




The Influence of Cooperation, Work Discipline, Occupational Health and Safety (K3) On Employees

^{1*} Riska Rahmawati

¹ Sanskara Karya Internasional

*corresponding e-mail: khariska578@gmail.com

Article Info	Abstract
<p>Keywords: Cooperation, Work Discipline, Occupational Health and Safety (K3)</p>	<p><i>Through a series of HR activities, namely planning, managing, directing and utilizing human resources productively, company goals will be achieved. In the company, it is very important that the name management and employees, the two elements cannot be separated. chose a qualitative approach method with a case study approach. This research method uses quantitative methods. The results of this study state that teamwork has a positive and significant effect on employee performance. In the application of occupational health and safety (K3) management in terms of internal factors and nurse behaviour in terms of external factors. Coordination and communication are very important for smooth performance between employees and between departments. Occupational health safety (K3) has a partial effect on employee productivity. Work discipline and occupational health safety (K3) simultaneously affect employee work productivity.</i></p>


This is an open access article under the CC-BY-SA license.

INTRODUCTION

Human resource management is very important for companies or agencies. Through a series of activities of planning, managing, directing, and utilizing human resources productively, company goals will be achieved. We know that human resources are the most important element in achieving goals or agencies. In the company, it is very important that the name management and employees, the two elements cannot be separated. If the management is good and the employee performance is also good, the company's goals will be achieved because employees are a very valuable asset in achieving company goals. As an employee doing a job must be as effective and efficient as possible. The quality and quantity of employees must be by the needs of employees and the placement of labor must also be appropriate and by their desires and expertise.

Human resources are one of the important factors in an organization or agency. Human resources must be managed properly to increase effectiveness and

efficiency in the organization. For this reason, good human resource management is needed to support the achievement of organizational goals. Performance improvement in human resources is needed for the progress of an agency. Personality is one of the important factors for an agency to see the performance of its employees because a person's personality will determine the results of his own work. Personality is the background of a person's behaviour. This means that personality shows the behaviour of an individual's attitudes to be able to do, know, and think in an organization. According to (Brackett et al., 2011) personality is a set of ways how an individual reacts and interacts with others. Personality is one of the most important factors for individuals, because personality determines how a person thinks, behaves and feels in various situations.

LITERATURE REVIEW

Cooperation

To make it easier to do a job, humans work together with other individuals. With good team-work all requirements will be met within the stipulated time. Teamwork should be enabled within the institution and should get the widest possible opportunity in decisive situations, such as when it comes to making decisions and solving problems. Ivancevich et al define teams: "*Teams are a special type of task group, consisting of two or more individuals responsible for the achievement of a goal or objective*". Teams are a special type of work group, consisting of two or more individuals responsible for the achievement of a goal. Meanwhile, Stephen P. Robbins argues "A group whose individual efforts result in a performance that is greater than the sum of the individual inputs".

A group where the individuals involved in it provide greater performance than the sum total of the performance provided by individuals (Al-Qudah & Houcine, 2024; Feng et al., 2022). From the above opinions, it can be concluded that teams and groups have the same concept. Thus, teams and groups are individuals who do work together to produce greater performance compared to working individually.

Teams can make changes faster than working individually, because individuals who are members of the team complement each other's expertise and the process and results of achieving team goals are a shared responsibility. In a team of individuals, who are members of a unit, so that there is interaction and mutual influence in achieving organizational goals. In a team, diverse expertise is also needed to complement each other's information and data needs, as well as

commitment in the process of achieving common goals. This definition is similar to that conveyed by Moorhead and Griffin, Kreitner and Kinicky, and Batteman and Snell in their books which use Katzenbach and Smith's understanding to explain the team concept.

The opinion of the experts above is reinforced by Greenberg and Baron, who state that, "Teams whose members are concerned primarily with using the organization's resources to effectively create its results". Teams where members focus on using organizational resources to effectively get the desired results. In achieving a common goal the team uses its resources effectively, so it is more efficient when a job is done together than individually.

