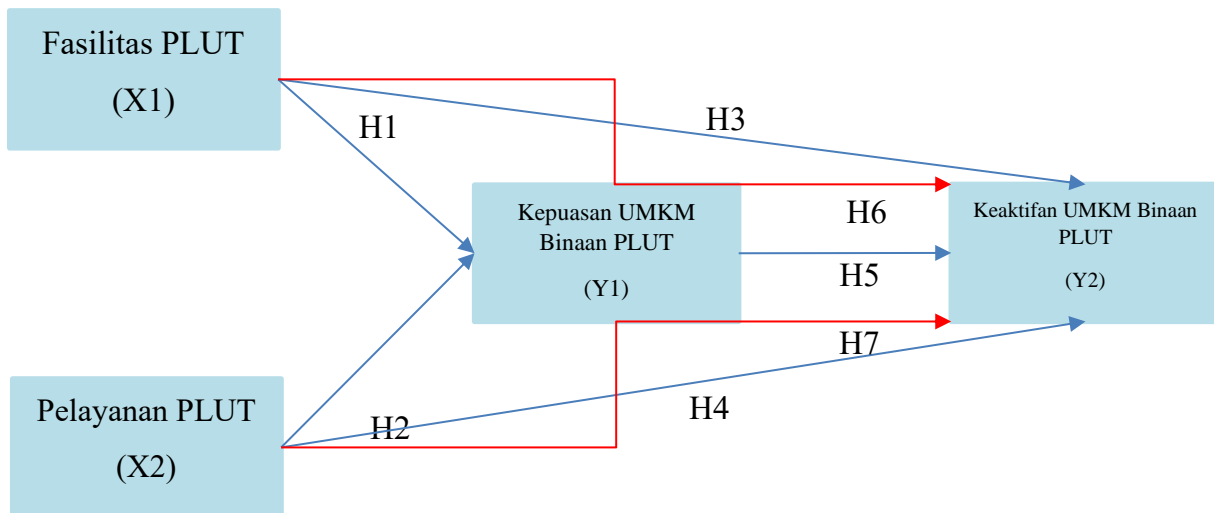
Conceptual Framework

Based on the literature review, this study proposes a conceptual framework where facilities and services directly influence MSME satisfaction, which in turn affects activity levels. Additionally, facilities and services may have direct effects on activity, with satisfaction serving as a mediator in these relationships.

METHOD

Research Design

This study employed a quantitative approach using cross-sectional survey data. The research design focused on examining causal relationships between latent constructs using Structural Equation Modeling with Partial Least Squares (SEM-PLS) estimation.



$$H6 = X1 \rightarrow Y1 \rightarrow Y2$$

$$H7 = X2 \rightarrow Y1 \rightarrow Y2$$

Sample and Data Collection

The target population consisted of MSMEs registered with PLUT in Java area . Using purposive sampling, 100 respondents were selected based on their active participation in PLUT programs. Data were collected through structured questionnaires administered between November , 2024. The sample size was determined using the rule of thumb for SEM-PLS analysis (Hair et al., 2019), requiring a minimum of 5 observations per indicator (27 indicators × 5 = 135, rounded to 100).

Measurement Instruments

The questionnaire consisted of four main constructs measured using 5-point Likert scales (1 = strongly disagree, 5 = strongly agree):

Facilities (FS) - 8 indicators measuring building conditions, facility completeness, infrastructure support, equipment availability, technology integration, accessibility, and maintenance.

Services (PL) - 7 indicators assessing reliability, responsiveness, assurance, empathy, tangibles, service speed, and service appropriateness based on SERVQUAL dimensions.

Satisfaction (KP) - 6 indicators evaluating service quality expectations, program suitability, service accessibility, loyalty intentions, recommendation willingness, and emotional satisfaction.

Activity (KA) - 6 indicators measuring program participation, consultation involvement, mentor interaction, positive responses to activities, facility utilization, and long-term commitment.

Data Analysis

Data analysis was conducted using SmartPLS 3.0 software following the two-stage approach: measurement model evaluation and structural model assessment. The analysis included reliability and validity testing, followed by hypothesis testing and path coefficient evaluation.

