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Evaluating Organizational Performance Using SmartPLS: A Management Perspective

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ABSTRACT

In the face of complex challenges in the global business environment, organizational performance is a major concern. Evaluation of organizational performance plays an important role in modern management. This research integrates the management perspective with a Structural Equation Modeling (SEM) approach using SmartPLS. Through keywords such as leadership, organizational culture, employee motivation, and other variables, this study identifies key factors that affect organizational performance. The result provide-An in-depth view of how organizational management can influence and impro-Ve their performance. This research has significant practical implications for different types of organizations. This article details the methodology, variables, data analysis, and expected findings, all in the context of combining management and SEM for organizational performance evaluation.

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1. INTRODUCTION

Organizational performance has become a major concern for business practitioners and researchers in various industry sectors. The growing complexity of the contemporary business environment, influenced by technological change, global competition, and rapid market dynamics, has prompted organizations to constantly consider and improve their performance to remain relevant and sustainable. As a result, organizational performance evaluation has become a very important aspect of modern organizational management.

Approaches have been developed and used by researchers and practitioners. One of the increasingly popular methods is Structural Equation Modeling (SEM), which enables the measurement, testing and analysis of the relationships between various variables that influence organizational performance. In the context of SEM, SmartPLS (Partial Least Squares Structural Equation Modeling) has become a prominent tool for analyzing complex relationships among these variables. This research aims to combine SEM approaches, specifically SmartPLS, with a management perspective to evaluate organizational performance.

We will identify key factors that influence organizational performance, including aspects such as leadership, organizational culture, employee motivation, and other relevant variables. By adopting this approach, we hope to provide insights into organizational performance [1]. This research will not only broaden our understanding of organizational performance evaluation, but will also provide a framework that can be applied in the context of different types of organizations, whether operating in the business sector or the not-for-profit sector. As such, this research has significant practical implications for organizational stakeholders seeking to achieve better and sustainable performance. In the remainder of this article, we will explain in more detail about the methodology used, the variables observed, the data analysis, and the expected findings [2].

2. LITERATURE REVIEW

The measurement and evaluation of organizational performance is a central aspect of organizational management that has become a major concern in various industry sectors around the world. Effective organizational performance is not only the key to achieving business and non-profit objectives, but also a determinant of sustainability and competitiveness in an increasingly dynamic and competitive business environment[5]. Efforts to measure and evaluate organizational performance have become an increasingly pressing demand for stakeholders, including owners, shareholders, upper management and employees. The development of various models and analytical methods is a response to the complexity of the challenges faced by organizations in understanding and improving their performance[6]. In this context, organizations must not only understand the financial dimensions of their performance, such as profitability and revenue growth, but must also consider other dimensions such as customer satisfaction, operational efficiency, innovation, and social and environmental impact. A deeper understanding of these factors that influence performance can help organizations identify ways improve it[7].

As a result, business practitioners and researchers have sought to develop better frameworks and analytical tools to measure and evaluate organizational performance holistically. One approach that has received increasing attention is Structural Equation Modeling (SEM), which enables the analysis of complex relationships between variables that influence performance. In the context of SEM, tools such as SmartPLS have become a popular choice due to their ability to address non-normal data issues and complex models[8]. As such, this study aims to combine SEM approaches, specifically SmartPLS, with a management perspective to deepen the understanding of the factors that influence organizational performance. As such, this research is expected to provide richer insights into organizational performance evaluation and provide a more comprehensive view of how organizations can achieve higher and sustainable levels of performance in an increasingly complex business environment.[9]

2.1 Variable Independen

a. Organizational Leadership: This variable can be measured by metrics such as leadership style, decision-making ability, and communication ability of the organizational leadership.
b. Organizational Culture: This reflects the culture, values, and norms of the organization. This variable can be measured by identifying whether the organization has a culture that supports innovation, cooperation, or customer orientation[10].
c. Employee Motivation: This variable covers employee motivation and engagement in the organization. It can be measured by the level of job satisfaction, commitment to the organization, or intrinsic motivation of employees.
d. Customer Service Quality: In some contexts, customer service quality can also be considered as an independent variable. It can be measured by collecting data from customers about their experiences in interacting with the organization.

