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The Effect of Knowledge Management and Change Management on Labor Agility in Manufactur Companies

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Abstract
This study aims to analyze the influence of knowledge management and change management on labor agility in manufacturing companies. Knowledge management includes the acquisition, dissemination, and application of information that is essential for decision-making and employee collaboration. On the other hand, change management focuses on the company's ability to adapt to market and technological dynamics. Workforce agility is considered the ability of employees to adapt quickly and flexibly to changes that occur. The research method uses a quantitative approach with a questionnaire as the main instrument, which includes indicators of workforce agility, knowledge management, and change management. The data was analyzed using the Structural Equation Modeling (SEM) method with SmartPLS software. The results show that change management has a significant and positive effect on workforce agility, while knowledge management has no significant influence in this context. This indicates that an effective change management strategy determines workforce agility more than knowledge management. This research suggests the importance of implementing inclusive and sustainable change strategies and optimizing knowledge management through technology-based approaches and practical training. Thus, manufacturing companies can increase their competitiveness in the face of dynamic industry challenges.

Keywords: Knowledge Management, Change Management, Workforce Agility, Flexibility, Manufacturing Companies

Introduction

Organizational culture and knowledge management have a great influence on improving employee performance in a company. One of the factors related to efforts to improve human resource performance is related to knowledge management, where several previous studies have shown that knowledge management is able to affect employee performance.(Ardiansyah M, Wahyudi Djoko, 2017). There are market changes that cause a clash of organizational culture with knowledge management which makes knowledge management and organizational culture always related. Competitive and innovative companies need quality human resources to support the company's business activities.(Akhavan et al., 2014)

Knowledge management has many benefits for companies. In fact, not a few companies use Knowledge Management as the basic centralization of the company. The benefits of Knowledge Management include reducing the loss of intellectual capital when someone leaves the organization, reducing costs by repeating total expenses when the organization is solving problems, minimizing redundancy in knowledge-related activities, making improvements in order to increase productivity quickly and easily, increasing employee satisfaction by doing personal development and empowerment employees, driving competitiveness in market strategies. By utilizing knowledge, organizations can be more effective in order to utilize very limited resources. Without Knowledge, organizations or companies will be threatened from failure. The existence of knowledge management companies can further improve skills when taking learning from the surrounding environment. In addition, Knowledge Management is very important for the sustainability of a company's business processes (Handijono, 2020)

Knowledge management is a process that helps organizations to find, select, organize, disseminate, and transfer important information and expertise needed for activities (Nasser H. Zaied et al., 2012) The goal of Knowledge Management is not only to improve performance, but also to gain knowledge. With the availability of knowledge, employees will not only have a broad insight and perspective that is obtained not only limited to the scope of their work, but more thoroughly about the problems that exist on a corporate scale (Andra & Utami, 2018)

Agility is the ability to view change as an opportunity. Agility plays an important role for the company which will then create a quality contribution of relationships built in work, appropriate decisions and innovations, integration and flexibility of the company and proactive cooperation. The implementation of workforce agility can be achieved by going through a series of tasks given (Purnomo & Padjadjaran, 2017).

Company performance is the ability of an organization to achieve its goals by using resources efficiently and effectively (Daft, 2007) A company's performance describes the extent to which the organization is able to meet the needs of its stakeholders and its own needs to survive. Having employees who can manage knowledge well can be a source of organizational strategy to produce performance that continues to improve and produce an organization that has a competitive advantage and is able to survive the fierce competition and consumer demands along with the times.(Andra & Utami, 2018)

Based on the researcher's observations, there are still some employees who often receive reprimands from superiors/leaders because their performance is not satisfactory, the performance that is still not good in employees, namely knowledge in using technology and the inability of employees to share their knowledge among fellow employees, especially for new employees. (Khaerana, 2022) Therefore, it can be indicated that employees' indifference to the ability to improve knowledge and share knowledge (knowledge sharing) still has not received attention.(Khaerana, 2022)

