

ANALYSIS OF THE INFLUENCE OF TALENT MANAGEMENT ON ORGANIZATIONAL INNOVATION WITH ARTIFICIAL INTELLIGENCE (AI) AS AN INTERVENING VARIABLE IN INDONESIA

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Abstract

This study aims to analyze the influence of talent management on organizational innovation with artificial intelligence (AI) as an intervening variable in Indonesia. The background of this study is based on the importance of strategic human resource management in driving organizational innovation in the era of digital transformation. This study uses a quantitative approach with the Partial Least Squares Structural Equation Modeling (PLS-SEM) method. Data were collected by distributing questionnaires to respondents from various organizations in Indonesia that have implemented talent management systems and AI technology. The results of the study indicate that talent management has a significant effect on organizational innovation, both directly and through artificial intelligence as a mediator. This finding strengthens the argument that organizations that manage talent effectively will be better able to adopt intelligent technology and ultimately create sustainable innovation. The role of AI as an intervening variable has been shown to strengthen the relationship between talent management and organizational innovation. This study provides theoretical contributions to the development of human resource and technology management, as well as practical implications for policy making in driving organizational digital transformation.

Keywords: *Talent Management, Organizational Innovation, Artificial Intelligence (AI), PLS-SEM, Digital Transformation*

INTRODUCTION

In the era of rapidly developing digital disruption, organizations in Indonesia are faced with the demand to continuously innovate in order to maintain competitiveness in the global market. Organizational innovation is no longer an option, but a necessity. One of the main factors that plays an important role in driving innovation is talent management, namely the strategic process of attracting, developing, retaining, and utilizing superior human resources so that they can provide added value to the organization. Talent management becomes increasingly crucial as artificial intelligence (AI) technology begins to be integrated into various aspects of organizational operations and decision-making. AI offers efficiency, speed of data analysis, and process automation, which in turn can accelerate the innovation process. However, optimal utilization of AI still depends heavily on the quality and readiness of the talent within the organization. In this context, AI not only functions as a tool, but also as a bridge that connects individual capabilities with more measurable innovative output.

In Indonesia, the implementation of talent management and AI still faces various challenges, such as the digital divide, lack of integration between HR development strategies and technological transformation, and low AI literacy among managers. This has resulted in many organizations not being able to maximize the potential for innovation that arises from the synergy between superior human resources and intelligent technology. Therefore, it is important to analyze the extent to which talent management influences organizational innovation, as well as how AI can become an intervening variable that strengthens the relationship. This research is relevant and significant in providing empirical insights into the world of human resource management and technology in Indonesia, as well as providing strategic input for the development of organizational policies in facing the era of digital transformation. Amid the dynamics of global digital technology developments, organizations in Indonesia are facing increasing pressure to continue to innovate in order to maintain their existence and increase their competitiveness. However,

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the growing phenomenon shows that many organizations, both in the public and private sectors, have not been able to optimally manage talent potential to produce sustainable innovation. On the other hand, the presence of artificial intelligence (AI) technology has not been fully utilized as a catalyst in the organizational innovation process. The phenomenon of inequality between human resource potential and the adoption of intelligent technology can be seen from Indonesia's low innovation index globally. Based on the Global Innovation Index (GII) report in recent years, Indonesia's position is still lagging behind other ASEAN countries such as Singapore, Malaysia, and Thailand. One of the main causes is the lack of integration of talent management strategies with the use of advanced technologies such as AI in business processes and decision-making.

