

Management of Continuing Education and Perceived Hospital Business Value: A Cross-Sectional PLS-SEM Study in Southeast Sulawesi

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Kata Kunci	Abstrak
Manajemen Pendidikan Berkelanjutan; Nilai Bisnis Rumah Sakit; Keberlanjutan Organisasi	Penelitian ini mengkaji hubungan antara manajemen pendidikan berkelanjutan dan persepsi nilai bisnis rumah sakit di Sulawesi Tenggara. Penelitian menggunakan desain survei kuantitatif dengan pendekatan potong lintang (cross-sectional). Data dikumpulkan pada Januari sampai Mei 2026 dari 20 rumah sakit pemerintah dan swasta. Sebanyak 200 tenaga manajerial dan administrasi yang memenuhi kriteria inklusi dipilih menggunakan teknik purposive sampling. Data dikumpulkan melalui kuesioner dengan skala Likert lima poin dan dianalisis menggunakan Partial Least Squares Structural Equation Modeling (PLS-SEM) dengan bantuan SmartPLS 4. Nilai bisnis rumah sakit dioperasionalkan sebagai persepsi responden terhadap efisiensi operasional, kualitas pelayanan, inovasi organisasi, kepuasan pengguna layanan, dan keunggulan kompetitif. Hasil penelitian menunjukkan adanya hubungan positif antara manajemen pendidikan berkelanjutan dan persepsi nilai bisnis rumah sakit ($\beta = 0,687$; $t = 12,846$; $p < 0,001$). Nilai R^2 sebesar 0,472 menunjukkan bahwa manajemen pendidikan berkelanjutan menjelaskan sebesar 47,2% variasi persepsi nilai bisnis rumah sakit dalam sampel penelitian. Mengingat penelitian menggunakan desain potong lintang dan purposive sampling, temuan tersebut harus ditafsirkan sebagai hubungan/asosiasi, bukan sebagai bukti hubungan sebab-akibat. Penelitian ini menunjukkan bahwa pengelolaan pendidikan berkelanjutan secara sistematis relevan dengan penciptaan nilai organisasi. Namun, penelitian longitudinal dan penelitian yang menggunakan indikator kinerja objektif masih diperlukan untuk membuktikan hubungan temporal dan kausal secara lebih kuat.
Keyword	Abstract
Sustainable Educational Management; Hospital Business Value; Organizational Sustainability	<i>This study examined the relationship between continuing education management and perceived hospital business value in Southeast Sulawesi. A quantitative cross-sectional survey design was employed. Data were collected from January to May 2026 from 40 public and private hospitals. A total of 200 managerial and administrative personnel who met the inclusion criteria were selected using purposive sampling. Data were collected using a five-point Likert-scale questionnaire and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4. Hospital business value was operationalized as respondents' perceptions of operational efficiency, service quality, organizational innovation, user satisfaction, and competitive advantage. The results showed a positive association between continuing education management and perceived hospital business value ($\beta = 0.687$; $t = 12.846$; $p < 0.001$). The R^2 value of 0.472 indicated that continuing education management accounted for 47.2% of the variance in perceived hospital business value in the study sample. Given the cross-sectional design and purposive sampling, these findings should be interpreted as an association rather than evidence of a causal relationship. The study indicates that systematic management of continuing education is relevant to organizational value creation. However, longitudinal studies and research using objective performance indicators are needed to establish temporal and causal relationships more robustly.</i>

INTRODUCTION

Hospitals are health service organizations that rely heavily on the competence of human resources to maintain the quality of service and the sustainability of the organization (Simion Luduşanu et al., 2025). Changes in service needs, patient safety demands, and the development of professional standards require health workers and managerial personnel to continuously update their knowledge, skills, and competencies. In this context, continuing *education* is an important part of human resource development to support the improvement of competencies in accordance with the needs of health services (Notarnicola et al., 2025).

Continuing education management includes not only the provision of training, but also the identification of competency needs, planning, implementation, evaluation, and follow-up of learning. Systematic management allows competency development to be integrated with organizational needs and goals, thus potentially supporting service quality, work efficiency, and hospital performance (Chansanguan et al., 2025a).

Thus, continuing education management needs to be seen as part of a human resource development strategy, not just an administrative activity. However, the relationship between continuing education management and hospital organizational value still needs further testing, particularly in the Indonesian context. Therefore, this study examines the relationship between continuing education management and the perception of hospital business value, which includes operational efficiency, quality of service, organizational innovation, service user satisfaction, and competitive advantage.