Maintaining an organization's competitive advantage is an increasingly difficult management task in the era of the Industrial Revolution 4.0, due to several factors such as rapid technological developments, changes in customer preferences and needs, as well as increasing competition. As a result, organizations seek to adopt and adapt several strategies (e.g., knowledge management, and innovation) that have been effective in achieving high levels of success that have been proven(Asbari et al., 2021)

The practice of sharing knowledge in organizations, both public and private, has a positive impact on organizational performance and commitment. In this study, it is stated that knowledge shared and applied by employees can help organizations respond to changes more effectively, strengthening the ability of the workforce to adapt to new situations and changing external challenges(Almahamid, 2018). Organizational awareness in placing knowledge as the main driving force of the organization so that it becomes superior and develops is inevitable. (Chen et al., 2018) shows that Knowledge Management has a significant relationship with job satisfaction and employee performance. A conducive work environment is the key driver for employees to produce optimal performance. (Wahyuningsih, 2018) stated the role of job satisfaction mediation in the relationship between the influence of the work environment on employee performance. Knowlegde management is one of the elements that is currently popular in improving employee performance in organizations. Organizational awareness manages knowledge as an organizational resource so that it becomes inevitable to develop. (Khanal & Raj Poudel, 2017) showed that the Knowledge Management process component had a significant relationship with job satisfaction and employee performance. (Rahman & Hasan, 2017) also showed a significant positive effect of Knowledge Management and HRM practices on performance. Other elements.

Workforce agility involves factors such as rapid decision-making, collaboration, and transparency, all of which can be improved through effective change management. By implementing this approach, companies can create an environment that allows employees to be more flexible and responsive to change(Petermann & Zacher, 2022). Leadership agility theory, leaders can manage the organization they lead in such a way, so that they can remain and continue to survive and even develop in the VUCA era and especially in the current era of adapting to new habits(Fridayani, 2021), that by having agility characteristics, the organization will continue to be able to adjust the direction of business strategy to an environment that is experiencing consistent changes in various aspects.

Change Management (X1) has a positive and significant effect on employee performance. This is because the Company can analyze changes carefully and employees can anticipate changes so that they do not have a negative impact on the company's sustainability. The employees can effectively adapt to changes in the business environment, thus the company can maintain the survival of the company and can continuously increase profits (Krismanto et al., 2023). The reason for taking the research object with the title "The Influence of Knowledge Management and Change Management on Labor Agility in Manufacturing Companies" is based on the phenomena or problems found in the field, which shows the importance of this topic to be studied more deeply. Based on the available data, there is a significant increase in certain aspects related to the implementation of knowledge management and change management, which has a direct impact on the level of workforce agility.

The data obtained shows that manufacturing companies are increasingly faced with the challenge of adapting to technological developments and market changes. However, many companies still do not have a well-integrated knowledge management system and an effective change management strategy. As a result, employees find it difficult to adapt to changes, which can impact productivity and efficiency. Further, the data shows that organizations that successfully implement knowledge management and change management tend to have employees who are more agile, flexible, and ready to accept change. This

increase in agility not only optimizes the response of the workforce to change, but also increases the competitiveness of manufacturing companies. Based on this phenomenon, this study aims to study more deeply the impact of knowledge management and change management on employee agility and provide practical solutions to problems faced by manufacturing companies.

The purpose of this study is to find out the extent to which the application of knowledge management in manufacturing companies contributes to the adaptability of employees in responding to change. Through this analysis, we hope to find the most effective knowledge management elements to improve employee responsiveness and flexibility. In addition, this study aims to evaluate the impact of change management on employee agility, including the evaluation of methods and strategies used in change management. By providing a deeper understanding of the impact of change management, this research will help manufacturing companies develop the right strategies to minimize employee resistance to change and maintain productivity during the adaptation process. This study also aims to determine the synergistic relationship between knowledge management and change management in improving employee agility. By identifying the interactions between the two elements, this research shows how knowledge management and change management can support each other to create a more agile workforce and be prepared for the challenges the industry is dynamically created. The ultimate goal of this study is to provide practical recommendations to manufacturing companies to improve employee flexibility through the implementation of effective knowledge management and change management strategies. Therefore, the results of this research are expected to not only provide scientific contributions but also practical solutions that help companies maintain competitiveness and resilience in the face of rapid industry changes.