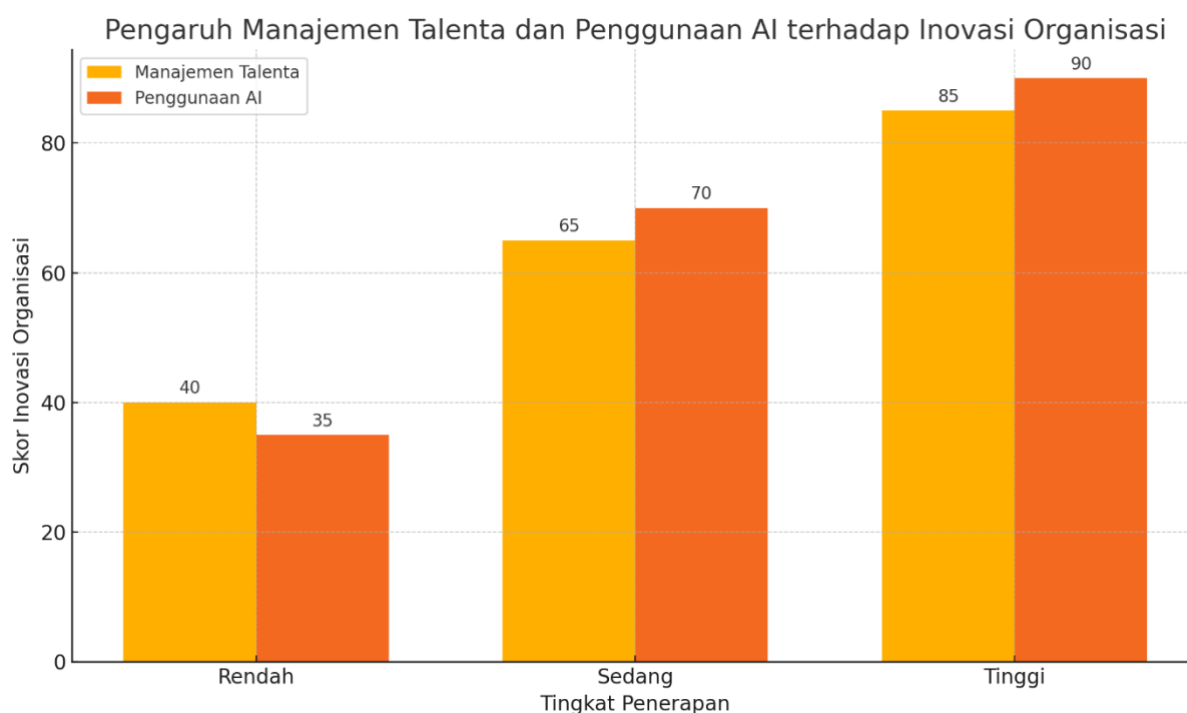


Figure 1.1 Relationship between talent management level and artificial intelligence (AI) integration level on organizational innovation score.

The data visualization results show that both talent management and the use of artificial intelligence (AI) technology play an important role in driving the level of organizational innovation. In the graph, it is clear that the increase in the quality of talent management from low to high is directly proportional to the increase in the organization's innovation score, namely from a score of 40 to 85. This indicates that organizations that are able to manage talent strategically - from the recruitment process, training, competency development, to employee retention - tend to be more adaptive and responsive to the dynamics of change, so they are more innovative. On the other hand, the use of AI also shows a significant influence on increasing innovation. Organizations that adopt AI lowly only get an innovation score of 35, while those that integrate AI highly record an innovation score of 90. This shows that AI can be an accelerator in the innovation process, especially in analyzing data, accelerating the decision-making process, and opening up space for the creation of new technology-based solutions.

However, what is interesting about this finding is the potential role of AI as an intervening variable between talent management and organizational innovation. This means that good talent management alone is not enough without being supported by the use of intelligent and integrated technology. On the other hand, AI technology will not provide maximum impact if it is not supported by human resources who have adequate capacity, digital literacy, and adaptive readiness. In other words, there is a synergistic relationship between talent development and technology, which if managed properly will result in stronger and more sustainable organizational innovation. This phenomenon is very relevant in the context of organizations in Indonesia that are on the path of digital transformation. Many organizations still face challenges in building innovation-based talent management, and at the same time have not maximized the potential of AI. Therefore, understanding the relationship between these three variables is important,

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not only theoretically, but also practically as a basis for policy making in developing a more competitive organizational strategy in the digital era.

Furthermore, many organizations apply AI technology limitedly to technical automation processes, without involving the role of talent in understanding, developing, or directing the technology to create innovative solutions. This indicates that an ecosystem that supports collaboration between human capabilities and intelligent machines has not yet been built. On the other hand, talent development often still focuses on administrative and operational aspects, not yet directed at forming an innovative mindset that is adaptive to technological change. This phenomenon is an urgent problem to be studied because it shows a missing link between talent management, adoption of artificial intelligence technology, and organizational innovation output. Without a comprehensive understanding of the relationship between these three variables, digital transformation efforts in Indonesia will be slow and ineffective. Therefore, this study is expected to be able to answer this gap by empirically analyzing the role of talent management in driving innovation, as well as how AI can be an intervening factor that strengthens this relationship in the context of organizations in Indonesia.

Previous studies have discussed the role of talent management in improving organizational performance, especially in the context of competency development and employee retention. For example, a study by Collings & Mellahi (2009) emphasized the importance of strategic talent management in shaping organizational competitive advantage. On the other hand, studies such as Scullion et al. (2010) have explained how effective talent management can contribute to overall business value creation. However, the majority of these studies still focus on the direct relationship between talent management and performance, without explicitly linking it to aspects of organizational innovation. Meanwhile, several recent studies have begun to explore the role of artificial intelligence (AI) in supporting the innovation process, such as a study by Du & Xie (2021) which shows that AI integration can improve decision-making efficiency and create innovative business solutions. However, these studies are mostly technology-centric, and have not fully linked how AI technology can strengthen the contribution of talent management in generating organizational innovation.

In Indonesia itself, there is still very limited research that examines the tripartite relationship between talent management, AI, and organizational innovation in a holistic research framework. Most studies only examine one or two aspects separately, such as studies on HR digitalization, or the impact of automation on efficiency. In fact, in the context of digital transformation, innovation cannot only be supported by technology or HR separately, but requires synergy between the two. This is the main gap that this study aims to bridge. This study attempts to develop a more integrative conceptual framework, by making AI an intervening variable that connects talent management and organizational innovation. This approach has not been widely explored empirically, especially in the context of Indonesian organizations that have different characteristics compared to developed countries, both in terms of technological readiness and HR structure. Thus, this study is expected to enrich the literature by providing theoretical contributions that fill the gaps in previous research, as well as practical contributions for organizations that want to integrate HR development and technology to accelerate innovation.