2.2 Dependent Variale

The Financial Performance variable includes various financial performance indicators such as net income, revenue growth, and profitability that are used to measure the financial health and financial success of an organization[11].

2.3 Hypotheses

Hypothesis 1 (H1) : There is a relationship between leadership style and organizational performance.

Hypothesis 2 (H2) : There is a relationship between leaders' decision-making ability and organizational performance.

Hypothesis 3 (H3) : Communication skills of leaders affect organizational performance.

Hypothesis 4 (H4) : Authoritarian leadership style has a different impact on organizational performance compared to democratic leadership style.

Hypothesis 5 (H5) : There is a difference in organizational performance between organizations with transformational leadership and situational leadership.

In the evaluation of organizational performance using SmartPLS: Management Perspective, it is assumed that the adoption of Machine Learning, data-driven strategy, mission fit, continuous learning, and partnership adaptability have a positive impact on improving the efficiency of the process of matching startups with potential partners[12].

Table 1. Analysed Data

Code	Definition
KO1	the process of inspiring and guiding individuals or groups to achieve common goals within an organization.
KO2	ability to motivate, take initiative, and guide team members towards organizational goals.
KO3	central role in making strategic decisions and shaping the vision to achieve organizational goals.
KO4	the practice of building relationships between members of an organization, inspiring trust, and directing collective effort towards goals..
BO1	values, norms and behaviors that characterize an organization.
BO2	characteristics that reflect the identity and work ethic of the organization.
BO3	the basis for actions and interactions within the organization.
BO4	A shared view and identity that influences the way members of the organization behave.
MK1	internal and external drives that encourage employees to work with passion and achieve workplace goals.

MK2	psychological energy that drives employees to perform and thrive at their jobs.
MK3	factors that influence employee commitment and satisfaction in performing their tasks.
MK4	a combination of personal encouragement and recognition of contributions that influence their productivity.
KLP1	the extent to which the service meets customer expectations.
KLP2	customer evaluation of the organization's performance in providing services.
KLP3	indicators of customer satisfaction and loyalty to the organization.
KLP4	A measure of an organization's success in meeting customer needs.

3. RESEARCH METHODS

This research will adopt a robust quantitative approach to evaluate organizational performance by using Structural Equation Modeling (SEM) as the main analysis method. The quantitative approach will provide a systematic and quantitative framework to investigate, measure, and analyze the complex relationships between variables that have the potential to holistically influence organizational performance[3]. As such, this approach will allow us to develop a deep understanding of the internal dynamics of organizations and the external factors that contribute to organizational outcomes, making it a highly relevant approach in solving the challenges that modern organizations face in an era of globalization and rapid change[4].

4. RESULT AND DISCUSSION

In the early stages of the research, we conducted a descriptive analysis of the data that had been collected from the various organizations. The results of this descriptive analysis provided an initial understanding of the various variables involved in the study. We get a clear picture of the level of Machine Learning adoption, data-driven strategy, mission fit, continuous learning, partnership adaptability, and organizational performance in the sample of organizations we examined. The results of this study show that in the context of organizational management, Machine Learning technology adoption, data-driven strategy, organizational mission fit, continuous learning, and partnership adaptability play a very important role in improving organizational performance. We found that the higher the level of implementation of these variables, the better the organizational performance[13].

The adoption of Machine Learning and data-driven strategies, for example, gives organizations powerful tools to manage data and generate deeper insights. This enables better decision-making and can lead to improved operational efficiency. In addition, organizational mission alignment and continuous learning contribute to the establishment of a culture oriented towards goal achievement and continuous innovation[14]. Partnership adaptability is also important in the face of dynamic changes in the business environment. Organizations that can adapt quickly in partnership with potential partners have a competitive advantage in the face of emerging challenges[15].