Continuing *education management* in this study refers to the process of systematically managing learning activities which includes planning, organizing, implementing, supervising, and evaluating

to support the continuous improvement of knowledge, skills, and competencies of the workforce (Indrawati & Kasmaini, 2025). In the context of hospitals, continuing education is not limited to the professional development of health workers, but also includes administrative, managerial, and service support personnel according to the needs of the organization (Tsekouropoulos et al., 2025). Thus, continuing education management in this study is positioned as a managerial process of developing human resource competencies, not as sustainability-oriented education. Systematic management is expected to support organizational learning, adaptation to change, and increase service effectiveness (Assaf, 2026).

On the other hand, the value of a hospital's business needs to be understood more broadly than just revenue or financial gain. In this study, the perception of hospital business value refers to respondents' assessment of the hospital's ability to create value through operational efficiency, service quality, organizational innovation, service user satisfaction, and competitive advantage (Sestino et al., 2025). This concept is different from organizational performance, sustainability, service quality, or patient satisfaction which are concepts in themselves, although they can be interrelated in the creation of organizational value. Because measurement is based on the perception of managerial and administrative personnel, the term perception of hospital business value is used to reflect respondents' assessment of the organization's ability to create value. Thus, the relationship between continuing education management and the perception of hospital business value becomes relevant to be studied in the context of human resource development and hospital management.

Various studies show that education and training contribute to the improvement of individual competencies and organizational performance (Aleca & Mihai, 2025). Other research also shows that the

development of competencies of health workers can support professional readiness and capacity in dealing with service demands (Yue et al., 2025). However, the research generally focuses on the effectiveness of training, competency improvement, or human resource performance, while the relationship between education management as a process that includes planning, implementation, evaluation, and follow-up of learning and organizational value creation has not been specifically tested (Bag et al., 2022). Thus, an untested aspect is whether the management of continuing education is systematically related to the perception of the value of the hospital's business, not only to individual competence or performance. This study contributes by examining this relationship through the PLS-SEM approach in hospital managerial and administrative personnel in Southeast Sulawesi, with the business value of hospitals measured based on perceptions of operational efficiency, service quality, organizational innovation, service user satisfaction, and competitive advantage. The findings of the research are expected to expand the study of human resource development by placing continuous education management as a strategic aspect in the value creation of hospital organizations (Korpall et al., 2025).

The context of hospitals in Southeast Sulawesi provides a relevant space to examine the relationship between continuing education management and the perception of hospital business value. Official data from the Central Statistics Agency shows that public hospitals and special hospitals are spread across various districts/cities in Southeast Sulawesi Province, so that health services take place in the context of diverse regions and organizational characteristics. This condition requires the management of human resources that are able to adjust competencies to service needs, the development of professional standards, and

the demands of improving service quality. In this context, continuing education is an important part of the competency development of health workers, managerial, and hospital administration. Therefore, this study empirically examines the relationship between continuing education management and the perception of hospital business value in Southeast Sulawesi.

Theoretically, this research is based on Human Capital Theory which views the knowledge, skills, and competencies of human resources as capital that can be developed through investment in education and learning to generate value for the organization (Neycheva, 2024). The nature of the hospital context, continuing education management allows organizations to develop workforce competencies systematically, which can further support the improvement of work processes, service quality, innovation, and operational efficiency. The mechanism is strengthened by the perspective of *Organizational Learning Theory*, which explains that individual learning can be developed into organizational capacity through the process of knowledge sharing, learning application, and continuous improvement (Díez et al., 2020). Thus, the systematic management of continuing education is estimated to be related to increasing the perception of hospital business value through strengthening the capacity of human resources and organizational learning. Based on these theoretical arguments, this study proposes the hypothesis that continuing education management is positively related to the perception of hospital business value (Gile et al., 2022).

Based on this description, this study aims to analyze the relationship between continuing education management and the perception of hospital business value in Southeast Sulawesi. Specifically, this study answers the question: Is there a relationship between continuing education management and the perception of hospital business

value? Based on Human Capital Theory and Organizational Learning Theory, systematic management of continuing education is estimated to be related to strengthening human resource competencies, organizational learning, and organizational value creation. Therefore, the research hypothesis is formulated as follows:

H1: There is a positive relationship between continuing education management and the perception of hospital business value.

