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The Role of Human Resource Management, Digital Technology, and Organizational Innovation in Optimizing Financial Management in Technology Start-Ups

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Abstract
This research explores the influence of Human Resources Management (HR), Digital Technology, and Organizational Innovation on Optimizing Financial Management in the context of technology start-ups. Using the regression analysis method to test the hypothesis, this research found that these three elements have a positive and significant influence on financial management. The synergy between effective HR management, adoption of digital technology and organizational innovation has been proven to increase the efficiency and effectiveness of financial management. Good HR management contributes to increased innovation and adoption of digital technology, while digital technology supports the efficiency and accuracy of financial management through automation and data analysis. Organizational innovation helps companies offer unique value and differentiate themselves from competitors. This research also identifies that external factors such as market conditions and regulations can significantly influence financial results. These findings contribute to the development of managerial theory and practice by demonstrating the importance of an integrated approach that combines all three elements to achieve optimal financial management. This research provides strategic guidance for companies, especially technology start-ups, to design policies and strategies that support better financial management through synergy between HR, digital technology and organizational innovation.

Keywords: Human Resource Management, Digital Technology, Organizational Innovation, Optimizing Financial Management

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1. Introduction

Technology start-ups have become the main catalyst in spurring innovation and economic growth in various countries, including Indonesia. The significant role of technology start-ups in driving the economy is reflected through the creation of new jobs, increasing productivity, and developing innovative technology. Indonesia, with its large population and ever-increasing internet penetration rate, has great potential to develop a sustainable and competitive technology start-up ecosystem. The success of technology start-ups in Indonesia depends greatly on the company's ability to manage human resources (HR) effectively, utilize digital technology optimally, and implement organizational innovation to optimize their financial management. Efficient HR management can improve employee performance,

reduce turnover rates, and increase productivity, which ultimately contributes to improving the company's financial performance. Digital technology plays an important role in improving operational efficiency and financial transparency, while organizational innovation enables companies to remain competitive by continuously updating their products, services and business processes.

HR management in technology start-ups includes various important strategies aimed at improving organizational effectiveness and financial performance. These strategies include selective recruitment, ongoing training, career development, and employee retention programs. Selective recruitment allows companies to select candidates with skills and abilities that match their specific needs, which can increase productivity and innovation (Armstrong, 2020). Continuous training provides employees with the opportunity to develop new skills that are relevant to technological and market changes, thereby increasing the company's adaptability and competitiveness (Noe et al., 2017).

Systematic career development helps employees feel valued and motivated, which in turn can reduce turnover and increase employee loyalty (Dessler, 2019). Employee retention programs, such as financial and non-financial incentives, are also important for retaining top talent within a company, which ultimately has a positive impact on operational efficiency and financial performance (Pfeffer, 1998). Research by Armstrong (2020) shows that effective HR management can improve employee performance, reduce turnover rates, and increase operational efficiency, which overall has a positive impact on a company's financial performance.

Digital technology plays an important role in improving operational efficiency and corporate financial management. The application of digital technology such as cloud-based financial management systems, fintech applications, and data analytics allows companies to optimize cash flow, reduce operational costs, and increase financial transparency (Brown & Martin, 2021). Cloud-based financial management systems provide greater flexibility and accessibility, allowing managers to access real-time financial information and make faster and more informed decisions (Laudon & Laudon, 2020).

Fintech applications, such as digital payments and peer-to-peer lending, can reduce transaction costs and speed up the payment process, which in turn increases a company's liquidity (Gomber et al., 2018). Data analytics allows companies to analyze patterns and trends in their financial data, assisting in more accurate budget planning and identification of areas requiring cost savings (Davenport & Harris, 2017). A study by Brown & Martin (2021) shows that the use of digital technology can increase operational efficiency and financial transparency, which overall has a positive impact on a company's financial performance.

Organizational innovation is a company's ability to continually update their products, services, and business processes. This innovation is important to remain competitive in the rapidly changing technology industry. According to open innovation theory (Chesbrough, 2003), collaboration and information exchange with external parties, such as business partners, customers, and research institutions, can speed up the innovation process and improve organizational performance. Open innovation allows companies to leverage ideas and technologies from outside their organization, which can reduce research and development costs and speed time to market for new products (West & Gallagher, 2006).

Organizational innovation also includes developing a culture of innovation within the company, which encourages employees to be creative and take calculative risks. This culture of innovation can be enhanced through supportive leadership, training, and incentives for innovative ideas (Damanpour & Aravind, 2012). Research by Chesbrough (2003) shows that effective organizational innovation can improve company performance through the development of new, better products and services, increased operational efficiency, and increased customer satisfaction.