Work Discipline

Discipline is a starting point in achieving success for the company. The application of discipline in a company is very important so that all employees in the company are willing to voluntarily obey and obey all applicable regulations without coercion and if there is a violation of existing regulations, sanctions will be given by the company. Good work discipline can be seen from the high awareness of employees in obeying and complying with all applicable regulations and the amount of responsibility for the duties of each employee (Puryanti et al., 2023; Syarifuddin, 2023).

Occupational Health and Safety (OHS)

Occupational Health and Safety (K3) is an effort to create a safe, comfortable working atmosphere and achieve the goal of the highest productivity. Occupational Health and Safety is very important to be implemented in all fields of work without exception building construction projects such as apartments, hotels, malls and others, because the application of OHS can prevent and reduce the risk of accidents and diseases due to work. (Burke et al., 2011) suggest that occupational health and safety (OHS) training can reduce the risk of work accidents. The greater the employee's knowledge of OHS, the smaller the risk of work accidents, and vice versa, the less the employee's knowledge of OHS, the greater the risk of work accidents. The occurrence of work accidents starts from management dysfunction in efforts to implement Occupational Health and Safety (K3). This imbalance is the basic cause of work accidents.

With the increasing cases of work accidents and losses due to work accidents, as well as the increasing potential hazards in the production process, effective, comprehensive, and integrated management of OHS in company management is

needed. Effective OHS management in organizations can help to improve the spirit of workers and enable them to have confidence in the management of the organization (Akpan, 2011). While the factors that cause work accidents are caused by human factors (unsafe human acts), in the form of human actions that do not experience safety such as not wearing Personal Protective Equipment (PPE), working not according to procedures, working while joking, placing tools or goods incorrectly, improper work attitudes, working near rotating equipment, fatigue, boredom and so on. In addition to human factors, it is also caused by environmental factors (unsafe conditions), in the form of unsafe environmental conditions, such as machines without safety guards, work equipment that is no longer good but is still used, inadequate lighting, inappropriate workspace layout, weather, noise, and slippery work floors.

Risk controls that can be carried out at the risk of work accidents are daily OHS inspections for the use of complete PPE (Personal Protective Equipment), tightening management supervision of workers who do not wear personal protective equipment, providing and completing safety signs in construction projects (Sepang, 2013). This is by law No. I of 1970 concerning Occupational Safety. The provision of PPE to employees must be followed by basic procedures informed of the hazards caused and trained on how to wear and maintain it properly.

Cooperative relationships, work discipline, and occupational health and safety (K3)

The definition of cooperation is a job that is done by a group of individuals that involves interaction and cooperation until the goal is achieved. The form of cooperation consists of several human resources from several different backgrounds, but has the same position and is active in an organization or company to carry out a commitment together to achieve the same goal. The common goal is the basis for the company or agency to form solid teamwork. Achieving these common goals certainly requires the abilities or skills of each different member.

In teamwork, each member has different abilities, from the shortcomings of each member, it makes a strong team with various characters and different abilities. Even though each member has different abilities, they have the same goal for the company. Common goals can be achieved if the objectives and targets have been set by the teamwork formed. If the objects and targets are not yet known then the achievement of the common goal is certainly very difficult to obtain. In achieving a common goal, not everything can go smoothly, this is because each member has

different thoughts but these differences will be merged into one as the achievement of a common goal.

As a form of achieving a common goal, several steps and ideas must be realized simultaneously. A good teamwork that has good skills will make real steps that are effective and efficient for achieving common goals. Human resources are the most important asset in the organization because they play a role in achieving organizational objectives. Human resources are an advanced dynamic factor that can determine or attract an organization so that agencies with reliable human resources can win the competition (Senen et al., 2016).

Human resources remain an important part of a company or organization, therefore human resources are carefully considered (Lustanti et al., 2015). Employees who work according to their abilities and according to their position will relatively work well. If individual performance is good, the company's performance will also be good. Employee performance is very important in an organization's efforts to achieve its goals (Wahyuni & Senen, 2016). relatively low employee performance is indicated by increased employee absenteeism, but there are still ways to improve it. Achieving employee performance can be through assessing employee work discipline.