This research is expected to make an empirical contribution to the development of education management studies in the context of health organizations and provide input for hospital leaders in developing sustainable education policies that are in line with organizational needs.

RESEARCH METHODOLOGY

This study uses a quantitative approach with a *cross-sectional survey design* to analyze the relationship between continuing education management and the perception of hospital business value in Southeast Sulawesi Province. Data collection was carried out in January-May 2026 in 20 hospitals consisting of 10 government hospitals and 10 private hospitals. The research population includes approximately 420 managerial and administrative personnel who meet the characteristics of the study. Respondents were selected using purposive sampling techniques with the criteria of having worked for at least two years and having participated in an education or training program organized by the hospital. A total of 220 questionnaires were distributed, 208 questionnaires were returned, and after a completeness check, 200 valid questionnaires were obtained for analysis, with a response rate of 94.5%. A total of 10 respondents were selected from each hospital so that the research analysis unit was individual, while the hospital was the location of data collection. The inclusion criteria are used to ensure that respondents

have adequate experience related to the management of education and training in the hospital environment.

The research instruments are adapted from previous instruments relevant to the management of continuing education and the business value of the organization (Naseer et al., 2025; Zaid et al., 2025). The instrument uses a five-point Likert scale, which is 1 (strongly disagree) to 5 (strongly agree). Continuing education management is measured through five dimensions, namely planning, organizing, implementing, evaluating, and follow-up, while the perception of a hospital's business value is measured through operational efficiency, service quality, organizational innovation, service user satisfaction, and competitive advantage. The instrument underwent content validation by three experts and trials on 30 respondents outside the main sample. All indicators are treated as reflective indicators, while continuing education management is modeled as a high-level multidimensional construct using a two-stage approach.

To minimize common method bias, the study applied an anonymous procedure and maintained the confidentiality of respondents' answers, used uniform filling instructions, and conceptually separated the measurement of predictor variables and criterion variables. The potential for common method bias was also statistically examined using Harman's single-factor test. The data is examined to identify missing and outdated data before analysis. Incomplete questionnaires were excluded from the analysis, while outliers were examined based on data distribution characteristics and extreme values.

Data analysis was carried out using *Partial Least Squares Structural Equation Modeling* (PLS-SEM) with the help of SmartPLS 4. PLS-SEM is used because the research involves multidimensional constructs and aims to test the relationship and predictive ability of continuing

education management to the perception of hospital business value. The *outer model evaluation* included *outer loading*, *Average Variance Extracted (AVE)*, *Cronbach's alpha*, *composite reliability*, and *discriminant validity*, while the *inner model evaluation* included path coefficients, R^2 , Q^2 , f^2 , and VIF. Hypothesis testing was conducted through bootstrapping with 5,000 subsamples, bidirectional testing at a significance level of 5%, and a 95% confidence interval. The results of the analysis showed a positive relationship between continuing education management and the perception of hospital business value ($\beta = 0.687$; $t = 12.846$; $p < 0.001$), with an R^2 value of 0.472.

RESULTS AND DISCUSSION

Respondent Characteristics

A total of 200 respondents participated in this study. Based on gender, respondents were dominated by women as many as 128 people (64.0%), while men as many as 72 people (36.0%). Based on age, most of the respondents were in the range of 31–40 years as many as 82 people (41.0%), followed by 41–50 years old as many as 56 people (28.0%), 21–30 years old as many as 44 people (22.0%), and over 50 years old as many as 18 people (9.0%). Based on the analysis unit, all respondents were managerial and administrative personnel from 20 hospitals in Southeast Sulawesi, consisting of 10 government hospitals and 10 private hospitals. A total of 10 respondents came from each hospital so that the distribution of samples between hospitals was balanced. The composition provides proportional representation between government and private hospitals at the individual level. However, because multiple respondents were from the same hospital, the data structure had potential for illness that needed to be considered in the interpretation of the analysis results.

Table 1. Respondent Characteristics

Characteristic Groups	Category	(n)	(%)
Gender	Male	72	36,0
	Women	128	64,0
Age	21–30 years old	44	22,0
	31–40 years	82	41,0
	41–50 years	56	28,0
	>50 years old	18	9,0
Final Education	Diploma	46	23,0
	Bachelor	112	56,0
	Magister	38	19,0
	Doctor	4	2,0
Long Time Working	2–5 years	46	23,0
	5–10 years	86	43,0
	>10 years	68	34,0
Total		200	100,0

Source : Research data, 2026

In table 1, it can be seen that from the level of education, respondents with S1 education were the largest group of 112 people (56.0%), followed by 46 people (23.0%), 38 people (19.0%), and 4 people (2.0%) with Doctorates. Based on the length of work, most of the respondents had 5–10 years of work experience as many as 86 people (43.0%), more than 10 years as many as 68 people (34.0%), while 2–5 years as many as 46 people (23.0%).