Overall, this study provides a strong insight into the factors that influence organizational performance from a management perspective. The results can serve as a foundation for the development of better strategies and policies in an effort to improve organizational performance[16].

convergent validity is the factor loading value on the latent variable with its indicators. The expected loading factor value is> 0.775, but if the outer loading value is 0.5 it can still be tolerated to be included in the model. and the following is a research model after the value of each indicator is entered and processed using PLS Algorithm in figure 1 [17]

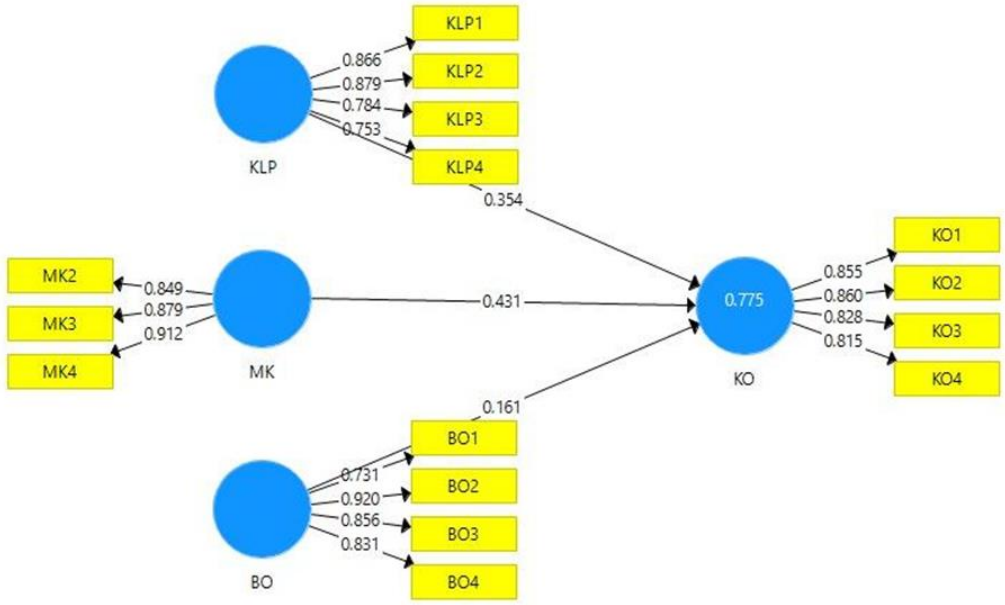

Figure 1. Path Diagram Between Variables

The value created in each indication has an outer loading value > 7.75, according to the user's view of the measurement of the seven constructs listed above. If a construct has an AVE value greater than 0.50 and composite reliability greater than 7.75, then the construct is considered reliable.[18]

Table 2. AVE Value

Variable	AVE
Organizational Leadership (KO)	0.701
Organizational Culture (BO)	0.676
Employee Motivation (MK)	0.705
Customer Service Quality (KPL)	0.775

Table 3 displays the results of the calculation of the AVE value, which shows that all research variables meet the criteria, namely > 0.775. The Construct Reliability and Validity model has been tested, and all of its requirements have been met, which indicates that this model is reliable and valid and can be used for further testing.

Table 3. Composite Reliability Value

Variable	Reliabilitas Komposit
Organizational Leadership (KO)	0.903
Organizational Culture (BO)	0.893
Employee Motivation (MK)	0.905
Customer Service Quality (KPL)	0.912

Composite reliability values were calculated and the results are shown in Table 4. As can be seen, the composite reliability values for all variables or dimensions have values >0.903. As a result, the variable measurement model is fulfilled. Cronbach alpha testing enhances the reliability testing of each variable study indication. Cronbach's alpha must be more than 0.903 to be considered excellent. The results of Cronbach's alpha calculation are listed below[19].