Work discipline as an attitude of a person's willingness and willingness to obey and obey the norms of the rules that apply around him (Ayu & Suarjaya, 2017). Employee discipline is necessary so that all activities that are being and will be carried out run according to a predetermined mechanism. Work discipline will encourage employees not to take actions that can harm the company (Mariani & Sariyathi, 2017). Improving employee work discipline requires good work facilities. Work facilities are a form of company service to employees to support performance in meeting employee needs, and to increase employee work productivity (Amirudin, 2021).

Some factors affect performance, among others: compensation, work environment, work culture, motivation, work discipline, workability, and K3 (Meltareza & Permana, 2022). (Mariani & Sariyathi, 2017) stated that employee performance is influenced by intrinsic and extrinsic employee factors. Intrinsic factors that affect employee performance consist of education, experience, motivation, health, age, skills, emotions and spirituality. Extrinsic factors that affect employee performance consist of physical and non-physical environments, leadership, vertical and horizontal communication, compensation, facilities, training, workload, work procedures, penalty systems, and so on.

Occupational safety and health programs should start from the most basic stage, namely the establishment of an occupational safety and health culture. Occupational safety and health programs can function and be effective, if the program can be communicated to all levels of individuals. When employees feel guaranteed occupational safety and health and are accompanied by incentives, the expectation for employees to work as optimally as possible is very high. Meanwhile, incentives are often interpreted as a driver or encouragement given deliberately to workers, so that in themselves there is a greater enthusiasm for achievement. Incentives as a stimulus so that employees work with full responsibility so that employee performance can be achieved (Kim, 2023).

Occupational safety and health is one of the maintenance programs in the company. The implementation of occupational safety and health programs for employees is very important because it aims to create an occupational safety and health system by involving elements of management, labor, conditions, and an integrated work environment to reduce accidents (Brhane & Zewdie, 2018). The development of the company is highly dependent on the performance of its employees. If it can maintain and take care of all its employees properly. Through a good OHS program, it is expected to reduce the level of work accidents and be able to improve employee performance, so that their work performance increases which is reflected in improved service to customers and the community. With the K3 program, conflicts between employees and the company regarding employee safety guarantees can be resolved, because employees assume that the company will think about their safety while working.

RESEARCH METHODS

The method used in this research is the literature review method. The literature review method is a method used to collect data or sources related to a particular topic that can be obtained from various sources, such as journals, books, the internet, and other libraries. The journals used in the literature review were obtained through the Indonesian journal provider database through www.google.com 1, and <http://www.scopus.com> 2. Then the author wrote down the keywords "cooperation, work discipline, occupational health and safety" and searched with other keywords related to this research. Of the many findings obtained, only 15 journals were included in this study. The author took 15 journals from the findings to be used as sources related to the topic or research to be discussed. Of the 15 journals, there are 10 Indonesian journals and 5 English journals.

Table 1. Literature review

No.	Author	Title	Methods	Assessment procedure	Results
1	Eva Silvani Lawas, Boge Triatmanto	The influence of communication, motivation and teamwork on improving employee performance	Quantitative, multiple linear	To determine the effect of communication, motivation, and teamwork on employee performance and analyze the variables that have a dominant effect on employee performance.	The data obtained in this study are primary data by distributing questionnaires to respondents. The data analyzed using multiple linear regression, it can be seen that the variable that has a dominant effect in improving employee performance is the communication variable. Communication is very important in life, with effective communication being able to unite individual thoughts in the organization.
2	Pandi Wibowo, Azis Fathoni	Development of cooperation patterns	quantitative	This research aims to determine the	From the research that has been done, the

	SE, MM, Maria Magdalena Minarsih SE, MM	between PT DONG BANG INDO employees to increase employee performance stimulus.		development of employee performance at PT Dong Bang Indo through the development of cooperation patterns. This research is expected to improve the quality of employee performance with the implementation of communication cooperation patterns.	following results are obtained, that there is a good influence with the application of communication cooperation patterns that can improve the lack of cooperation between employees at PT Dong Bang Indo and can overcome the problems found at PT Dong Bang Indo.
3	Wahyu Kusuma Pratiwi, Dwiarko Nugrohoseno	The influence of personality on teamwork and its impact on employee performance	Quantitative	Identify factors that can affect performance, such as personality and teamwork	Teamwork has a positive and significant effect on employee performance. This shows that teamwork that is well established and optimal, the better the work results.
4	Fanita Achmad, Utik Bidayati	The influence of wages, cooperation between employees, and	Qualitative	To determine the effect of wages, cooperation between	The results of this study indicate that the work environment