Evaluation of Measurement Models (Outer Model)

Validitas Convergence

All results of the evaluation of the measurement model show that all indicators have an outer loading value above 0.70, thus meeting the criteria of convergent validity. The AVE value of both constructs was also above 0.50, which indicates that the construct was able to explain more than half of the variance of the indicator. The reliability of the construct is indicated by Cronbach's alpha and composite reliability values which are all above the recommended limit. The validity of the discriminant was then evaluated using the Fornell–Larcker

and HTMT criteria. Overall, the test results show that the instrument has convergent

validity, internal reliability, and adequate discriminant validity (Sofyani, 2025).

Table 2. Measurement Model Evaluation Results

Construct	Indicator	Outer Loading	Cronbach's Alpha	rho_A	Composite Reliability	AVE
Continuing Education Management	MPB1	0,742	0,931	—	0,944	0,691
	MPB2	0,781				
	MPB3	0,815				
	MPB4	0,847				
	MPB5	0,865				
	MPB6	0,892				
Perception of Hospital Business Value	NBR1	0,761	0,918	—	0,936	0,713
	NBR2	0,803				
	NBR3	0,856				
	NBR4	0,881				
	NBR5	0,914				

Sumber : Data peneltian, 2026

Tabel 3. Heterotrait-Monotrait Ratio (HTMT)

Construct	Continuing Education Management	Perception of Hospital Business Value
Continuing Education Management	—	0,739
Perception of Hospital Business Value	0,739	—

Source : Research data, 2026

Table 3 shows below the results of the discriminant validity test using the Heterotrait–Monotrait ratio (HTMT) showing a value of 0.739 between the construct of continuing education management and the perception of the value of the hospital's business. The value is below the limit of 0.85, so the two constructs can be empirically distinguished. The bootstrapping results also show that the 95% HTMT confidence interval does not include a value of 1, which further supports the fulfillment of discriminant validity.

Figure 1 below shows the results of the model estimation using the PLS algorithm.

All indicators have an outer loading value that meets the validity criteria so that they are able to represent the construction of continuing education management and the business value of the hospital (Alberti et al., 2022). In addition, the structural relationship between the two variables shows a positive direction, indicating that the better the implementation of continuing education management, the higher the business value generated by the hospital (Mohamed et al., 2025). These results support the feasibility of the model to proceed with hypothesis testing (Sharma et al., 2023).