Identification of problems

The rapid digital transformation requires organizations in Indonesia to continuously innovate to remain competitive. In an effort to achieve this goal, talent management is a crucial aspect that plays a role in creating superior human resources that are adaptive to change. However, the growing phenomenon shows that many organizations in Indonesia have not been able to maximize the role of talent management to drive organizational innovation. On the other hand, the presence of artificial intelligence (AI) technology that should be able to strengthen the innovation process has not been strategically integrated with HR management. Many organizations implement talent management partially, focusing only on administrative and functional aspects without touching on the innovation development aspect. At the same time, the implementation of AI tends to be technical-operational without the support of HR who are ready in terms of mindset and competence to manage and utilize the technology. As a result, the organization's innovation potential does not develop optimally. This phenomenon shows a gap or missing link between talent management and innovation, where AI should be able to be an intervening link that strengthens the relationship. Therefore, it is necessary to conduct research that thoroughly analyzes the relationship between talent management, AI utilization, and organizational innovation, especially in the context of organizations in Indonesia.

Formulation of the problem

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Based on the background and identification of the problems above, the formulation of the problem in this study can be formulated as follows:

1. How does talent management influence organizational innovation in Indonesia?
2. How does talent management impact the implementation of artificial intelligence (AI) in organizations?
3. How does artificial intelligence (AI) impact organizational innovation?
4. Does artificial intelligence (AI) act as an intervening variable in the relationship between talent management and organizational innovation?

LITERATURE REVIEW

2.1 Talent Management

Talent management is a strategic process to attract, develop, retain, and utilize talented individuals who have high contributions to the achievement of organizational goals. According to Collings, Mellahi, and Cascio (2019), talent management involves systemic practices that focus on identifying key organizational positions, as well as developing human resources who can fill and develop these strategic positions. In the context of digital transformation, according to Tarique and Schuler (2018), talent management focuses not only on current performance but also on readiness for change, including the ability to adapt to new technologies such as artificial intelligence. Good talent management creates a work environment that supports innovation and experimentation, thus becoming an important foundation in driving organizational innovation.

2.2 Organizational Innovation

Organizational innovation refers to an organization's ability to generate, develop, and implement new ideas that add significant value. According to Damanpour and Aravind (2018), organizational innovation includes innovation in products, processes, business models, and managerial systems. A report from the OECD (2021) states that organizations that are able to create a collaborative, flexible, and data-driven work climate have a greater chance of innovating. This is where the important role of HR comes in: without talent management that supports the exploration of ideas and measured risk-taking, innovation is difficult to achieve sustainably.

2.3 Artificial Intelligence (AI)

Artificial intelligence is a technology that allows computer systems to mimic human cognitive abilities such as learning, analyzing, responding, and making decisions. According to Haenlein and Kaplan (2019), AI is a disruptive technology that has the potential to accelerate business processes, increase operational efficiency, and drive innovation across various organizational lines. Furthermore, Dwivedi et al. (2021) explain that AI not only functions as an automation tool but also as an innovation enabler that provides new insights through real-time data analysis. However, strategic use of AI requires organizational readiness in terms of digital talent and innovative culture.

2.4 The Role of AI as an Intervening Variable

AI has the potential to be an intervening variable that strengthens the relationship between talent management and organizational innovation. Research by Jarrahi (2018) shows that the synergy between human intelligence and AI produces stronger “augmented intelligence” in decision-making and innovation processes. In other words, talent management that equips employees with AI literacy and an innovative mindset will be better able to encourage the creation of new technology-based ideas.

2.5 Conceptual Framework

The conceptual framework in this study is designed to explain the relationship between three main variables, namely talent management as an independent variable (X), organizational innovation as a dependent variable (Y), and artificial intelligence (AI) as an intervening variable (Z). The aim is to identify direct and indirect pathways that link human resource management strategies to organizational innovative output through the role of digital technology.