		work environment on morale at PT OSKSA ART STUDIO BANTUL YOGYAKARTA.		employees and the work environment on morale at PT Oksa both partially and simultaneously.	variable has a positive effect on employee morale, so researchers suggest that companies can create a comfortable and pleasant work environment for employees so that employee job satisfaction can increase.
5	M. Basri Kamal	The influence of leadership and supervision on employee work discipline at PT. PERKEBUNAN NUSANTARA III (PERSERO)	Quantitative	The identification of this research problem is that there are still employees who lack discipline at work, this can be seen from most employees who make mistakes in their work. Supervision that does not go well during working hours of employees who leave the office. Leadership pays less attention to	Leadership is very influential on work discipline. Work discipline supervision. From the calculations that influence leadership and supervision of work discipline. The most dominant variable influence on work discipline is the supervision variable.

				employees at work.	
6	Indra Sasangka, Asep Suwarna, Rana Juliansyah	The effect of compensation on employee discipline at PT. PUTERA PAPAN HUTAMA	Qualitative	Aimed at achieving goals or objectives that have been set before employee performance is the result of employee work in carrying out tasks in accordance with the responsibilities assigned to all employees.	Compensation reflects the status, recognition and level of fulfillment of needs enjoyed by employees and families so that it can affect employee job satisfaction. Compensation is believed to affect the discipline and performance of employees of PT Putera Papan Hutama.
7	Wahyudi	The effect of discipline and motivation on employee performance	Quantitative	Poor employee performance is not just a matter of attitude, other things such as not achieving targets and customer complaints. Performance studies are needed, and research specifically to	Shows that the contribution of motivation and discipline to performance is significant. Performance will not be achieved if one of them lacks motivation and discipline rules.

				examine the effect of motivation and discipline on performance.	
8	Saloni Waruwu, Ferida Yuamita	Analysis of occupational health and safety (OHS) factors that significantly affect work accidents in the student castle apartment construction project	Quantitative	Efforts to create a safe, comfortable working atmosphere and achieve the goal of maximum productivity. Know the factors in occupational safety and health training	Minimizing the occurrence of work accidents on construction projects, namely management is responsible for developing and maintaining a program to prevent work accidents and improve work practices and safe conditions, while employees have the responsibility to protect the safety and health of themselves and others who may be the result of their actions or negligence.
9	Riska Nazirah, Yuswardi Yuswardi	Nurses' behavior in implementing occupational health and safety (OHS)	Quantitative	To find out how the behavior of nurses in the implementation of occupational	A description of nurses' behavior in implementing occupational health and

		management in Aceh		health and safety management (K3) in Aceh Province.	safety (OHS) management in terms of internal factors and nurses' behavior in terms of external factors was obtained. Hospitals can conduct socialization about OHS management more optimally so that there is no longer bad behavior from nurses in OHS management.
10	Andi Hendrawan	Shipboard health and safety program	Qualitative	To explain the shipboard occupational safety and health program as part of management.	Produce occupational safety and health programs including; counseling, training, health checks and protective equipment (PPE). Counseling and training are conducted to increase knowledge about OHS. In

					<p>general, shipping uses medical devices and personal protective equipment for ship crews is adequate because it has become a standardized rule. Health checks are also carried out before carrying out work, during regular work and when stopping work.</p>
11	<p>Novi Febriyanti, A. Fikri Amiruddin Ihsani</p>	<p>Development strategy of human resource management for millennial generation</p>	<p>Qualitative</p>	<p>The aim is to answer the formulation of problems regarding the characteristics of the millennial generation related to work culture and human resource development strategies for the millennial generation.</p>	<p>Proving that the strategies are ways to improve each individual's ability such as responsibility training, intensive learning, behavior modification, immediate information, practice, and learning patterns. Factors</p>