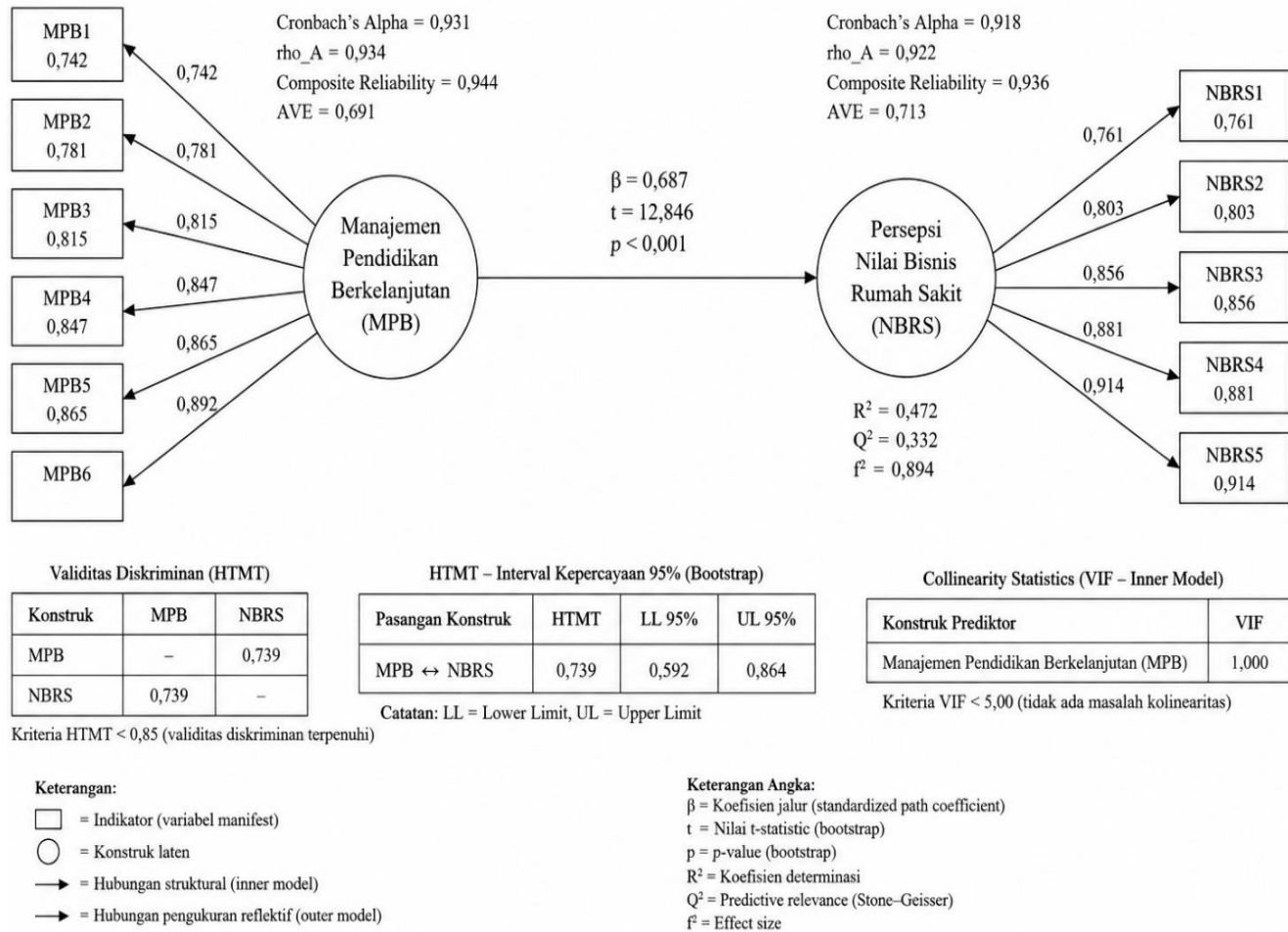


Figure 1. Results of PLS (Outer and Inner Model) Algorithm
(Source: Research data, 2026)

Construct Reliability

Table 4. Reliability Test Results

Construct		Cronbach's Alpha	rho_A	Composite Reliability	Remarks
Continuing Management Education		0,931	0,934	0,944	Reliabel
Perception of Hospital Business Value		0,918	0,922	0,936	Reliabel

Source : Data Analysis, 2026

Cronbach's Alpha, rho_A, and Composite Reliability values in the research construct were all above the threshold value of 0.70, indicating adequate internal consistency and supporting the reliability of the instrument. Reliability evaluation was carried out on the constructs used in the

measurement model, while the multidimensional continuing education management constructs were evaluated according to the high-level construct specifications used in the PLS-SEM model. Thus, the test results show that the indicators used consistently represent the

measured construct.

Validitas Diskriminan

Just like the IFES matrix to know exactly the position of the company, it must first calculate the weight (a) and rating (b) of factor points as well as the total number of multiplication of weights and twigs ($c = axb$) on each O-T factor. The way of giving value is to give a rating for strength and the chance of getting a rank of 3 (strong) or 4 (very strong). As for weaknesses and threats, they get a rank of 1 (Very weak) or 2 (Weak). Give each of these factors a weight that ranges from 0.00 (not important) to 1.0 (all important). The sum of the total weights must be equal to 1.0 (Ahmad, 2020). So that among others as follows:

Tabel 5. Fornell-Larcker Criterion

Construct	MPB	NBRS
Continuing Education Management (MPB)	0,831	0,739
Hospital Business Value Perception (NBRS)	0,739	0,844

Source : Data Analysis, 2026

The results of the discriminant validity test showed that the square root value of AVE in each construct was higher than the correlation between constructs, so that the Fornell–Larcker criteria were met. In addition, testing using the Heterotrait–Monotrait ratio (HTMT) yielded a value of 0.739, which is below the conservative limit of 0.85. The bootstrapping results showed that the 95% confidence interval of HTMT was in the range of 0.592–0.864 and did not include a value of 1, thus further supporting the fulfillment of the discriminatory validity between continuing education management and the perception of hospital business value. Thus, the two constructs can be empirically distinguished even though the data are obtained from the same respondents.