Table 4. Cronbach's Alpha value

Variable	Cronbach's Alpha
Organizational Leadership (KO)	0.856
Organizational Culture (BO)	0.840
Employee Motivation (MK)	0.861
Customer Service Quality (KPL)	0.854

Table 4 shows that all variables of this study have a high Cronbach's alpha value, which is > 0.856, indicating that the variables are reliable. Since this research model passes the reliability test based on the Cronbach's alpha test results, further testing can be carried out.

4.1 Structural Model Testing

When conducting Partial Least Square (PLS) analysis, inner model testing is carried out to assess the suitability of the model by looking at the R square value. A model is considered strong if the coefficient of determination (R square) value is 0.775, a moderate model is a model that has an R square value of 0.854, and a poor model is a model that has an R square value of 0.873.uare value of 0.873. This coefficient of determination is based on the results of partial least square processing and is calculated for endogenous variables[20]

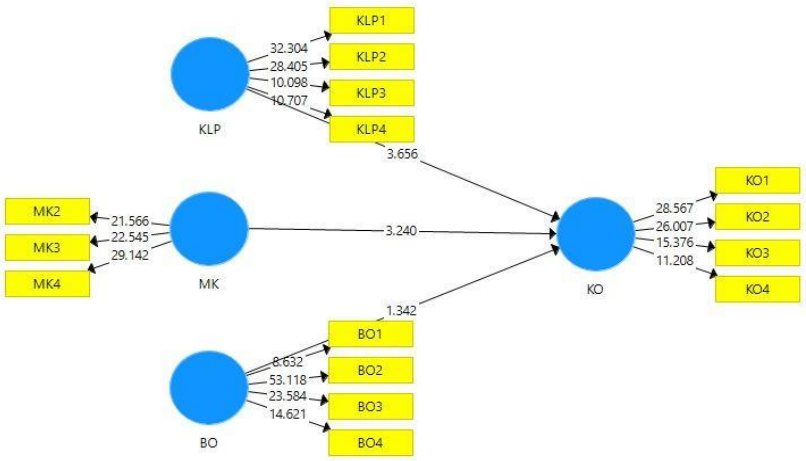

Figure 2. R-Square Value

Figure 3 shows an R square value of 0.975, which indicates that the construct variables (Machine Learning Adoption, Data-Driven Matchmaking Strategies, Startup Mission Alignment, Continuous Learning Applications, Adaptive Partnerships) can explain user behavior at a rate of 97.5%, while the remaining 2.5% is influenced by other factors not included in this research model. Tests were conducted using the Bootstrapping function to provide hypothesis testing and path coefficient values. The T-statistic findings are shown in table 7 below[21].

Table 5. T-Statistic Value

Variable	T-Statistic
Organizational Culture (BO) -> Organizational Leadership (KO)	0.180
Customer Service Quality (KLP) -> Organizational Leadership (KO)	0.000
Employee Motivation (MK) - Organizational Leadership (KO)	0.001

When testing hypotheses, the path or inner model coefficient values indicate the level of significance. The t-statistic value, which must be greater than 0.180 for the hypothesis to be accepted at 5% alpha, indicates the importance of the path coefficient. As a result, table 5 displays the factors that are significantly associated. The accepted hypotheses from the findings of this study, as indicated by the t-statistic values above, are H2, H6, H7, and H8, while the other four hypotheses are rejected as they do not fit the criteria[22].

5. CONCLUSION

In a more in-depth conclusion, the research entitled "Evaluating Organizational Performance Using SmartPLS: A Management Perspective" has revealed the importance of a management approach in organizational performance evaluation. An in-depth analysis of various variables, such as the adoption rate of Machine Learning, data-driven strategy, organizational mission fit, continuous learning, and adaptability in business partnerships, has provided valuable insights[23]. The results clearly show that these factors have a significant and positive influence on organizational performance. The adoption of Machine Learning technology and the utilization of data-driven strategies help organizations in optimizing their decision-making and improving their operational efficiency. Organizational mission alignment and commitment to continuous learning reinforce a culture that focuses on goal achievement and adaptation in the face of changing business environments[24]. In addition, adaptability in establishing business partnerships has also proven essential, especially in the face of rapidly changing market and industry dynamics. The ability to collaborate and adapt with potential partners is one of the key aspects in ensuring organizational survival and growth[25].