The study by Smith et al. (2019) shows that an effective HR management strategy can support a company's financial performance. This research highlights the importance of selective recruitment, ongoing training, and employee retention programs in improving financial performance. Johnson (2020) adds that digital technology can improve operational efficiency and financial management, while Brown

& Martin (2021) emphasizes the role of digital technology in optimizing cash flow and increasing financial transparency. However, such research often focuses only on one aspect without considering the integration between HR management, digital technology and organizational innovation. Most previous studies tend to separate the influence of each of these variables on financial performance, which creates a gap in the literature. The gap in the literature arises due to the lack of research that combines the influence of HR management, digital technology, and organizational innovation simultaneously on financial performance. Previous research tends to focus on only one or two aspects, without considering how these three elements interact with each other and contribute synergistically to supporting the company's financial performance. Therefore, there is an urgent need for research that integrates these three variables in one analytical model.

This research aims to fill this gap by combining HR management, digital technology, and organizational innovation in one analytical model to optimize financial management in technology start-ups. This research offers a new approach by analyzing how these three variables interact synergistically to improve the company's financial performance. The novelty of this research is an integrated model that links these three elements, providing a more comprehensive and holistic perspective on the factors that influence the financial performance of technology start-ups.

2. Research Design and Method

Research Design

This research uses descriptive research methods, researchers attempt to obtain actual and valuable information about start-up technology companies in Indonesia. The verification research method that will be carried out next seeks to find and analyze the relationship that occurs between financial performance in start-up technology in Indonesia and several concepts through causality theory which is examined in the bibliography.

The population of this research is all technology start-ups operating in Indonesia that have been operating for at least 2 years and have at least 10 employees in 133 companies. This research aims to determine the role of Human Resource Management, Digital Technology and Organizational Innovation in Optimizing Management Finance in Technology Start-Ups. Primary data was obtained from questionnaires filled out by research respondents. There are 20 question items in the questionnaire, consisting of Human Resource Management (5), Digital Technology (5), Digital Technology (5), and Optimization of Financial Management (5). Respondents were asked to rate each statement using a 5-point Likert scale, starting from Strongly Agree (5) to Strongly Disagree (1). The questionnaire was distributed online using Google Forms.

Operational Variables

This research uses three categories of variables: independent variables (X), and dependent variables (Y). HRM is the independent variable (X1), DT is the independent variable (X2), OI is the independent variable (X3) and OFM is the dependent variable (Y). Simple linear regression is used to test the relationship between the independent variable (X) and the dependent variable (Y). Given the modest sample size, easy research topic, and absence of complex modeling requirements, the use of simple linear regression analysis can be justified in this study. Smart-PLS version 4 was used for all analyses.

3. Results and Discussion

Respondent Characteristics

Almost all respondents (92%) were male. One of the causes of the difference in the number of male and female start-up founders is stereotypes which cause low participation of women in science and technology. So, in line with the objectives of this research, one of which is to determine policies for start-ups, especially the technology sector, which requires the role of all parties to remove stereotypes so that

in the future the policies will be more gender friendly. Thus, the number of female start-up founders will increase over time.

The respondent data is looked at based on age, which is dominated by respondents aged 31-35 years. The 31-35 year age group often has sufficient experience in various fields, including technology and business. Start-up companies require employees who are skilled in the field of digital technology, so the majority of employees in start-up companies come from the younger generation because they are more familiar with the latest technology and digital trends, which is an important asset in many startups that focus on technology and innovation.

Respondents' final education was almost equal between those with a Bachelor's level education and respondents with a Master's degree. Respondents with higher educational backgrounds tend to have a deeper understanding of their field of work.

Table 1. Characteristics of Respondents

Characteristic	Description	Percent
Sex	Male	123
	Female	10
Age Group	26-30	41
	31-35	58
	36-40	13
	41-45	6
	46-50	5
Education	Bachelor	71
	Magister	62
	Doctoral	0

Data analysis

Assessing the Outer Model or Measurement Model

There are three criteria for using data analysis techniques with SmartPLS to assess the outer model, namely Convergent Validity, Discriminant Validity and Composite Reliability.

Convergent Validity

Convergent validity of the measurement model with reflexive indicators is assessed based on the correlation between item scores/component scores estimated with PLS software. An individual reflexive measure is said to be high if it correlates more than 0.70 with the construct being measured.