Table 5. Discriminating Validity Test

Variable endogenous	R ²	Category
Hospital Business Value	0,472	Medium

Source : Data Analysis, 2026

HTMT MPB-NBRS = 0.739

95% CI = 0.592–0.864

Description: The diagonal value is the square root of the AVE; the value outside the diagonal is the HTMT ratio.

An R² value of 0.472 showed that continuing education management statistically explained 47.2% variation in the perception of hospital business value in the study sample, while the other 52.8% variation was related to other factors not covered in the model. The R² value is the proportion of variance described by the model and cannot be interpreted as evidence of a cause-and-effect relationship because the study used a cross-sectional design. With only one predictor construct, the value of R² is also mathematically closely related to the square of the path coefficient ($0.687^2 \approx 0.472$). Therefore, the R² value and the path coefficient do not show two separate contributions, but rather describe the same statistical relationship from different perspectives.

Figure 2 illustrates the average scores on each dimension of continuing education management and the business value of hospitals based on respondents' perceptions. In general, all dimensions obtained a good assessment, indicating that the implementation of continuing education has been running adequately in the hospital where the research is located (Atalla et al., 2024). These findings indicate a positive perception of the implementation of educational programs as one of the factors that support the improvement of organizational performance and the creation of business value for hospitals (Chansanguan et al., 2025b).

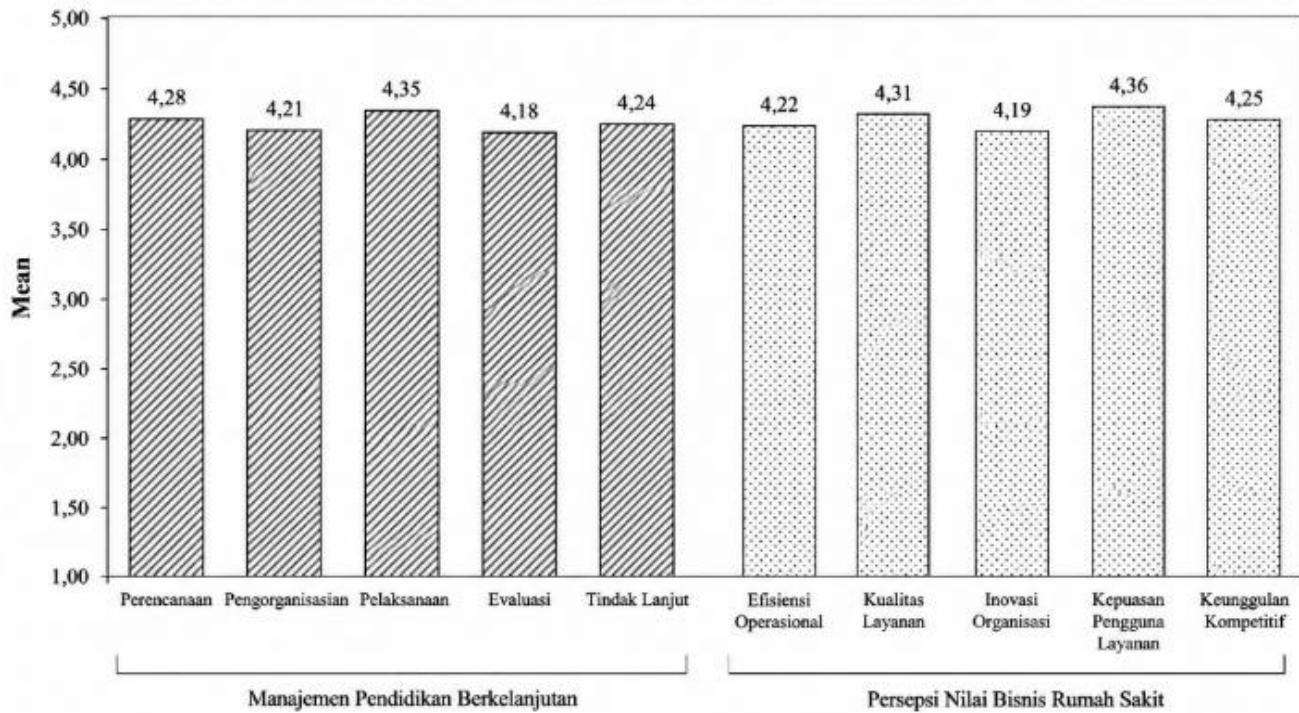


Figure 2. Mean Value Chart for Each Dimension

Predictive Relevance (Q^2)