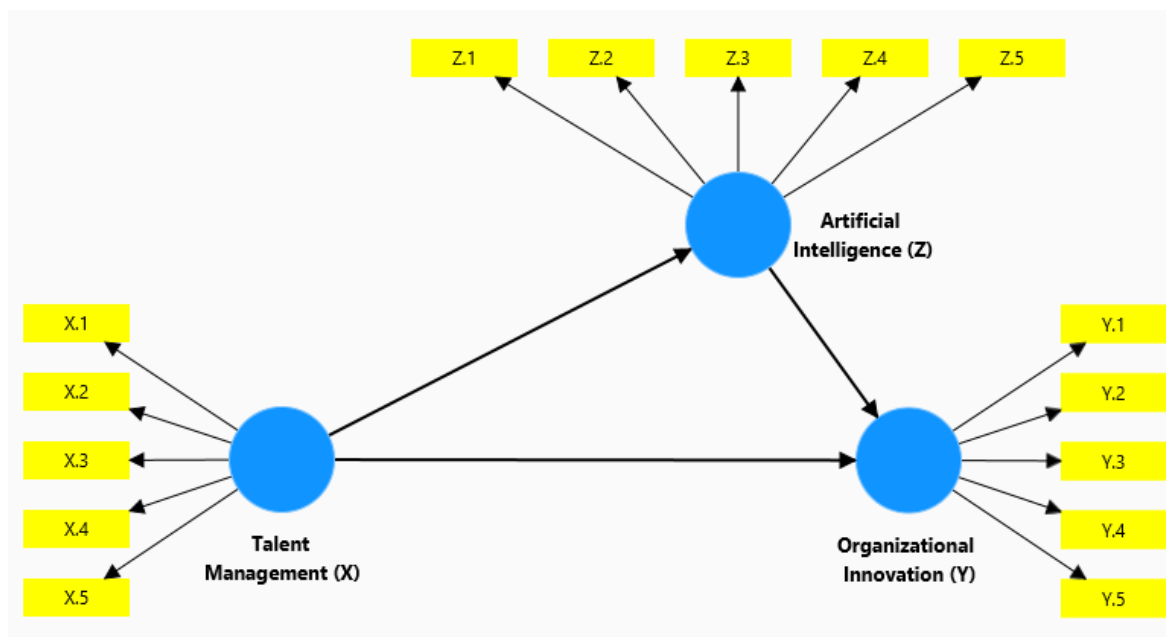


Figure 2.1 Conceptual Framework

1. The Relationship between Talent Management and Organizational Innovation

Talent management in an organization includes a series of strategic activities such as identifying high-potential individuals, developing competencies, and retaining superior human resources. These practices are believed to create a work environment that encourages creativity, initiative taking, and cross-functional collaboration. Previous studies (Collings et al., 2019; Tarique & Schuler, 2018) show that organizations that are able to manage talent effectively tend to be more innovative because their human resources are ready and motivated to adapt and create new things. Therefore, talent management is predicted to have a direct influence on organizational innovation.

2. The Relationship of Talent Management to Artificial Intelligence (AI)

In the context of digitalization, the success of AI implementation is highly dependent on the readiness and quality of the organization's human resources. Good talent management not only ensures that employees have technical competence, but also ensures a digital mindset and continuous learning capabilities. Organizations that invest in talent tend to be more prepared to adopt and develop AI technology as part of their business processes (Dwivedi et al., 2021). Therefore, it is suspected that talent management has an impact on the adoption and use of AI in organizations.

3. The Relationship between Artificial Intelligence and Organizational Innovation

AI acts as a catalyst in the innovation process by providing various advantages such as process automation, big data processing, trend prediction, and service personalization. AI also helps organizations to create new products, services, and processes that are more efficient and relevant to market needs (Haenlein & Kaplan, 2019). Therefore, optimal use of AI can improve an organization's ability to innovate sustainably.

4. The Role of AI as an Intervening Variable

This conceptual framework specifically places AI as an intervening variable, namely an intermediary that bridges the influence of talent management on organizational innovation. This means that good talent management will strengthen the organization's readiness to implement AI, and ultimately, AI will strengthen the innovative drive of the organization. This concept is in line with Jarrahi's (2018) thinking about human-AI symbiosis, namely the synergy between human intelligence and artificial intelligence that produces innovative decisions and actions. Thus, the relationship between talent management and organizational innovation is not only direct, but also influenced by the presence and effectiveness of AI use. This shows the need for an adaptive HR management approach to technological developments, as well as the importance of investing in digital upskilling and AI literacy for all levels of the organization.

METHOD

3.1 Research Approaches and Types

This study uses a quantitative approach with an explanatory research type, namely research that aims to explain the causal relationship between variables, namely talent management, artificial intelligence (AI), and organizational innovation. The quantitative approach was chosen because it is able to test hypotheses and measure the influence between variables objectively and measurably using numerical data (Creswell & Creswell, 2018). "Quantitative research is used when researchers want to test theories by measuring the relationship between variables and analyzing data with statistical procedures" (Creswell & Creswell, 2018).

3.2 Population and Sample

The population in this study were employees or managers of organizations/companies in Indonesia that are or have implemented talent management and artificial intelligence (AI). The sample determination was carried out using purposive sampling techniques, namely the deliberate selection of respondents based on certain criteria, such as strategic positions, minimum two years of work experience, and involvement in the organizational innovation process. According to Etikan and Bala (2017), purposive sampling is suitable for use in quantitative research that focuses on respondents with specific characteristics relevant to the research topic. The minimum sample size is determined using the Hair et al. (2019) formula, which is 5–10 respondents per indicator, so if there are 20 indicators in the questionnaire, the minimum sample size is 100 respondents.