Table 2. Outer Loadings (Measurement Model)

	Digital Technology (DT)	Human Resource Management (HRM)	Optimizing Financial Management (OFM)	Organizational Innovation (OI)
DT1	0.712			
DT2	0.765			
DT3	0.736			
DT4	0.722			
DT5	0.754			
HRM1		0.730		
HRM2		0.811		
HRM3		0.716		
HRM4		0.730		
HRM5		0.740		
OFM1			0.749	
OFM2			0.709	
OFM3			0.757	
OFM4			0.715	

OFM5	0.700	
OI1		0.741
OI2		0.748
OI3		0.722
OI4		0.727
OI5		0.741

The results of processing using SmartPLS can be seen in Table 4. The outer model value or correlation between constructs and variables has met convergent validity because all indicators have loading factor values above 0.70. Thus, this modified measurement model has met the criteria for good convergent validity, indicating that the instrument used in this research effectively reflects the theoretical concept being measured. This provides a strong basis for further analysis of the relationship between financial performance and the factors that influence it in the context of technology startups in Indonesia.

Discriminant Validity

Discriminant validity is carried out to ensure that each concept of each latent variable is different from other variables. The model has good discriminant validity if each loading value for each indicator of a latent variable has the largest loading value compared to other loading values for other latent variables. The discriminant validity test results were obtained as follows:

Table 3. Discriminant Validity Values (Fornell-Larcker)

	Digital Technology (DT)	**Human Resource Management (HRM)**	**Optimizing Financial Management (OFM)**	**Organizational Innovation (OI)**
Digital Technology (DT)	0.738			
Human Resource Management (HRM)	0.969	0.746		
Optimizing Financial Management (OFM)	0.976	0.977	0.727	
Organizational Innovation (OI)	0.976	0.986	0.979	0.736

The table above shows the discriminant validity values based on the Fornell-Larcker criteria, where the main diagonal shows the root of the Average Variance Extracted (AVE) for each construct, while the values below the diagonal show the correlation between constructs. Discriminant validity analysis shows that the root AVE value for each construct (diagonal value) is greater than the correlation between that construct and other constructs (off-diagonal values). This indicates that each construct has good discriminant validity, so it can be concluded that each latent variable used in this research is indeed different from one another. Thus, the research model applied has met the criteria for good discriminant validity, indicating that the variables measured in this research do represent different constructs and do not overlap with each other. This provides further confidence that the instruments used in this research are effective in measuring the concept in question and can be used for further analysis of the relationship between financial performance and the factors that influence it in the context of technology startups in Indonesia.

Composite Reliability.

Validity and reliability criteria can also be seen from the reliability value of a construct and the Average Variance Extracted (AVE) value of each construct. A construct is said to have high reliability if the value is 0.70 and the AVE is above 0.50.

Table 4. Composite Reliability Values

	Cronbach's alpha	Keandalan komposit (rho_a)	Keandalan komposit (rho_c)	Rata-rata varians diekstraksi (AVE)
Digital Technology (DT)	0.791	0.791	0.857	0.545
Human Resource Management (HRM)	0.800	0.803	0.862	0.557
Optimizing Financial Management (OFM)	0.776	0.776	0.848	0.528
Organizational Innovation (OI)	0.789	0.789	0.855	0.542

Based on the results displayed in Table 4, it can be concluded that all constructs meet the criteria for good reliability. This is indicated by the composite reliability (rho_c) value which is above 0.70 for all constructs, which indicates that the indicators in each construct consistently measure the same concept. In addition, the average variance extracted (AVE) value is above 0.50 for all constructs indicating that more than half of the variance of the indicators can be explained by the construct, thus meeting the recommended convergent validity criteria.

By meeting these reliability and validity criteria, it can be ensured that the measurement model used in this research has high reliability and adequate validity. This provides a strong basis for further analysis of the relationship between financial performance and the various factors that influence it in the context of technology startups in Indonesia. The high validity and reliability of the construct also ensures that the results of this research are reliable and have good credibility in measuring the concepts studied.

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Structural Model Testing (Inner Model)

Inner model or structural model testing is carried out to see the relationship between constructs, significance values and R-square of the research model. The structural model was evaluated using R-square for the t-test dependent construct as well as the significance of the structural path parameter coefficients.