The Stone–Geisser Q^2 value of 0.332 (>0) indicates that the model has predictive relevance to endogenous constructs in the study sample. The Q^2 value is obtained through a blindfolding procedure in an endogenous construct by removing part of the observation value based on omission distance, then reestimating the eliminated value and comparing it with the actual observation value. A Q^2 value greater than 0 indicates that the model has predictive relevance, while the magnitude of the Q^2 value is used to describe the model's predictive relevance level according to the methodological criteria used. These results show the predictive ability of the model on the perception of hospital business value, but cannot be equated with the predictive ability of out-of-sample because Q^2 is obtained from a data-based procedure of the research sample (Saihi et al., 2024).

Effect Size (f^2)

Table 6. Effect Size Value

Hubungan	f^2	Interpretasi
MPB → Hospital Business Value	0,894	Large

Source : Data Analysis, 2026

An effect size value (f^2) of 0.894 indicates a large effect size in the study model. However, since the structural model has only one predictor construct, it is mathematically a direct derivative of the R^2 value of 0.472, i.e. $f^2 = R^2/(1 - R^2) = 0.472/(1 - 0.472) \approx 0.894$. Therefore, the f^2 value is not interpreted as additional independent evidence, but rather as a representation of the statistical effect measure of the relationship of continuing education management to the perception of hospital business value in the model used. These results still need to be interpreted as statistical relationships and not as evidence of cause-and-effect relationships because the study used a cross-sectional design.

Hypothesis Testing

The bootstrapping results show that continuing education management has a

positive and significant effect on the business value of hospitals.

Table 7. Hypothesis Testing Results

Intervariable Relationships	Original Sample (β)	Standard Error	t-statistic	p-value	95% CI	Verdict
Continuing Education Management → Perception of Hospital Business Value	0,687	0,0535	12,846	<0.001	0,582–0,792	Accepted

Source : Data Analysis, 2026

The path coefficient value of 0.687 indicates a positive relationship between continuing education management and the perception of hospital business value.

Since the coefficient is a standardized coefficient, an increase of one standard deviation in continuing education management is associated with an increase of about 0.687 standard deviation in the

perception of hospital business value. A t-statistic value of 12.846 with a p-value of <0.001 indicates that the relationship is statistically significant. However, the coefficient is not a percentage increase in business value and cannot be interpreted as evidence of a cause-and-effect relationship because the study used a *cross-sectional* design.

Table 8. Summary of SEM-PLS Analysis Results

Parameter	Value	Criteria/Interpretation
AVE	0,691–0,713	Meet (>0.50)
Composite Reliability	0,936–0,944	Reliabel (>0,70)
Cronbach's Alpha	0,918–0,931	Reliabel (>0,70)
R ²	0,472	Explained variance 47.2%
Q ²	0,332	Predictive relevance (>0)
Path Coefficient (b)	0,687	Positive relationships
t-statistic	12,846	Significant (>1.96)
p-value	<0.001	Significant (<0.05)
f ²	0,894	Effect size besar

Source : Data Analysis, 2026

Table 8 above shows a positive and significant relationship between continuing education management and the perception of hospital business value in Southeast Sulawesi. Education management which includes planning, organizing, implementing, evaluating, and systematically following up is related to respondents' perception of the business value of hospitals. Business value in this

study is measured based on perceptions of operational efficiency, service quality, organizational innovation, service user satisfaction, and competitive advantage. However, the results of the study did not examine the five aspects as separate paths of relationship. Therefore, these findings show a relationship between the overall construct of continuing education management and the perception of hospital business value,

rather than proving that continuing education directly improves each of these aspects (Kumar et al., 2025).

The results of the study show that continuing education management has a positive and significant effect on the business value of hospitals in Southeast Sulawesi Province. This influence is shown by the path coefficient of 0.687 with a *t-statistic* value of 12.846 and a *p-value* of < 0.001 , which indicates that the better the management of continuing education, the higher the ability of hospitals to create business value. In addition, a determination coefficient (R^2) value of 0.472 suggests that almost half of the variation in hospital business value can be explained by continuing education management, while the rest is influenced by other factors outside the research model. These findings show that education is not just a competency development activity, but has become a strategic asset that influences the overall success of the organization (Schiuma et al., 2024).