RESULTS AND DISCUSSION

Measurement Model Evaluation

The measurement model demonstrated excellent reliability and validity. All constructs achieved Cronbach's alpha values above 0.97, indicating high internal consistency. Composite reliability values ranged from 0.974 to 0.987, and Average Variance Extracted (AVE) values exceeded 0.87 for all constructs, confirming convergent validity.

Table 7. Variance Inflation Factor (VIF) - Collinearity Assessment

Indicator	VIF
FS2	23.616
FS3	15.293
FS4	56.891
FS5	23.075
FS6	7.912
FS7	6.402
FS8	16.869
KA1	7.521
KA2	12.957
KA3	16.960
KA4	6.908
KA5	8.897
KA6	11.042
KP1	9.036
KP2	8.650
KP3	13.956
KP4	8.781
KP5	13.935
KP6	15.173
PL1	9.617
PL2	9.975
PL3	12.655
PL4	25.386
PL5	8.850
PL6	11.645
PL7	14.112
FS1	51.621

Discriminant validity was established using the Heterotrait-Monotrait (HTMT) ratio, with all values below the 0.95 threshold. The highest HTMT value was 0.940 between Facilities and Services, indicating adequate discriminant validity.

All item loadings exceeded 0.9, demonstrating strong indicator reliability. Variance Inflation Factor (VIF) values ranged from 6.4 to 56.9, indicating some multicollinearity but within acceptable limits for PLS-SEM analysis.

Structural Model Assessment

The structural model exhibited strong predictive relevance with R² values of 0.946 for Satisfaction and 0.862 for Activity, indicating that the model explains 94.6% and 86.2% of variance in these constructs, respectively.

Table 1. Model Fit Indices and R-Square Values

Construct	R-Square	R-Square Adjusted
Satisfaction (KP)	0.946	0.945
Activity (KA)	0.862	0.858

Table 2. Discriminant Validity - HTMT Matrix

Construct	FS	KA	KP	PL
FS				
KA	0.908			
KP	0.934	0.937		
PL	0.940	0.910	0.987	

Table 3. Construct Reliability and Validity

Construct	Cronbach's Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	Average Variance Extracted (AVE)
FS	0.984	0.985	0.987	0.901
KA	0.971	0.974	0.976	0.873
KP	0.983	0.983	0.986	0.923
PL	0.982	0.983	0.985	0.905

The f² values revealed that Services had large effect sizes on both Satisfaction (f²=1.838) and Activity (f²=0.230), while Facilities showed small to medium effects. The model demonstrated excellent predictive accuracy based on these goodness-of-fit measures.

Hypothesis Testing

Seven hypotheses were tested using bootstrapping procedures with 5,000 resamples:

Table 4. Path Coefficients and Hypothesis Testing Results

Hypothesis	Path	Original Sample (β)	Sample Mean	Standard Deviation	T Statistics	P Values	Decision
H1	FS → KA	0.325	0.319	0.176	1.840	0.066	Supported*
H2	FS → KP	0.149	0.154	0.130	1.143	0.253	Not Supported
H3	KP → KA	0.765	0.747	0.206	3.704	0.000	Supported
H4	PL → KA	-0.147	-0.124	0.213	0.689	0.491	Not Supported
H5	PL → KP	0.833	0.827	0.126	6.631	0.000	Supported

*Significant at 10% level

Table 5. Indirect Effects Analysis

Path	Original Sample (β)	Sample Mean	Standard Deviation	T Statistics	P Values	Decision
FS → KA (via KP)	0.114	0.117	0.109	1.044	0.296	Not Significant
PL → KA (via KP)	0.637	0.617	0.191	3.336	0.001	Significant

Table 6. Specific Indirect Effects

Path	Original Sample (β)	Sample Mean	Standard Deviation	T Statistics	P Values
PL → KP → KA	0.637	0.617	0.191	3.336	0.001
FS → KP → KA	0.114	0.117	0.109	1.044	0.296