					supporting sustainability are ability, motivation, and opportunity.
12	Sukowati, Afrizal, Wargianto	The effect of work discipline, organizational and training commitments to performance that impac to work achievement.	Quantitative	Examine work discipline, organizational commitment and performance training that have an impact on teacher performance at SMA Negeri 1 Kelapa.	It is known that the influence of work discipline, organizational commitment, and training on employee performance that the simultaneous influence of variables of work discipline, organizational commitment and teacher performance training, the partial influence of variables simultaneously work discipline, the partial influence of organizational commitment variables on performance, the partial influence of training

					variables on performance, the partial influence of performance variables on job performance.
13	Wahyu Arif Sujatmiko, Realize	Effect of motivation and discipline on employees performance of PT. Cipta Catur Mahkota	Quantitative	Aims to describe how motivation and work discipline affect employee performance at PT Cipta Catur Mahkota.	The results of this study indicate that motivation has a positive and significant effect on the performance of employees of PT Cipta Catur Mahkota, work discipline has a positive and significant effect on employee performance.
14	Mohammad Lutfi, Siswanto	A transformational leadership and its implication on employee performance through organizational culture and motivation	Quantitative	To analyze the effect of transformational leadership on employee performance through organizational culture and motivation variables.	The research results have managerial implications, namely to improve employee performance it is necessary to optimize the role of leadership that encourages employee work

					motivation. This research emphasizes the contribution of transformational leadership and motivation in improving employee performance.
15	IKetut Sudiardhita, Agus Supriyanto, Mardi	The effect of recruitment, selection and motivation to performance of employees at Datacomm Diangraha Company	Quantitative	Aims to empirically examine the effect of recruitment, selection and motivation on employee performance at Datacomm Diangraha Company.	Partial tests show that recruitment has a big effect on performance. Selection has a significant effect on employees. Motivation has a big effect on employee performance. It shows that all variables have met the criteria for validity and reliability, while the structural model analysis shows that hypothesis testing supports the proposed hypothesis. Recruitment, selection and

					motivation affect employee performance.
--	--	--	--	--	---

RESULT AND DISCUSSION

The formulation of the problem emphasized in the research

In the research of Eva Silvani Lawas, Boge Triatmanto, about the effect of communication, motivation, and teamwork on improving employee performance. To determine the effect of communication, motivation, and teamwork on employee performance and analyze the variables that have a dominant effect on employee performance.

Pandi Wibowo, Azis Fathoni SE, MM, Maria Magdalena Minarsih SE, MM. About the development of cooperation patterns between employees of PT Dong Bang Indo to improve employee performance stimulus. This research aims to determine the development of employee performance at PT Dong Bang Indo through the development of cooperation patterns. This research is expected to improve the quality of employee performance with the implementation of communication cooperation patterns.

Wahyu Kusuma Pratiwi, Dwiarko Nugrohoseno, on the influence of personality on teamwork and its impact on employee performance. Identifying factors that can affect performance, such as personality and teamwork. Fanita Achmad, Utik Bidayati, about the effect of wages, cooperation between employees, and work environment on morale at PT Oksa Art Studio Bantul Yogyakarta. To determine the effect of wages, cooperation between employees and the work environment on morale at PT. Oksa both partially and simultaneously.

M. Basri Kamal, about the influence of leadership and supervision on employee work discipline at PT. Perkeban Nusantara III (PERSERO). identify the problem of this research there are still employees who lack discipline at work, this can be seen in most employees who make mistakes in their work. Supervision that is not going well during working hours of employees who leave the office. Leadership pays less attention to employees at work.

Indra Sasangka, Asep Suwarna, Rana Juliansyah, about the effect of compensation on employee discipline at PT Putera Papan Utama. Aimed at achieving goals or objectives that have been set before employee performance is the result of employee work in carrying out tasks by the responsibilities assigned to all employees.

Wahyudi, on the influence of discipline and motivation on employee performance. Poor employee performance is not just a matter of attitude, other things such as not achieving targets and customer complaints. Performance studies are needed, and research specifically to examine the effect of motivation and discipline on performance.

Saloni Waruwu, Ferida Yuamita, about Analysis of occupational health and safety (OHS) factors that significantly affect work accidents in the student castle apartment construction project. Efforts to create a safe, comfortable work atmosphere and achieve maximum productivity goals. Knowing the factors in occupational safety and health training.