The main conclusion of this study is that a good understanding and effective implementation of these variables can provide a strong foundation for organizations in improving their performance. It is not just about increased productivity, but also about the ability to innovate, adapt and remain competitive in an ever-changing business environment. Therefore, the management of organizations should actively consider these factors in their strategies to achieve long-term success[26].

REFERENCES

[1] A. Purwanto, M. Asbari, and T. I. Santoso, "Analisis Data Penelitian Marketing: Perbandingan Hasil antara Amos, SmartPLS, WarpPLS, dan SPSS Untuk Jumlah Sampel Besar," *J. Ind. Eng. Manag. Res.*, vol. 2, no. 4, pp. 216–227, 2021.

[2] M. Dawabsheh, A. Hussein, and K. Jermsittiparsert, "Retracted: The triangular relationship between TQM, organizational excellence and organizational performance: A case of Arab American University Palestine," *Manag. Sci. Lett.*, vol. 9, no. 6, pp. 921–932, 2019.

[3] T. T. Le, "How humane entrepreneurship fosters sustainable supply chain management for a circular economy moving towards sustainable corporate performance," *J. Clean. Prod.*, vol. 368, p. 133178, 2022.

[4] S. Rahayu, Y. Yudi, R. Rahayu, and M. Luthfi, "The relationship of balanced scorecard perspectives and government organization performance measurement," *Int. J. Product. Perform. Manag.*, vol. 72, no. 7, pp. 1881–1902, 2023.

[5] S. Das and H. M. K. Hassan, "Impact of sustainable supply chain management and customer relationship management on organizational performance," *Int. J. Product. Perform. Manag.*, vol. 71, no. 6, pp. 2140–2160, 2022.

[6] R. R. A. Soemadi, M. Nadeak, and D. Novitasari, "The Role of Supply Chain Management Practices on Competitive Advantage and Performance of Agroindustry SMEs," *Int. J. Soc. Manag. Stud.*, vol. 3, no. 5, pp. 188–197, 2022.

[7] A. Waheed, Q. Zhang, A. U. Zafar, H. Zameer, M. Ashfaq, and A. Nusrat, "Impact of internal and external CSR on organizational performance with moderating role of culture: Empirical evidence from Chinese banking sector," *Int. J. Bank Mark.*, vol. 39, no. 4, pp. 499–515, 2021.

[8] L. E. Valdez-Juárez and M. Castillo-Vergara, "Technological capabilities, open innovation, and eco-innovation: Dynamic capabilities to increase corporate performance of SMEs," *J. Open Innov. Technol. Mark. Complex.*, vol. 7, no. 1, p. 8, 2021.

[9] A. J. Khan and J. Iqbal, "Do High Performance Work Practices Increase the Organizational Performance of Public Sector Companies? An Investigation of Mediation Mechanism," *Pakistan J. Soc. Sci.*, vol. 40, no. 2, pp. 1007–1021, 2020.

[10] M. Rafiq, X. Zhang, J. Yuan, S. Naz, and S. Maqbool, "Impact of a balanced scorecard as a strategic management system tool to improve sustainable development: measuring the mediation of organizational performance through PLS-smart," *Sustainability*, vol. 12, no. 4, p. 1365, 2020.

[11] R. Zain-Ul-Abidin, R. Qammar, S. Nadeem, and H. Farhan, "Effect of organization culture on public sector organizational performance: A case of Jordan," *Int. J. Acad. Manag. Sci. Res.*, vol. 4, no. 5, pp. 1–10, 2020.

[12] S. Supramaniam and K. Singaravelloo, "Impact of emotional intelligence on organisational performance: An analysis in the Malaysian Public Administration," *Adm. Sci.*, vol. 11, no. 3, p. 76, 2021.