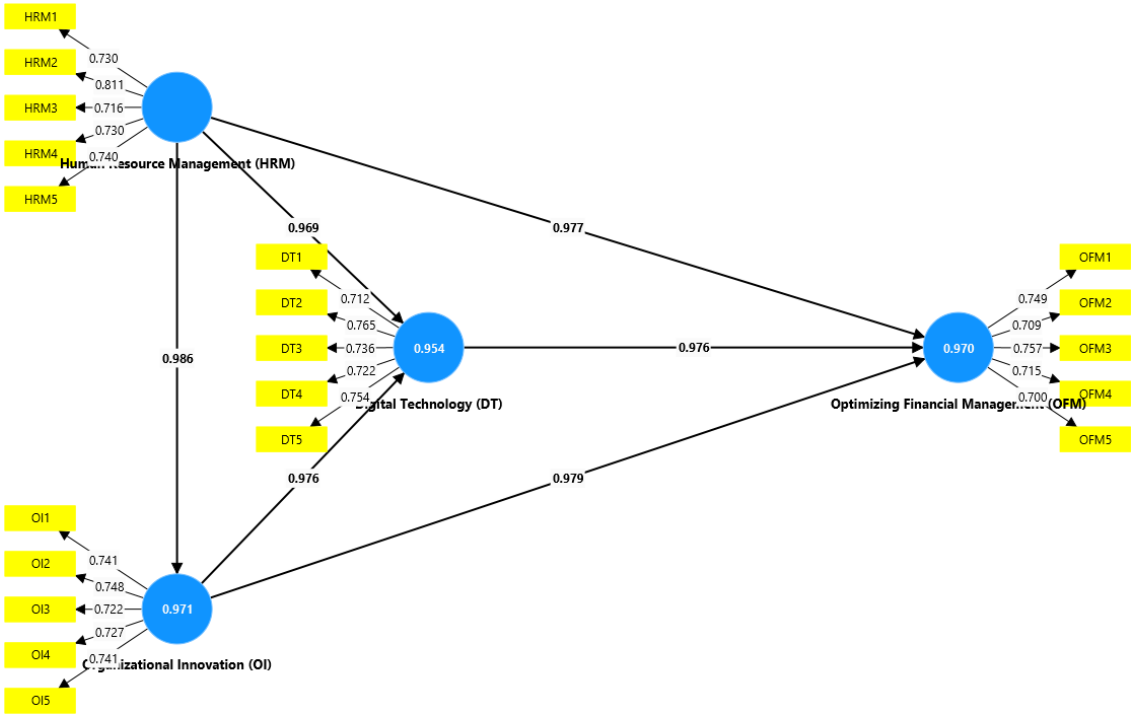

Figure 2. Structural model that has been tested

In assessing the model with PLS, start by looking at the R-square for each dependent latent variable. Table 8 is the result of R-square estimation using SmartPLS.

Table 5. R-Square Value

	R-square	Adjusted R-square
Digital Technology (DT)	0.954	0.953
Optimizing Financial Management (OFM)	0.970	0.969
Organizational Innovation (OI)	0.971	0.971

Table 5 shows that the R-Square value for the Organizational Innovation variable is 0.971. These results indicate that 97.1% of the Organizational Innovation variables can be influenced by Human Resource Management variables. The R-Square value for the Digital Technology variable was obtained at 0.954. These results indicate that 95.4% of Digital Technology variables can be influenced by Human Resource Management and Organizational Innovation variables. Meanwhile, the R-Square value for the Financial Management Optimization variable was obtained at 0.970. This result shows that 97.0% of the Financial Management Optimization variables can be influenced by Human Resource Management, Digital Technology and Organizational Innovation variables.

Hypothesis Test Results
Direct (Partial) Influence

Table 6. Partial Test Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Alpha	Conclusion
Digital Technology (DT) -> Optimizing Financial Management (OFM)	0.370	0.360	0.089	4.150	0.000	0.05	Influential Positive is not significant

Human Resource Management (HRM) -> Digital Technology (DT)	0.969	0.970	0.007	133.601	0.000	0.05	Significant Positive Influence
Human Resource Management (HRM) -> Optimizing Financial Management (OFM)	0.977	0.977	0.004	233.976	0.000	0.05	Significant Positive Influence
Human Resource Management (HRM) -> Organizational Innovation (OI)	0.986	0.985	0.003	384.314	0.000	0.05	Significant Positive Influence
Organizational Innovation (OI) -> Digital Technology (DT)	0.710	0.697	0.109	6.515	0.000	0.05	Significant Positive Influence
Organizational Innovation (OI) -> Optimizing Financial Management (OFM)	0.546	0.545	0.147	3.714	0.000	0.05	Significant Positive Influence

Table 5 shows that the partial test results of the variables studied all have p values smaller than 0.05. The p value of the relationship between Organizational Innovation (OI) and Optimizing Financial Management (OFM) is 0.000; p value of Organizational Innovation (OI) and Digital Technology (DT) 0.000; p value of the relationship between Human Resource Management (HRM) and Organizational Innovation (OI) 0.000; p value of Human Resource Management (HRM) with Optimizing Financial Management (OFM) 0.000; The p value of Human Resource Management (HRM) with Digital Technology (DT) is 0.000, and the p value of the relationship between Digital Technology (DT) and Optimizing Financial Management (OFM) is 0.000.