3.3 Data Collection Techniques

The data collection technique was carried out through a closed questionnaire based on a Likert scale of 1–5, which was distributed online and offline to respondents who met the criteria. The questionnaire was compiled based on indicators of talent management variables, AI, and organizational innovation that had been validated from previous studies. According to Sekaran & Bougie (2019), questionnaires are the main instrument in quantitative research that allows for the efficient collection of large amounts of primary data.

3.4 Data Analysis Techniques

Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS) and Structural Equation Modeling (SEM) Partial Least Square (PLS) methods with the help of SmartPLS software. This tool is suitable for exploratory research and has a relatively small to medium sample size (Hair et al., 2019).

The analysis steps include:

1. Instrument Validity and Reliability Test
2. Measurement Model Test (Outer Model) – Convergent validity, discriminant validity, composite reliability
3. Structural Model Test (Inner Model) – R-square value, path coefficient, and direct and indirect (intervening) influence test

"PLS-SEM is more suitable for complex models, theories that are still under development, and mediating (intervening) influences" (Hair et al., 2019).

RESULTS AND DISCUSSION

Evaluation of Measurement Model (Outer Model)

The measurement model (outer model) is confirmatory factor analysis (CFA) by testing the validity and reliability of latent constructs. The following are the results of the outer model evaluation in this study.

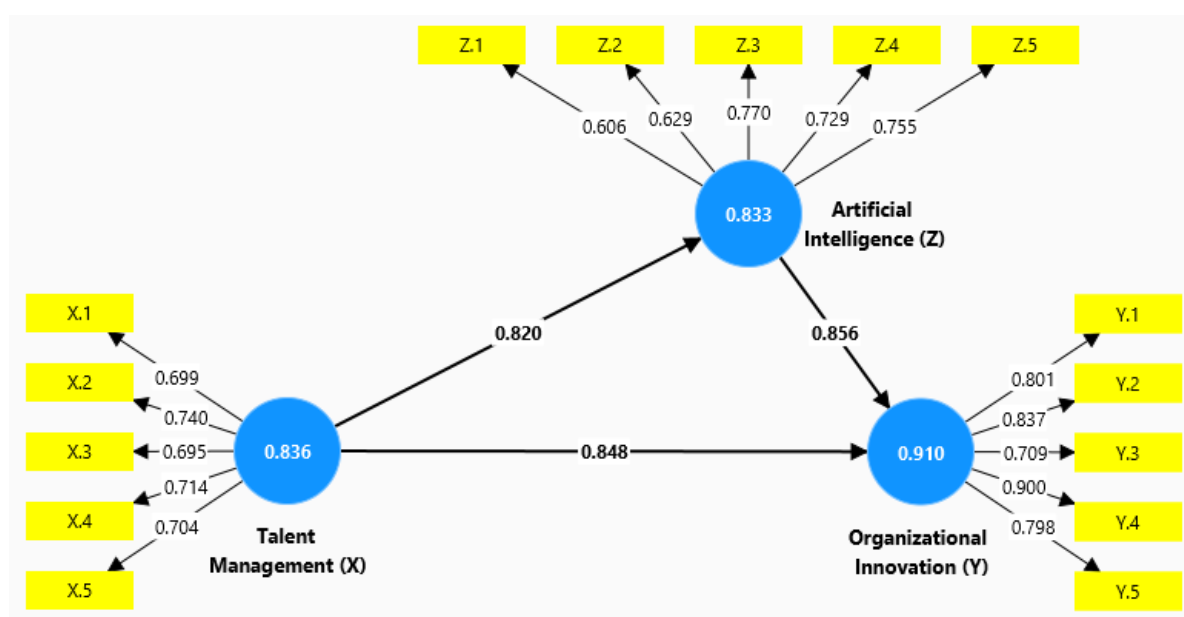


Figure 4.1. Outer Model

Convergent Validity

The convergent validity of the measurement model with the reflective indicator model is assessed based on the correlation between the item score/component score and the construct score calculated using PLS. The following are the results of the convergent validity measurement model test using loading factors:

Table 4.1
Results of Instrument Validity Test Using Loading Factor

	Artificial Intelligence (Z)	Organizational Innovation (Y)	Talent Management (X)
X.1			0.799
X.2			0.740
X.3			0.795
X.4			0.714
X.5			0.704
Y.1	0.801		
Y.2	0.837		
Y.3	0.709		
Y.4	0.900		
Y.5	0.798		
Z.1	0.706		

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Z.2	0.729		
Z.4	0.729		
Z.5	0.755		
Z.3	0.770		

Source :Primary data processed (2025)

Based on Table 4.1 above, it can be seen that all loading factor values have passed the limit of 0.7 so that it can be concluded that each indicator in this study is valid. Therefore, these indicators can be used to measure research variables.