Methods

This study uses a quantitative approach to explore the influence of knowledge management and change management on workforce agility in manufacturing companies. The population in this study is employees who work in manufacturing companies, with sampling techniques using non-probability sampling through the purposive sampling method. The research sample was calculated using the formula Hair et al., which is 5–10 times the number of indicators, so that 99 respondents were obtained. The research instrument is in the form of a questionnaire designed based on variable indicators. Data collection through questionnaires is distributed online. The first independent variable is knowledge management with indicators of knowledge acquisition, dissemination, and application; the second independent variable is change management with indicators of change management, dynamic capability, and leadership agility; and the dependent variable is the agility of the workforce with indicators of adaptability, speed and accuracy, and communication. The data was measured using the Likert scale and analyzed by the Structural Equation Modeling (SEM) method using SmartPLS software to comprehensively test the relationship between variables. The reason the researchers used the smartPLS data processing tool is because it is suitable for analyzing the relationships of latent variables in research models with relatively small sample sizes, non-normally distributed data, and complex models with mediation or moderation relationships.

Results and Discussion

Respondent Profile

Table 1 Respondent Profile Results

Characteristic	Category	Frequency	Percentage
Gender	Man	44	45%
	WOMAN	54	55%
Age	18-25 Years	91	93%
	25-35 YEARS	4	4%
	> 35 YEARS	3	3%
Last Education	High School/Vocational School Equivalent	80	82%
	DIPLOMA	4	4%
	S1	13	13%
	S2	1	1%

Source: SmartPLS Data Processing (2024)

The respondent profiles in this study include various demographic characteristics that reflect the diversity of participants' backgrounds. Based on gender, the majority of respondents were women as many as 54 people (55%), while male respondents amounted to 44 people (45%). In terms of age, the age group of 18-25 years dominated with 91 respondents (93%), followed by the age group of 25-35 years as many as 4 respondents (4%), and over 35 years old as many as 3 respondents (3%). In terms of last education, most of the respondents had a high school/vocational education level equivalent to 80 people (82%). The rest consisted of 4 people (4%) Diploma graduates, 13 people (13%) S1 graduates, and 1 person (1%) S2 graduates. This data shows that the majority of respondents are the younger generation with secondary education backgrounds

Validity Test

Table 2 Outer Loading Results

	Labor Agility	Knowledge Management	Change Management	Information
ATK10	0,792			Valid
ATK2	0,806			Valid
ATK3	0,827			Valid
ATK4	0,753			Valid
ATK5	0,765			Valid
ATK6	0,801			Valid
ATK7	0,834			Valid
ATK9	0,778			Valid
KM3		0,812		Valid
KM4		0,817		Valid
KM5		0,801		Valid
KM6		0,825		Valid

KM7	0,840		Valid
KM8	0,845		Valid
KM9	0,838		Valid
MP1		0,829	Valid
MP10		0,813	Valid
MP2		0,808	Valid
MP3		0,735	Valid
MP4		0,817	Valid
MP5		0,844	Valid
MP6		0,729	Valid
MP7		0,800	Valid
MP8		0,784	Valid
MP9		0,779	Valid
KM1			

Source : SmartPLS Data Processing (2024)

The validity test using the results of outer loading in this study showed that all indicators had a loading factor value above 0.70, which is the minimum limit value to show the validity of a good indicator. These indicators include three main variables: Workforce Agility, Knowledge Management, and Change Management. In the Labor Agility (ATK) variable, the loading factor value ranges from 0.753 to 0.834, indicating that all indicators are valid. Similarly, the indicators for the Knowledge Management (KM) variable have consistently high loading factor values, ranging from 0.713 to 0.845, indicating that all indicators are valid in measuring this construct. The Change Management Variable (MP) also showed valid results with loading factor values ranging from 0.729 to 0.844. Based on these results, it can be concluded that all indicators are valid and can be used in the measurement of variables in this study.