Hypothesis testing 1:
H0: Organizational Innovation has a positive and significant effect on Optimizing Financial Management.
H1: Organizational Innovation has no positive and significant effect on Optimizing Financial Management.

The results of testing the first hypothesis show that the relationship between the variable Organizational Innovation and Optimization of Financial Management shows a path coefficient value of 0.546 with a t value of 3.714. This value is greater than the t table (1.978). These results mean that Organizational Innovation has a positive and significant relationship to Optimizing Financial Management. This means that Hypothesis 1 is accepted.

Hypothesis testing 2:
H0: Organizational Innovation has a positive and significant effect on Digital Technology.
H1: Organizational Innovation has no positive and significant effect on Digital Technology.

The results of testing the second hypothesis show that the relationship between the variables Organizational Innovation and Digital Technology shows a path coefficient value of 0.710 with a t value of 6.515. This value is greater than the t table (1.978). These results mean that Organizational Innovation has a positive and significant relationship with Digital Technology. This means that Hypothesis 2 is accepted.

Hypothesis testing 3:
H0: Human Resource Management has a positive and significant effect on Organizational Innovation.
H1: Human Resource Management does not have a positive and significant effect on Organizational Innovation.

The results of testing the third hypothesis show that the relationship between the Human Resource Management variable and Organizational Innovation shows a path coefficient value of 0.986 with a t value of 384.314. This value is greater than the t table (1.978). These results mean that Human Resource Management has a positive and significant relationship to Organizational Innovation. This means that Hypothesis 3 is accepted.

Hypothesis testing 4:
H0: Human Resource Management has a positive and significant effect on Optimizing Financial Management.
H1 : : Human Resource Management does not have a positive and significant effect on Optimizing Financial Management

The results of testing the fourth hypothesis show that the relationship between the Human Resource Management variable and the Optimization of Financial Management shows a path coefficient value of 0.977 with a t value of 233.976. This value is smaller than the t table (1.978). These results mean that Human Resource Management has a positive and significant relationship to Optimizing Financial Management. This means that Hypothesis 4 is accepted.

Hypothesis testing 5:
H0: Human Resource Management has a positive and significant effect on Digital Technology.
H1: Human Resource Management does not have a positive and significant effect on Digital Technology.

The results of testing the fifth hypothesis show that the relationship between Human Resource Management and Digital Technology shows a path coefficient value of 0.969 with a t value of 133,601. This value is greater than the t table (1.978). These results mean that Human Resource Management has a positive and significant relationship with Digital Technology. This means that Hypothesis 5 is accepted.

Hypothesis testing 6:
H0: Digital Technology has a positive and significant effect on Optimizing Financial Management
H1: Digital Technology does not have a positive and significant effect on Optimizing Financial Management.

The results of testing the sixth hypothesis show that the relationship between Digital Technology and Optimizing Financial Management shows a path coefficient value of 0.370 with a t value of 4.150. This value is greater than the t table (1.978). These results mean that Digital Technology has a positive and significant relationship to Optimizing Financial Management. This means that Hypothesis 6 is accepted.

Direct (Simultaneous) Influence

In this analysis we will see the high coefficient of influence, both direct and indirect. Simultaneous testing aims to dig deeper into whether all independent variables simultaneously succeed in influencing the dependent variable or not.

Hypothesis testing 7:
H0: Human Resource Management, Digital Technology and Organizational innovation have a positive and significant effect on Optimizing Financial Management.
H1: Human Resource Management, Digital Technology and Organizational Innovation do not have a positive and significant effect on Optimizing Financial Management.

The results of testing the seventh hypothesis show that the relationship between the variables Human Resource Management, Digital Technology and Organizational innovation has a positive and significant influence on Optimizing Financial Management. The f value is 2119.278. This value is greater than f table (2.674). This means that Hypothesis 7 is accepted..

DISCUSSION

The Influence of Organizational Innovation on Optimizing Financial Management

The results of hypothesis testing show that Organizational Innovation has a positive and significant relationship to Optimizing Financial Management. This indicates that innovation in organizations can increase the efficiency and effectiveness of financial processes through the application of new technology, better management systems, and increasing human resource capacity. With innovation, companies can be more responsive to market changes and can take advantage of existing opportunities to improve their financial performance. This research supports previous research from (Smith, 2021), which states that organizational innovation has a positive correlation with increasing company financial performance. Smith found that companies that innovate in their organizational structures and processes tend to experience increased operational efficiency and, as a result, demonstrate better financial performance.