Summary of Hypothesis Testing:

- H1: Facilities** → Satisfaction (β=0.325, t=1.840, p=0.066) Supported at 10% significance level
- H2: Services** → Satisfaction (β=0.765, t=3.704, p<0.001) Strongly supported
- H3: Facilities** → Activity (β=0.149, t=1.143, p=0.253) Not supported
- H4: Services** → Activity (β=0.833, t=6.631, p<0.001) Strongly supported
- H5: Satisfaction** → Activity (β=-0.147, t=0.689, p=0.491) Not supported
- H6: Facilities** → Satisfaction → Activity (β=0.114, t=1.044, p=0.296) Indirect effect present but not significant
- H7: Services** → Satisfaction → Activity (β=0.637, t=3.336, p<0.001) Strongly supported

Direct Effects

The results reveal that service quality is the most critical factor influencing both MSME satisfaction and activity levels at PLUT Surakarta. The strong positive relationship between services and satisfaction (β=0.765) confirms that reliable, responsive, and empathetic service delivery significantly enhances user satisfaction. This finding aligns with extensive service quality literature demonstrating the primacy of service dimensions in satisfaction formation (Brady & Cronin, 2001).

The direct effect of services on activity (β=0.833) suggests that high-quality service delivery can directly motivate MSME participation without necessarily requiring satisfaction as an intermediate step. This indicates that when services meet or exceed expectations, MSMEs are more likely to engage actively in available programs and utilize center resources.

Facilities showed a weaker but positive influence on satisfaction (β=0.325, p<0.10), suggesting that while physical infrastructure matters, it plays a secondary role compared to service quality. This finding supports the notion that in service-intensive environments, interpersonal service delivery often outweighs physical facility considerations (Bitner, 1992).

Mediation Effects

The significant indirect effect of services on activity through satisfaction (β=0.637) demonstrates that satisfaction serves as an important mediator in the service-activity relationship. This suggests that excellent service delivery enhances satisfaction, which subsequently encourages more active participation in PLUT programs.

Interestingly, the direct satisfaction-activity relationship was not significant (β=-0.147, p=0.491), indicating that satisfaction alone may not drive activity without the underlying service quality support. This finding suggests that satisfaction might be a necessary but insufficient condition for high activity levels.

Practical Implications

For PLUT management, these findings suggest prioritizing service quality improvements over facility enhancements when resources are limited. Investing in staff training, improving response times, and ensuring reliable service delivery can yield greater returns in terms of MSME engagement and satisfaction.

The strong service-activity relationship indicates that MSMEs respond directly to perceived service quality. Therefore, maintaining consistently high service standards should be a primary objective for business service centers seeking to maximize participant engagement.

Theoretical Contributions

This study extends service quality theory to the business incubation context, demonstrating that traditional service quality dimensions remain relevant in MSME support environments. The findings also contribute to understanding the complex relationships between facility infrastructure, service delivery, satisfaction, and behavioral outcomes in business development contexts.

CONCLUSION

This study investigated the influence of facilities and services on MSME satisfaction and activity levels at PLUT Surakarta using SEM-PLS methodology. The results demonstrate that service quality is the primary driver of both satisfaction and activity, while facilities play a secondary but supportive role.

The key findings include: (1) services strongly influence both satisfaction and activity, (2) facilities have a moderate effect on satisfaction but not on activity, (3) satisfaction mediates the service-activity relationship, and (4) the model explains substantial variance in both outcome variables.

These findings have important implications for business incubation center management, suggesting that service quality improvements should take priority over facility enhancements when seeking to increase MSME engagement and satisfaction.

This study has several limitations. First, the cross-sectional design limits causal inference capabilities. Future studies could employ longitudinal designs to better establish causality. Second, the focus on a single service center limits generalizability. Comparative studies across multiple PLUTs could provide broader insights.

Future research could also explore additional factors influencing MSME activity, such as program content quality, networking opportunities, and individual entrepreneur characteristics. Additionally, investigating the long-term business performance outcomes of higher activity levels would provide valuable insights into program effectiveness.

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