Reliability Test

An instrument can be said to be reliable by looking at the value of Average Variance Extracted more than 0.5, Cronbach Alpha more than 0.6 and Composite Reliability more than 0.7. The following are the results of the calculation of reliability through Average Variance Extracted (AVE), Cronbach Alpha and Composite Reliability can be seen in the following table:

Table 4.2
Calculation of AVE, Cronbach Alpha, and Composite Reliability

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Artificial Intelligence (Z)	0.830	0.833	0.827	0.691
Organizational Innovation (Y)	0.905	0.910	0.906	0.659
Talent Management (X)	0.837	0.836	0.836	0.505

Source :Primary data processed (2025)

The results of the reliability and construct validity tests in this study indicate that all main variables, namely Talent Management (X), Artificial Intelligence (Z), and Organizational Innovation (Y), meet the criteria set for good research instruments. This can be seen from the values obtained in the Cronbach's Alpha, Composite Reliability, and Average Variance Extracted (AVE) indicators. First, seen from the Cronbach's Alpha value, all constructs have values above 0.80. In general, a Cronbach's Alpha value above 0.70 indicates that the items in a construct have good internal consistency (Hair et al., 2019). The Organizational Innovation variable has the highest value of 0.905, followed by Artificial Intelligence (0.830) and Talent Management (0.837). This indicates that each indicator in the variable supports each other and can be trusted in measuring the intended concept.

Second, the Composite Reliability value (rho_A and rho_C) for all constructs has also exceeded the minimum limit of 0.70. This value indicates that the internal reliability of the construct is very good, even more accurate than Cronbach's Alpha because it considers the weight of the indicator. The rho_C value for the AI variable is 0.827, for Organizational Innovation it is 0.906, and for Talent Management it is 0.836. This strengthens the conclusion that the instruments used in this study are reliable in measuring each construct. Third, in the convergent validity aspect, all constructs have an AVE value above 0.50. This AVE value reflects how much variance can be explained by the indicators for their respective constructs. The Artificial Intelligence variable has the highest AVE of 0.691, followed by Organizational Innovation of 0.659, and Talent Management of 0.505. Thus, it can be concluded that the indicators in each construct have been able to explain their variables significantly.

Structural Model Evaluation (Inner Model)

Evaluation of the inner model can be seen from several indicators including the coefficient of determination (R²), Predictive Relevance (Q²) and Goodness of Fit Index (GoF) (Hussein, 2015). The results of the structural model displayed by Smart PLS 3.0 in this study are as follows:

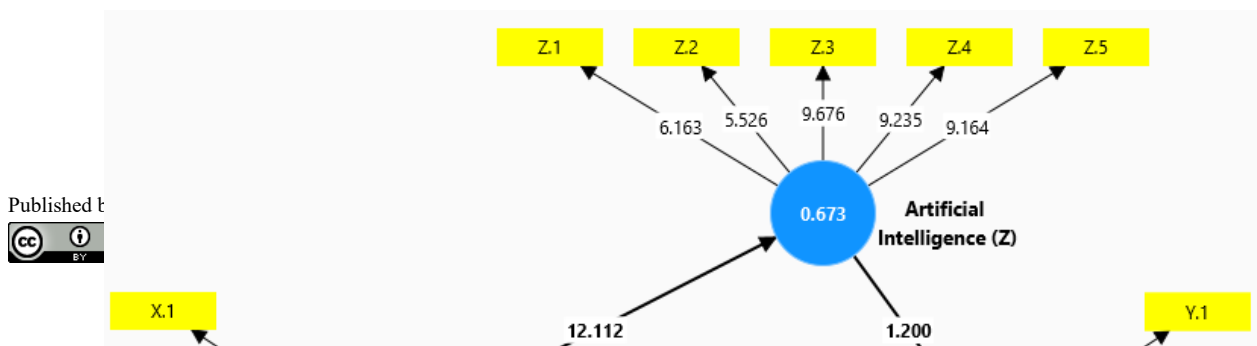


Figure 4.2 Structural Model (Inner Model)

R2 (R-square) results

In assessing the model with PLS, it begins by looking at the R-square for each dependent latent variable. The results of the r^2 calculation in this study are as follows:

Table 4.3
Correlation Value (r^2)

	R-square	R-square adjusted
Artificial Intelligence (Z)	0.673	0.670
Organizational Innovation (Y)	0.798	0.794

Source :Primary data processed (2025)

The R-square (R^2) value is an important indicator in the structural model that shows the magnitude of the contribution of the independent variable to the variation of the dependent variable. In other words, the higher the R-square value, the greater the proportion of variance of the dependent variable that can be explained by the independent variables in the model. Based on the results of data processing, it is known that the R-square value for the Artificial Intelligence (Z) variable is 0.673. This means that 67.3% of the variation in the use or integration of AI in organizations can be explained by talent management as an independent variable. Meanwhile, the remaining 32.7% is explained by other factors outside this research model. This value is quite high and shows that talent management has a significant role in driving the readiness and utilization of AI in the organizational environment.

Furthermore, the R-square on the Organizational Innovation (Y) variable shows a value of 0.798. This means that 79.8% of the variation in organizational innovation can be explained by the combined influence of talent management and artificial intelligence (AI). This is a very strong indicator and shows that both variables together provide a dominant contribution to the creation of innovation in the organization. This supports the hypothesis that innovation is not only influenced by HR capacity, but also by the extent to which technology such as AI can be utilized strategically.