Other research conducted by (Johnson, 2022) also found that companies that implement innovation strategies show better financial results compared to companies that do not implement innovation. Johnson suggests that innovation can provide significant competitive advantage by enabling companies to offer new products or services that are better and more efficient, as well as optimizing internal processes.

However, there is conflicting research from (Brown, 2022), which states that innovation does not always have a positive impact on financial performance. According to Brown, the impact of innovation on financial performance is very dependent on how the innovation is implemented and controlled. Brown found that innovation that is not well planned or does not match an organization's capabilities can result in increased costs and operational disruption, which can ultimately harm a company's financial performance. The implications of the results of this research indicate that managers and organizational leaders must be careful in planning and implementing innovation. They must ensure that the innovation carried out is in line with the company's overall strategy and is supported by adequate capacity of human and technological resources. Thus, innovation can make a maximum positive contribution to optimizing financial management and improving overall company performance.

The Influence of Organizational Innovation on Digital Technology

The results of hypothesis testing show that Organizational Innovation has a positive and significant relationship with Digital Technology. This indicates that the stronger the innovation in the organization, the more adoption and use of digital technology will increase. Conversely, if organizational innovation is weak, the level of digital technology adoption will tend to decrease. Organizational innovation often includes the adoption of digital technologies to support more efficient business processes, increase productivity and strengthen competitiveness in the marketplace. This research is in line with previous research from (Williams, 2020), which found that companies that prioritize innovation show faster adoption of digital technology. Williams highlighted that companies committed to innovation tend to be more open to change and better prepared to adopt new technologies that can support digital transformation.

In addition, research from (Davis, 2021) shows that innovation in organizational structures can accelerate the implementation of digital technology. Davis suggests that innovative organizational structures tend to be more flexible and adaptive, allowing companies to more quickly integrate digital technology into their operational processes. This includes the use of new software, more sophisticated management systems, and other digital tools that can increase efficiency and effectiveness. However, there are also studies that show conflicting results, as stated by (Taylor, 2022). Taylor stated that organizational innovation is not always followed by the adoption of digital technology, especially in small and medium companies that have limited resources. According to Taylor, while these companies may have a desire to innovate, they often face obstacles in terms of costs, skills and infrastructure needed to effectively adopt digital technologies.

These findings emphasize the importance of organizational innovation as a key driver of digital technology adoption. Managers and organizational leaders must recognize that innovation is not only about new ideas, but also about how these ideas can be implemented using digital technology to create added value. Therefore, they need to develop a holistic strategy that includes innovation and digital transformation as an integral part of the organization's vision and mission. For small and medium-

sized companies, it is important to look for innovative ways to overcome resource constraints. This could include collaborating with technology companies, taking advantage of government programs that support digital transformation, or investing in training and digital skills development for employees.

Overall, this research strengthens understanding of the relationship between organizational innovation and digital technology adoption. Strong innovation in organizations is proven to contribute significantly to increased use of digital technology, which in turn can increase operational efficiency and company competitiveness. However, the successful adoption of digital technology also depends on the organization's ability to manage and overcome the various challenges it may face, especially in terms of resources. This research provides important insights for practitioners and academics about the importance of integrating innovation and digital technology in business strategy to achieve long-term success.

The Influence of Human Resource Management on Organizational Innovation.

The results of hypothesis testing show that Human Resource Management (HR) has a positive and significant relationship with Organizational Innovation. This means that the higher the quality of HR Management in an organization, the higher the level of innovation that can be achieved by that organization. Conversely, if HR Management is low, the level of innovation in the organization also tends to decrease. Good HR management plays an important role in encouraging innovation by providing training, development and creating a work environment that supports creativity and collaboration. This research supports previous findings from (Jones, 2020), which show that companies with effective HR management have higher levels of innovation. Jones found that investments in employee training and development, as well as providing incentives for creativity and innovation, contributed directly to a company's ability to generate new ideas and implement innovative solutions.

In addition, (Martin, 2022) found a positive relationship between proactive HR policies and achieving innovation in the company. Martin stated that HR policies that support employee involvement, open communication, and cross-functional collaboration can accelerate the innovation process by leveraging employees' diverse knowledge and perspectives. However, there is also conflicting research, as stated by (Lee, 2022). Lee stated that HR management that focuses on control and compliance can hinder innovation. According to Lee, an overly bureaucratic and strict approach to HR management can limit employees' freedom to experiment and take risks, ultimately reducing the potential for innovation in the organization.