Riska Nazirah, Yuswardi Yuswardi, about Nurses' behavior in the implementation of occupational health and safety (OHS) management in Aceh. To find out how the behavior of nurses in the implementation of occupational health and safety (OHS) management in Aceh Province. Andi Hendrawan, about the occupational health and safety program on board the ship. To explain the occupational health and safety program on board as part of management.

Novi Febriyanti, A. Fikri Amiruddin Ihsani, about Development strategy of human resource management for the millennial generation. The aim is to answer the formulation of problems regarding the characteristics of the millennial generation related to work culture and human resource development strategies for the millennial generation. Sukowati, Afrizal, Wargianto, on Examining work discipline, organizational commitment and performance training that have an impact on teacher performance at SMA Negeri 1 Kelapa.

Wahyu Arif Sujatmiko, Realize, about Effect of motivation and discipline on employee performance of PT Cipta Catur Mahkota. Aims to describe how the influence of motivation and work discipline on employee performance at PT Cipta Catur Mahkota.

Mohammad Lutfi, Siswanto, about transformational leadership and its implication on employee performance through organizational culture and motivation. To analyze the effect of transformational leadership on employee performance through organizational culture and motivation variables.

IKetut Sudiardhita, Agus Supriyanto, Mardi, about the effect of recruitment, selection, and motivation to the performance of employees at Datacomm Diangraha Company. Aims to empirically examine the effect of recruitment, selection, and motivation on employee performance at Datacomm Diangraha Company.

Research results

In the research of Eva Silvani Lawas, Boge Triatmanto found the data obtained in this study are primary data by distributing questionnaires to respondents. The data analyzed using multiple linear regression, it can be seen that the variable that has a dominant effect in improving employee performance is the communication variable. Communication is very important in life, with effective communication being able to unite individual thoughts in the organization.

Pandi Wibowo, Azis Fathoni SE, MM, Maria Magdalena Minarsih SE, MM From the research that has been done, the following results are obtained, that there is a good effect with the application of communication cooperation patterns can improve the lack of cooperation between employees at PT Dong Bang Indo and can overcome the problems found at PT Dong Bang Indo.

Wahyu Kusuma Pratiwi and Dwiarko Nugrohoseno stated that teamwork has a positive and significant effect on employee performance. This shows that teamwork that is well established and optimal, the better the work results. Fanita Achmad and Utik Bidayati found the results of this study indicate that the work environment variable has a positive effect on employee morale, so researchers suggest that companies can create a comfortable and pleasant work environment for employees so that employee job satisfaction can increase.

M. Basri Kamal stated that leadership is very influential in the work discipline. Work discipline supervision. From the calculations that influence leadership and supervision of work discipline. The most dominant variable influence on work discipline is the supervision variable.

Indra Sasangka, Asep Suwarna, Rana Juliansyah, Compensation reflects the status, recognition and level of fulfillment of needs enjoyed by employees and families so that it can affect employee job satisfaction. Compensation is believed to affect the discipline and performance of employees of PT Putera Papan Utama. Wahyudi shows that the contribution of motivation and discipline to performance is significant. Performance will not be achieved if one of them lacks motivation and discipline rules. Saloni Waruwu, Ferida Yuamita, Minimizing the occurrence of work accidents on construction projects, namely management is responsible for developing and maintaining a program to prevent work accidents and improve work practices and safe conditions while employees have the responsibility to protect the safety and health of themselves and others who may be the result of their actions or negligence.

Riska Nazirah, Yuswardi Yuswardi, Obtained an overview of nurse behavior in the implementation of occupational health and safety (OHS) management in terms of internal factors and nurse behavior in terms of external factors. Hospitals can conduct socialization about OHS management more optimally so that there is no longer bad behavior from nurses in OHS management.

Andi Hendrawan, Produces occupational safety and health programs including; counseling, training, health checks, and protective equipment (PPE). Counseling and training are conducted to increase knowledge about OHS. In general, shipping use of medical devices and personal protective equipment for ship crews is adequate because it has become a standardized rule. Health checks are also carried out before carrying out work when doing work periodically, and when stopping work.