The results of this study show that there is a positive and significant relationship between continuing education management and the perception of hospital business value. These findings are in line with (Ahmed et al., 2025). ANG emphasized the importance of systematic management of education and competency development in supporting organizational needs. These results are also consistent with (Qiao et al., 2024) which shows that the learning process accompanied by implementation and follow-up can support the transfer of knowledge to the work environment. This alignment shows that continuing education is not only related to training activities, but also to how the learning process is managed and integrated into the needs of the organization. In the perspective of Human Capital Theory, education and competency development are seen as investments that increase the capacity of individual knowledge and skills, which can further provide value to the

organization. However, this study did not separately examine the mechanism of knowledge transfer or the influence of each stage of education on efficiency, service quality, innovation, user satisfaction, and competitive advantage. Therefore, the findings of the study are more appropriately understood as evidence of a relationship between the management of continuing education as a whole and the perception of hospital business value, rather than as evidence of a causal relationship in each of these mechanisms.

The findings of this study can be theoretically understood that sustainable management of learning and competency development is one of the relevant aspects in the creation of organizational value (Visconti & Morea, 2020). The positive relationship found shows that the management of continuing education is related to the perception of hospital business value, which in this study includes operational efficiency, service quality, organizational innovation, service user satisfaction, and competitive advantage. This perspective is in line with the view that the development of human resource competencies can be part of an organizational value creation strategy (Wiyono et al., 2025). However, the aspects of investment in facilities, technology, and financial performance were not measured in this study so they could not be compared empirically with the management of continuing education. Therefore, the statement regarding the role of continuing education as a value creation mechanism is positioned as a theoretical interpretation and research implication, rather than as a direct finding regarding the factors that determine the business value of hospitals.

The magnitude of the effect size value ($f^2 = 0.894$) indicates the measure of the contribution of continuing education management to the variation in the value of the hospital business in the model. However, in a model with one predictor, the value of f^2 is so closely related to the value of R^2 that it

does not need to be interpreted as causal proof. Substantively, these results show that continuing education management has strong relevance in explaining the perception of hospital business value. These findings need to be understood in the context of perception-based measurement, so that they cannot be equated with a direct impact on organizational performance or productivity (Rakkhitawangso, 2025).

The Q^2 value of 0.332 indicates that the model has predictive relevance to the perception of hospital business value in the study sample. However, because these values are obtained through the blindfolding procedure, the results do not directly demonstrate the predictability of the out-of-sample. An R^2 value of 0.472 indicates that continuing education management explains 47.2% of the variation in the perception of hospital business value, while the remaining 52.8% comes from other factors not tested in this study. Thus, the results show the predictive relevance of the model and the empirical relationship between variables, but it cannot be used to conclude the ability of external predictions or cause-effect relationships. Out-of-sample prediction testing requires additional analysis such as PLSpredict (Srinivasa Rao et al., 2015).

In the context of hospitals in Southeast Sulawesi, the findings of the study show the need to strengthen the management of continuing education, especially in the aspect of follow-up and program organization that obtained relatively lower scores. Therefore, hospitals need to strengthen post-training evaluations, transfer of learning outcomes to the workplace, and organize educational programs to be more targeted. Such efforts can help ensure that continuing education not only enhances individual competencies, but also supports the achievement of organizational goals and the business value of hospitals (Blidaru et al., 2026).

CONCLUSIONS AND SUGGESTIONS

Conclusion

Results The results of the study show a positive and significant relationship between continuing education management and the perception of hospital business value in Southeast Sulawesi Province, with a path coefficient of 0.687, t-statistic of 12.846, and p -value < 0.001 . An R^2 value of 0.472 indicates that continuing education management explains the 47.2% variation in the perception of hospital business value in the model. These findings show the relevance of continuing education as part of hospital organizational management, but cannot be interpreted as a causal relationship. The results of the study were limited to the perception of the selected respondents, cross-sectional design, purposive sampling, and self-report data, with unit analysis on individuals in the context of hospitals in Southeast Sulawesi. Further research can use longitudinal designs, broader samples, and include other organizational variables to gain a more comprehensive understanding.

Suggestions

Hospital management is advised to strengthen the organization and follow-up of continuing education and link it to measurable performance indicators. Further research can use longitudinal or quasi-experimental design, probability sampling, objective business indicators, and multilevel analysis by controlling for hospital characteristics, such as type, ownership, and size, as well as adding leadership variables, organizational culture, and digital transformation to obtain more comprehensive results.

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