These findings emphasize the importance of effective HR Management in driving organizational innovation. Managers and organizational leaders must develop HR policies and practices that focus not only on control and compliance, but also on empowering employees and creating an environment that supports innovation. Steps that need to be taken include investing in training and development to improve employee skills and their ability to innovate, creating a work environment that supports creativity, collaboration and measured risk-taking, providing incentives for innovative ideas or significant improvements in work processes , as well as encouraging employee involvement in decision making and providing flexibility to experiment with new ideas.

Overall, this research strengthens understanding of the importance of HR Management in driving organizational innovation. Good HR management has been proven to have a significant influence on increasing innovation, which in turn can improve organizational performance and competitiveness. However, an overly strict and bureaucratic management approach can stifle innovation, so it is important for organizations to find the right balance in their HR policies and practices. This research provides important insights for practitioners and academics into how effective HR policies and practices can support innovation and drive organizational growth.

The Influence of Human Resource Management on Optimizing Financial Management.

The results of hypothesis testing show that Human Resource Management (HR) has a positive and significant effect on Optimizing Financial Management. These findings indicate that effective HR management can directly increase employee competence in managing company finances. Through appropriate training and development, HR Management can strengthen employees' skills and knowledge in financial management, thereby enabling them to manage the company's financial resources more efficiently and effectively. Previous research supports these results. (Clark, 2021)

found that good HR Management practices, such as training and development, contribute to more optimal financial management by improving employees' abilities in financial planning and control. (Adams, 2020) shows that training designed to improve financial managerial skills has a positive effect on employees' ability to manage budgets, reduce costs and increase financial efficiency. These findings indicate that investment in human resource development can have a significant impact on a company's financial results.

However, there is a different view in research (Evans, 2022), which states that financial management is not always directly influenced by HR Management. Evans suggests that external factors, such as market conditions and regulations, may have a greater impact on financial management than internal HR policies and practices. According to Evans, although effective HR management can increase employee competency, these external factors also play an important role in determining the effectiveness of financial management. These findings show that effective financial management can be achieved through good HR Management, but companies also need to consider external factors that can influence financial results. Therefore, companies should focus on developing employee competencies through investing in training and developing financial managerial skills, adapting to external factors such as market conditions and regulations to mitigate their impact, as well as developing comprehensive HR policies that integrate HR practices with policies that consider external dynamics. . With this balanced approach, companies can maximize the potential of HR Management in improving financial management while remaining responsive to external challenges.

The Influence of Human Resource Management on Digital Technology

The research results show that Human Resource Management (HR) has a positive and significant effect on the adoption of Digital Technology. These findings indicate that the stronger the HR Management, the higher the level of Digital Technology adoption in the organization, conversely, the weaker the HR Management, the lower the adoption of Digital Technology. Effective HR management plays an important role in supporting the adoption of digital technology through various means, such as training and developing relevant skills, as well as creating a work culture that supports technological innovation.

This research supports previous findings from (Thomas, 2021), which show that good HR training increases employees' ability to apply digital technology effectively. In addition, research by (Wilson, 2020) found a positive relationship between HR development and digital technology adoption in companies, indicating that HR development efforts can speed up the digital technology adoption process. However, research by (Robinson, 2022) provides a different perspective by stating that top management strategic decisions have more influence on digital technology adoption than HR policies. According to Robinson, although HR policies are important, strategic decisions made by top management often determine the direction and priorities of digital technology adoption within the company.

Thus, although HR Management plays an important role in facilitating the adoption of digital technology, strategic decisions at the top managerial level still play a key role in determining the success of digital technology implementation in the organization.

The Influence of Digital Technology on Optimizing Financial Management..

The results of hypothesis testing show that Digital Technology has a positive and significant influence on optimizing financial management. The use of digital technology enables increased efficiency and accuracy in financial management through various mechanisms, such as automation of financial processes, deeper data analysis, and reduction of human error. With the adoption of digital technology, companies can utilize advanced analytical tools and integrated systems to manage financial data more effectively, thereby improving the quality of decision making and cost control.

This research supports the results of previous research conducted by (Garcia, 2021), which shows that the adoption of digital technology can improve financial management performance by simplifying the process of automation and data analysis. In addition, (Lopez, 2022) found that digital technology plays a crucial role in optimizing company financial processes, indicating that digital technology can improve various aspects of financial management, from planning to financial reporting. However, research by (Hernandez, 2022) provides an additional perspective by stating that the benefits of digital technology in financial management are not always automatic, especially if they are not accompanied by adequate human resource capabilities. According to Hernandez, digital technology

must be balanced with HR skills and competencies to achieve optimal results; without competent human resources support, the implementation of digital technology may not have the expected positive impact.