Novi Febriyanti, A. Fikri Amiruddin Ihsani, Proving that the strategies carried out are ways to improve the abilities of each individual such as responsibility training, intensive learning, behavior modification, immediate information, practice, and learning patterns. Supporting factors for sustainability are ability, motivation, and opportunity. Sukowati, Afrizal, Wargianto, It is known the influence of work discipline, organizational commitment, and training on employee performance that the simultaneous influence of variables of work discipline, organizational commitment, and teacher performance training, the partial influence of variables simultaneously work discipline, the partial influence of organizational commitment variables on performance, partial influence of training variables on performance, the partial influence of performance variables on job performance.

Wahyu Arif Sujatmiko, Realize, The results of this study indicate that motivation has a positive and significant effect on the performance of employees of PT Cipta Catur Mahkota, and work discipline has a positive and significant effect on employee performance. Mohammad Lutfi, Siswanto, Hasil research has managerial implications, namely to improve employee performance it is necessary to optimize the role of leadership that encourages employee work motivation. This research emphasizes the contribution of transformational leadership and motivation in improving employee performance. I Ketut Sudiardhita, Agus Supriyanto, Mardi, Partial tests show that recruitment has a major effect on performance. Selection has a significant effect on employees. Motivation has a big effect on employee performance. Shows that all variables have met the criteria for validity and reliability, while the structural model analysis shows that hypothesis

testing supports the proposed hypothesis. Recruitment, selection and motivation affect employee performance.

Steps used in research and research methods

In the research of Fanita Achmad, Utik Bidayati. Indra Sasangka, Asep Suwarna, Rana Juliansyah. Andi Hendrawan. Novi Febriyanti, A. Fikri Amiruddin Ihsani. chose a qualitative approach method with a case study approach. qualitative research is data collection in a natural setting using natural methods and is carried out by naturally interested people or researchers, then some of them use questionnaires from previous research. Also, some are done with descriptive and verification methods. This study uses a causality design. The statistical analysis used in this study is Pearson correlation analysis and multiple regression analysis. Some use the data analysis method using multiple linear regression analysis and hypothesis testing.

In the research of Eva Silvani Lawas, Boge Triatmanto. Pandi Wibowo, Azis Fathoni SE, MM, Maria Magdalena Minarsih SE, MM. Wahyu Kusuma Pratiwi, Dwiarko Nugrohoseno. M. Basri Kamal. Wahyudi. Saloni Waruwu, Ferida Yuamita. Riska Nazirah, Yuswardi Yuswardi. Sukowati, Afrizal, Wargianto. Wahyu Arif Sujatmiko, Realize. Mohammad Lutfi, Siswanto. Ietut Sudiardhita, Agus Supriyanto, Mardi. in the research using quantitative method research methods, also carried out identifying satisfaction with rewards and organizational commitment in identifying affective organizational commitment and personality self-esteem, then data were collected using questionnaires and analyzed using path analysis, which was processed using AMOS. Emotional intelligence and work stress on employee performance are correlated. By using purposive sampling method from several respondents as well. Then there is also a causal research method study with personality variables and teamwork as independent variables and performance as the dependent variable.

Discussion

While MSMEs acknowledge the long-term economic and environmental benefits of adopting green technologies, the immediate financial burden and lack of technical know-how present significant hurdles. This dichotomy is reflected in broader research, which suggests that while the potential cost savings and efficiency gains are appealing, the initial investment and transition complexities can deter MSMEs (Appah & Duoduo, 2023; Gao et al., 2023; Kurniawan et al., 2023). This study's findings reinforce the need for more robust and accessible financing

options, such as low-interest loans or grants specifically designed for green technology investments in the MSME sector.

The cultural resistance to change and skepticism towards new technologies noted in the interviews can be addressed through targeted educational programs. These programs should not only focus on the "how" of technology integration but also on shifting the perception of green technologies from a financial burden to a strategic investment. (Cacciatore, 2023) emphasizes the success of such educational interventions in other contexts, suggesting that similar strategies could be effective in Indonesia. These programs could be delivered through partnerships between government agencies, technology providers, and industry associations.