Reliability Test

Table 3 Reliability Test Results

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
ATK	0,917	0,918	0,932	0,632
MILES	0,927	0,940	0,939	0,660
MP	0,935	0,941	0,945	0,631

Source : SmartPLS Data Processing (2024)

The results of the reliability test show that all variables have an excellent level of internal consistency. Cronbach's Alpha scores for Workforce Agility of 0.917, Knowledge Management of 0.927, and Change Management of 0.935, all of which are above the threshold of 0.7, indicate high reliability. The rho_A and Composite Reliability values for all variables also exceeded the minimum value of 0.7, confirming adequate construction consistency. In addition, the Average Variance Extracted (AVE) values for each variable were above 0.5, namely Labor Agility (0.632), Knowledge Management (0.660), and Change

Management (0.631), which indicates good convergence validity. Thus, the instrument used in this study was declared reliable and valid to measure the construct in question.

R Square Test

Table 4 R Square Results

	R Square	R Square Adjusted
ATK	0,519	0,509

Source : SmartPLS Data Processing (2024)

The results of the R Square test showed that the independent variable in this study was able to explain 51.9% of the variation in the dependent variable, namely Labor Agility (ATK), with an R Square value of 0.519. Meanwhile, the Square Adjusted R value of 0.509 indicates the level of adjustment after taking into account the number of independent variables in the model. This indicates that the research model has quite good predictive ability, although there is still 48.1% variation in the Labor Agility variable explained by other factors outside this model.

Path Coefficiens

Table 5 Results of Path Coefficiens

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P-Values
KM -> ATK	-0,001	0,026	0,170	0,006	0,995
MP-> ATK	0,721	0,714	0,107	6,727	0,000

Source : SmartPLS Data Processing (2024)

The results of the path coefficients analysis showed the relationship between the variables Knowledge Management and Workforce Agility, as well as Change Management and Workforce Agility. Based on the table, the relationship between Knowledge Management and Labor Agility has a native coefficient value of -0.001 with a p-value of 0.995, which is far above the significant threshold of 0.05. This shows that the influence of Knowledge Management on Labor Agility is not significant. On the other hand, the relationship between Change Management and Workforce Agility has a coefficient value of 0.721 with a p-value of 0.000, which shows a positive and significant influence. With a T-statistics value of 6.727 (well above 1.96), this indicates that Change Management plays a big and significant role in increasing Labor Agility. These results highlight the importance of effective change management in building a more responsive and flexible workforce in dealing with organizational dynamics.

Variable X1, namely knowledge management, has a weak relationship with labor agility (Y). This indicates that knowledge management in organizations does not make a significant contribution in improving the ability of the workforce to adapt to change. One of the reasons that can explain this is the lack of optimal implementation of knowledge management that is relevant to the needs of employees in manufacturing companies. Good knowledge management is supposed to help employees access important information, share

insights, and apply them in daily tasks. However, if the applied knowledge system is inappropriate or difficult to access, this can hinder the contribution of knowledge to the flexibility and responsiveness of the workforce. In addition, the lack of practical training to utilize knowledge is also a factor that affects the weakness of this relationship. Thus, while knowledge management has the potential to support workforce agility, its implementation needs to be tailored to the characteristics and needs of the organization. Companies can increase the positive impact of knowledge management by integrating digital technologies, providing experience-based training, and fostering a culture of active information sharing. This can turn knowledge into a more effective resource in supporting the ability of the workforce to cope with change.