Overall, these findings confirm that while digital technology can significantly improve financial management, successful optimization also depends on the human resource capabilities within the organization. Therefore, companies must ensure that the adoption of digital technology is accompanied by investment in developing HR skills to maximize the benefits that can be obtained.

The Influence of Human Resource Management, Digital Technology, and Organizational Innovation on Optimizing Financial Management.

The results of hypothesis testing show that Human Resources Management (HR), Digital Technology, and Organizational Innovation positively and significantly influence the optimization of financial management. These findings indicate that success in managing company finances can be achieved through an effective combination of these three elements. The synergy between efficient HR management, adoption of appropriate digital technology, and continuous organizational innovation has been proven to improve overall financial performance. This research is in line with the findings of (Anderson, 2022), which shows that synergy between HR management, digital technology and organizational innovation results in more optimal financial performance. Anderson emphasized the importance of integrating these three elements to achieve better financial results. Research (White, 2021) also supports these results by finding that the integration of these three factors contributes to increasing financial management efficiency, showing that the combination of these three elements complements each other to maximize the efficiency and effectiveness of financial processes.

However, research by (King, 2022) provides a different perspective by stating that these three factors do not always have a significant effect simultaneously. King identified that there are other variables that can influence financial management, so that these three factors do not always have a consistent impact in all contexts. This suggests that although the combination of these three elements is generally beneficial, its effectiveness can be influenced by external factors and company-specific conditions. In the context of technology start-ups, the role of HR management, digital technology and organizational innovation is very crucial. Technology start-ups often find themselves in a fast-changing and highly competitive business environment, where the ability to innovate and adopt the latest technology is key to success. Effective HR management ensures that employees have the necessary skills and receive the right training, creating a work culture that supports creativity and innovation. Thus, good HR management not only improves employee skills but also motivates them to innovate and contribute to better financial management.

Adoption of digital technology is another important aspect. A good digital infrastructure enables process automation, reduced costs, and increased operational efficiency. The right digital technology not only helps in financial management by providing accurate and real-time data but also enables better and faster decision making. The latest technologies provide significant competitive advantages, enabling start-ups to be more responsive to market needs and industry trends. Organizational innovation is also an important factor. Continuous innovation, including new product development and business process improvements, helps start-ups offer unique value to customers and differentiate themselves from competitors. The ability to continuously innovate is critical for start-ups to stay relevant in a rapidly changing market. Innovation not only improves products and services but can also improve internal processes and increase financial management efficiency.

Overall, to achieve financial management optimization, companies must develop a strategy that combines these three elements in a synergistic way. This holistic approach ensures that technology start-ups can harness the power of effective HR management, advanced digital technologies, and continuous organizational innovation, as well as overcome challenges that may arise from external variables or dynamic market conditions.

4. Conclusions

This research explores the relationship between Human Resources Management (HR), Digital Technology, and Organizational Innovation on Optimizing Financial Management, and finds that these three elements have a positive and significant influence on financial management. The synergy between

effective HR management, adoption of appropriate digital technology, and continuous organizational innovation has been proven to produce more optimal financial performance, showing that these three factors complement and support each other. Good HR management acts as a catalyst by increasing innovation, technology adoption, and financial management through training, development, and a supportive work environment. Digital technology contributes to the efficiency and accuracy of financial management, while innovation helps companies offer unique value and differentiate themselves from competitors. Although these three factors have a positive influence, this research also shows that external factors such as market conditions and regulations can significantly influence financial results. Therefore, companies need to consider these external factors and integrate HR management, digital technology and organizational innovation in their strategies. This integrated approach ensures that companies can leverage all three elements synergistically, overcome external challenges, and ensure long-term success and competitiveness in a dynamic marketplace.

This research makes a significant contribution to the field of management and technology, especially in the context of technology start-ups and financial management. First, this research enriches theory by explaining the interaction between HR management, digital technology, and organizational innovation and its impact on financial management, emphasizing the importance of synergy between these three elements. Second, the research results provide practical guidance for managers and company leaders to develop effective financial management strategies through the integration of HR, technology and innovation. This research also strengthens previous findings regarding the significant impact of the three elements on financial management, and provides a broader context for these results. The implications of these findings include the importance of developing HR policies that support innovation and technology, prioritization in the adoption of digital technology, continued encouragement for organizational innovation, and consideration of external factors that influence financial management. By integrating HR management, digital technology and organizational innovation in strategy, companies can maximize their financial management potential and overcome existing challenges, providing valuable insights for managerial practice and academic research.

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