The adjusted R-square value (adjusting R^2 to the number of predictors) for both variables is only slightly lower, namely 0.670 for AI and 0.794 for organizational innovation. The small difference between R-square and adjusted R-square indicates that the model has a good level of stability and does not experience overfitting, and the model is quite efficient even though the number of indicators or predictors is limited. Overall, these findings strengthen the position of artificial intelligence (AI) as an intervening variable that bridges the relationship between talent management and organizational innovation. The high R-square values for both endogenous variables indicate that the structural model built in this study has excellent predictive power in explaining the dynamics of organizational innovation in the digital era.

Goodness of Fit Model

In the Partial Least Squares (PLS-SEM) approach, Goodness of Fit (GoF) is used to assess the overall quality of the structural model, namely the extent to which the combination of exogenous (independent) variables is able to explain the endogenous (dependent) variables in the model. One of the GoF measures commonly used in PLS is the

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Q-square predictive relevance (Q^2) which is calculated based on the R-square value of the endogenous variables.

Q-square represents the predictive ability of the model to actual data, where the Q^2 value that is closer to 1 indicates that the model is better at explaining and predicting endogenous variables.

Data in Research:

- R-square of the Organizational Innovation variable (Y) = 0.798
- R-square of the Artificial Intelligence variable (Z) = 0.673

Total Q-square formula:

$$Q^2 = 1 - (1 - R_Y^2)(1 - R_Z^2)$$

$$Q^2 = 1 - (1 - 0.798)(1 - 0.673)$$

$$Q^2 = 1 - (0.202)(0.327)$$

$$Q^2 = 1 - 0.0660 = 0.934$$

The Q^2 value of 0.934 indicates that the model has a very high predictive power (strong predictive relevance) for endogenous variables (AI and organizational innovation). This value is far above the minimum threshold of 0.35 which is generally considered the limit of a strong model according to Hair et al. (2019). Thus, the structural model in this study is proven to have a very good overall fit (overall model fit). This strengthens the belief that the talent management variable (X), through the support of artificial intelligence (AI) as an intervening variable (Z), has the ability to explain and predict organizational innovation (Y) strongly and significantly. The model in this study has met the criteria Very good Goodness of Fit, indicated by the Q-square value of 0.934. This means that this model is not only statistically strong, but also very relevant predictively in the context of the influence of talent management on organizational innovation through artificial intelligence. This finding supports the sustainability of the model to be applied or tested further in other organizations with similar characteristics in Indonesia.

Hypothesis Testing

Based on the results of the outer model conducted, all hypotheses tested have met the requirements, so they can be used as analysis models in this study. Hypothesis testing in this study uses alpha 5% which means if the t-statistic value ≥ 2.048 or the probability value $\leq$ level of significance ($\alpha = 5\%$).

Table 4.4
Path Coefficients

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Artificial _Intelligence (Z) -> Organizational _Innovation (Y)	0.491	0.555	0.410	1,200	0.230
Talent _Management (X) -> Artificial _Intelligence (Z)	0.820	0.824	0.068	12.112	0.000
Talent _Management (X) -> Organizational _Innovation (Y)	0.445	0.377	0.094	3.129	0.002

Source :Primary data processed (2025)

Hypothesis testing is conducted to determine the significance of the relationship between variables in the structural model using the PLS-SEM approach. The significance test is seen from the T-statistic and P-value, with the provision that the effect is considered significant if the T-statistic value ≥ 1.96 and P-value ≤ 0.05 (Hair et al., 2019).

Following are the results of testing the three main paths in the model:

1. The Influence of Talent Management (X) on Artificial Intelligence (Z)

- a) T-statistic = 12.112
- b) P-value = 0.000

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These results show that the influence of talent management on AI implementation is very significant. The T-statistic value is far above 1.96 and the P-value is far below 0.05, indicating that talent management plays an important role in increasing organizational readiness in adopting artificial intelligence (AI).

This finding is in line with research by Dwivedi et al. (2021) and Tarique & Schuler (2018) which emphasizes that competent human resources and strategic talent management will strengthen the organization's digital readiness, including in the use of AI. In other words, organizations that are able to develop and retain superior talent are more likely to implement artificial intelligence-based technology.

2. The Influence of Talent Management (X) on Organizational Innovation (Y)

a) T-statistic = 3.129

b) P-value = 0.002

This influence is also significant. It means that talent management directly contributes to increasing organizational innovation. Employees who have high competence, work motivation, and a work environment that supports individual development tend to dare to take the initiative, explore new ideas, and collaborate to create innovation. These results are consistent with the research results of Collings et al. (2019) and Damanpour & Aravind (2018) which state that organizations with good talent management systems tend to have a stronger culture of innovation. HR is the main catalyst in driving the innovative process in the organization.