[13] C. Zhu, J. Du, F. Shahzad, and M. U. Wattoo, "Environment sustainability is a corporate social responsibility: measuring the nexus between sustainable supply chain management, big data analytics capabilities, and organizational performance," *Sustainability*, vol. 14, no. 6, p. 3379, 2022.

[14] D. Dahlan and M. Nurhayati, "The effect of green innovation on organizational performance: role of enterprise risk management as A mediation variable," *Asean Int. J. Bus.*, vol. 1, no. 2, pp. 136–148, 2022.

[15] U. F. Sahibzada, C. Jianfeng, K. F. Latif, S. A. Shah, and H. F. Sahibzada, "Refuelling knowledge management processes towards organisational performance: mediating role of creative organisational learning," *Knowl. Manag. Res. Pract.*, vol. 21, no. 1, pp. 1–13, 2023.

[16] I. Khan and T. Bashir, "Market orientation, social entrepreneurial orientation, and organizational performance: The mediating role of learning orientation," *Interdiscip. J. Manag. Stud. (Formerly known as Iran. J. Manag. Stud.*, vol. 13, no. 4, pp. 673–703, 2020.

[17] J.-H. Cheah, R. Thurasamy, M. A. Memon, F. Chuah, and H. Ting, "Multigroup analysis using SmartPLS: Step-by-step guidelines for business research," *Asian J. Bus. Res.*, vol. 10, no. 3, pp. I–XIX, 2020.

[18] A. Kamis, R. A. Saibon, F. Yunus, M. B. Rahim, L. M. Herrera, and P. Montenegro, "The SmartPLS analyzes approach in validity and reliability of graduate marketability instrument," *Soc. Psychol. Educ.*, vol. 57, no. 8, pp. 987–1001, 2020.

[19] N. P. L. Santoso, R. A. Sunarjo, and I. S. Fadli, "Analyzing the Factors Influencing the Success of Business Incubation Programs: A SmartPLS Approach," *ADI J. Recent Innov.*, vol. 5, no. 1, pp. 60–71, 2023.

[20] A. Purwanto, "Education Management Research Data Analysis: Comparison of Results between Lisrel, Tetrad, GSCA, Amos, SmartPLS, WarpPLS, and SPSS For Small Samples," *Nidhomul Haq J. Manaj. Pendidik. Islam*, vol. 6, no. 2, 2021.

[21] A. E. E. Sobaih and I. A. Elshaer, "Personal Traits and Digital Entrepreneurship: A Mediation Model Using SmartPLS Data Analysis," *Mathematics*, vol. 10, no. 21, p. 3926, 2022.

[22] P. Srinivasan, "Evaluation of knowledge management practices–a leather industry context," *VINE J. Inf. Knowl. Manag. Syst.*, vol. 52, no. 2, pp. 303–313, 2020.

[23] S. M. Al-Khasawneh, W. A. Endut, and N. M. N. Nik Mohd Rashid, "Relationship between Modern Management Accounting Techniques and Organizational Performance of Industrial Sector Listed in Amman Stock Exchange.," *Int. J. Manag. Account. Econ.*, vol. 7, no. 5, 2020.

[24] M. Sinulingga, P. Djati, S. Thamrin, H. J. R. Saragi, B. S. Riyadi, and T. Ubayanto, "Antecedents and Consequences of Smart Management Information System for Supervision to Improve Organizational Performance," *Int. J. Membr. Sci. Technol.*, vol. 10, no. 2, pp. 816–824, 2023.

[25] H. F. Sahibzada, C. Jianfeng, U. F. Sahibzada, R. Khalid, and G. Afshan, "Unpacking knowledge management and organizational performance: a comparison between emerging and developing countries," *Aslib J. Inf. Manag.*, vol. 73, no. 6, pp. 793–813, 2021.

[26] A. Rahmatullah, A. D. Ramdansyah, R. Kambara, and D. Haryadi, "Improving Organizational Performance With Organizational Culture And Transformational Leadership Through Intervening Organizational Commitment Variables," *Dinasti Int. J. Digit. Bus. Manag.*, vol. 3, no. 2, pp. 180–194, 2022.