The profile of the research respondents shows that the majority of the workforce comes from the young age group with secondary education background. This characteristic affects how knowledge management (X1) is applied and accepted in the organization. Young workers are generally more adaptive to technology, but they need a learning approach that is simple, applicative, and relevant to daily needs. Digital-based knowledge management, such as information sharing platforms or e-learning systems, can be an effective solution to increase the accessibility and relevance of knowledge for respondents. However, the success of this approach relies heavily on the design of a system that is user-friendly and supports collaboration. In addition, practical experience-based training can help young workers understand the application of knowledge in real-world contexts, thereby encouraging increased their flexibility in dealing with change. On the other hand, secondary education backgrounds show the need for strategies that are more focused on strengthening basic skills and increasing employees' intellectual capacity. This approach includes training designed to improve technical and non-technical abilities relevant to work dynamics. By understanding the workforce characteristics of these respondent profiles, companies can develop a more targeted knowledge management program. This will not only increase the effectiveness of the knowledge system, but also strengthen the ability of the workforce to respond better to change, ultimately supporting workforce agility in the organization.

Previous research that describes developing a theoretical framework that links the use of knowledge management systems to organizational agility, by highlighting the mediating role of absorbive capacity. They found that the implementation of knowledge management systems can effectively increase an organization's capacity to absorb new information, which in turn increases organizational agility.(2017)

Knowledge management in the organization to increase employee flexibility and responsiveness. This study found that good knowledge management plays a role in creating a culture of collaboration, which in turn supports increasing workforce agility. This is relevant to the results of this study which shows that the dominant young generation in the respondent profile is more ready to adopt a digital-based system that facilitates collaboration and knowledge sharing.(2014)

This research makes significant theoretical contributions to the literature on human resource management and organizations, especially related to the relationship between knowledge management, change management, and workforce agility. Theoretically, this study shows that knowledge management does not always exert a significant influence on workforce agility, supporting the view that the success of knowledge management is highly dependent on its relevance and implementation in an organizational context. In addition,

these findings confirm the importance of change management as a major factor influencing workforce agility, in line with the theory that the success of organizations in dealing with change depends on their ability to manage change effectively. This research also enriches the literature on workforce agility by highlighting the importance of synergy between change management and employee development to create flexibility and responsiveness to environmental dynamics.

This research provides practical guidance for companies, especially in the manufacturing sector, to prioritize inclusive and sustainable change management strategies. This strategy includes employee training, transparent communication, and active employee involvement in the change planning process to minimize resistance. In addition, although knowledge management does not have a significant influence in the context of this research, companies still need to evaluate its implementation by utilizing digital-based technologies to share information and provide experiential training. Companies are also advised to develop employee competencies through practical training relevant to operational needs, especially for young workers with secondary education backgrounds. Furthermore, creating a collaborative work culture and supporting continuous learning can increase workforce flexibility and encourage more effective knowledge sharing activities. By implementing these findings, companies can strengthen workforce agility, increase competitiveness, and be better prepared to face the challenges of an ever-evolving industry.

Conclusion

Based on the results of this study, it can be concluded that Change Management has a significant influence on Workforce Agility, while Knowledge Management does not show a significant influence. Nonetheless, Knowledge Management has the potential to increase the flexibility of the young workforce, particularly through technology and knowledge-sharing platforms that support collaboration. The profile of the majority of respondents aged 18-25 years with a secondary education background shows that the Knowledge Management strategy should be focused on experiential training and digital collaboration to improve workforce adaptability. Change Management, on the other hand, has been shown to have a great influence in improving Workforce Agility, with a significant coefficient value, which emphasizes the importance of effective change management strategies in creating a workforce that is responsive and flexible to organizational change. While Knowledge Management can support workforce agility, the main challenge lies in how to optimize the implementation of more practical and applicable knowledge, while the success of Change Management is highly dependent on the organization's ability to design and implement profound and sustainable change. Therefore, to improve Workforce Agility, organizations must focus on implementing effective Change Management strategies and support Knowledge Management with adequate experiential training, as well as technology-based collaborative learning.

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