3. The Influence of Artificial Intelligence (Z) on Organizational Innovation (Y)

a) T-statistic = 1.200

b) P-value = 0.230

Unlike the two previous relationships, the influence of AI on organizational innovation turned out to be insignificant. The T-statistic value is below 1.96 and the P-value is above 0.05, indicating that AI has not directly had a significant impact on organizational innovation in the context of this study.

This could happen because even though AI has been adopted, its use is still limited to technical or operational functions, not touching on strategic aspects of innovation. This finding contradicts research by Jarrahi (2018) and Haenlein & Kaplan (2019) which states that AI can accelerate and expand innovation if utilized optimally. However, differences in organizational context and HR readiness can explain why AI has not been able to become a direct driver of innovation in several companies in Indonesia.

Indirect Effect Testing

The test of indirect influence in the mediation model aims to determine whether the intervening variable, namely Artificial Intelligence (AI), is able to bridge or mediate the relationship between Talent Management (X) and Organizational Innovation (Y).

Table 4.4
Indirect Effect Test

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Talent_Management (X) -> Artificial_Intelligence (Z) -> Organizational_Innovation (Y)	0.403	0.468	0.085	3,046	0.003

The indirect effect path test was conducted to determine whether Artificial Intelligence (AI) acts as a mediator in the relationship between Talent Management (X) and Organizational Innovation (Y). The results of the statistical test showed a T-statistic value of 3.046 and a P-value of 0.003, which means that the effect is statistically significant (because $T > 1.96$ and $P < 0.05$). This means that AI is proven to significantly mediate the relationship between talent

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management and organizational innovation. In other words, effective talent management not only has a direct impact on innovation, but also indirectly increases organizational innovation through optimizing the use of AI.

These results indicate that organizational talent plays a key role in enhancing the ability to adopt and utilize AI technology, which ultimately strengthens the innovative capacity of the organization. This shows the strategic role of HR in digital transformation, where the success of technology implementation is largely determined by how talent is managed, developed, and directed. With this significant indirect influence, it can be concluded that organizations that have a good talent management system will be better prepared to adopt advanced technologies such as AI. Furthermore, the integration of AI into work processes and decision-making can accelerate the emergence of new ideas, operational efficiency, and product and service innovation.

This finding is in line with the research results of Dwivedi et al. (2021), which shows that human capital development is closely related to the success of AI adoption in organizations. They emphasize that digital talent is a key factor bridging technology and innovation. Likewise, Jarrahi (2018) put forward the concept of human-AI collaboration, which describes the synergy between human intelligence (through talent) and artificial intelligence (AI) as the main driver of modern organizational innovation. In this context, AI is not just a technological tool, but also an integral part of an HR-based innovation system. The results of this study also strengthen the findings of Tarique & Schuler (2018) which state that digital-oriented talent management can strengthen organizational readiness in facing technological disruption and increase agility in innovation.

CONCLUSION

Conclusion

This study aims to analyze the influence of talent management on organizational innovation with artificial intelligence (AI) as an intervening variable in Indonesia. Based on the results of data processing using a quantitative approach with the PLS-SEM method, several conclusions were obtained as follows:

1. Talent Management has a significant impact on Artificial Intelligence (AI). This shows that organizations that implement effective talent management strategies tend to be more capable of adopting and utilizing AI technology to support work processes.
2. Talent Management also has a direct and significant impact on Organizational Innovation. This means that proper HR management, based on competence, potential, and career development, has a real impact on increasing the innovative capacity of the organization.
3. Artificial Intelligence (AI) has been shown to be a significant intervening variable in the relationship between Talent Management and Organizational Innovation. This means that the influence of talent management on innovation can be strengthened by the presence and strategic use of AI.
4. Thus, it can be concluded that organizational innovation does not only rely on technology alone, but is greatly influenced by talent management strategies, and that AI functions as a connector that strengthens these relationships.

Suggestion

1. For organizations and companies, it is important to continue to develop an adaptive talent management system, based on digital competencies, and encourage a culture of learning and innovation. Talents with technological literacy will be a key asset in the digital transformation process.
2. The use of AI must be directed at strategic aspects, not just as an operational tool. AI needs to be integrated into innovation processes, such as product development, market mapping, service personalization, and predictive analytics.
3. Further research is recommended to test other variables such as innovation culture, digital leadership, and organizational technology readiness as moderating or intervening factors, in order to enrich the understanding of the relationship between HR, technology, and innovation.

Recommendation

1. The government through related ministries is expected to create policies to accelerate the development of national digital talent that are in line with technological advances such as AI. Technology competency-based training programs need to be expanded, especially for the creative industry, manufacturing, and public service sectors.

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2. Organizations in Indonesia need to develop a digital transformation roadmap that includes talent management as a key pillar. This strategy should include investments in training, reskilling, and strengthening a culture of data and technology-driven innovation.
3. Collaboration between universities, the industrial world, and AI technology providers needs to be strengthened in the form of joint research, innovation incubation, and digital internship programs to prepare superior human resources who are able to integrate AI into organizational systems effectively.

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