Policy Implications

The expressed need for clearer and more accessible government policies suggests that current initiatives are either inadequately communicated or misaligned with the needs of MSMEs. Aligning with (Kurniawan et al., 2023), this study underscores the importance of government involvement in facilitating technology adoption. Policymakers should consider simplifying the application processes for subsidies and enhancing the visibility of existing incentives. Additionally, developing policies that encourage technology providers to offer trial periods or demonstrations could help reduce perceived risks associated with new technology adoption.

CONCLUSION

This study has provided a comprehensive analysis of the factors influencing the adoption of green technologies among Indonesian MSMEs, revealing a complex interplay of benefits and barriers. Despite the clear understanding among MSME owners and managers of the economic and environmental advantages of green technologies, significant obstacles such as high upfront costs, lack of technical expertise, and cultural resistance hinder widespread adoption. The findings underscore the need for enhanced governmental support through streamlined, well-publicized policies and financial incentives tailored to the unique needs of MSMEs. Additionally, educational programs designed to demystify green technologies and showcase their benefits are crucial for overcoming skepticism and resistance. Addressing these challenges through a multifaceted approach will not only accelerate the adoption of green technologies but also contribute to Indonesia's broader sustainability goals, fostering an environment where economic growth and environmental preservation go hand in hand. This research highlights the pivotal

role that Indonesian MSMEs play in the nation's sustainability journey and lays out actionable strategies for empowering this vital sector to embrace a greener future.

REFERENCE

- Amankwah-Amoah, J., Debrah, Y. A., Yu, W., & Lin, Z. (2021). Technology strategies in emerging economies: Emerging issues, challenges and new research agenda. *Forecasting and Social.*
- Appah, E., & Duoduo, G. (2023). Determinants of Tax Compliance Behaviour and Sustainable Economic Growth Among MSMEs in Nigeria. *International Journal of Development and Economic Sustainability*, 11(3), 70–105.
- Cacciatore, S. (2023). Creativity and Leadership: How the Arts Can Improve Business Strategies. *Socio-Cultural Management Journal*, 6(1), 55–84.
- Dhewanto, W., Umbara, A. N., & Hanifan, R. (2023). Towards Policy Development of Entrepreneurial Ecosystem: A Review in Indonesia Financial Technology Sector. *Proceedings of the 8th International Conference on Industrial and Business Engineering*, 282–290. <https://doi.org/10.1145/3568834.3568841>
- Gao, J., Siddik, A. B., Khawar Abbas, S., Hamayun, M., Masukujjaman, M., & Alam, S. S. (2023). Impact of E-Commerce and Digital Marketing Adoption on the Financial and Sustainability Performance of MSMEs during the COVID-19 Pandemic: An Empirical Study. *Sustainability*, 15(2), 1594.
- Kurniawan, -, Maulana, A., & Iskandar, Y. (2023). The Effect of Technology Adaptation and Government Financial Support on Sustainable Performance of MSMEs during the COVID-19 Pandemic. *Cogent Business & Management*, 10(1), 2177400.
- Meng, Y. (2023). An Analysis of the Factors Influencing Cultural Identity of International Students Coming to China and Its Relationship with Cultural Identity. *Journal of Education, Humanities and Social Sciences*, 8, 2033–2040.
- Muchie, M., & Bekele, E. (2009). *Promoting micro, small and medium Enterprises (MSMEs) for sustainable rural Livelihood.*
- Rusmayadi, G., Supriandi, S., & Pahrijal, R. (2023). Trends and Impact of Sustainable Energy Technologies in Mechanical Engineering: A Bibliometric Study. *West Science Interdisciplinary Studies*, 1(09), 831–841.
- Spilnichenko, V. K., Gridchina, A. V., & Avvakumova, I. V. (2023). The Green Economy of the Future and the Prospects for Its Development Based on the Leading Digital Technologies. In *Challenges of the Modern Economy: Digital Technologies, Problems, and Focus Areas of the Sustainable Development of Country and Regions* (pp. 359–362). Springer.
- Toma, S.-G., Grigore, A.-M., & Marinescu, P. (2014). Economic Development and Entrepreneurship. *Procedia Economics and Finance*, 8(14), 436–443. [https://doi.org/10.1016/s2212-5671\(14\)00111-7](https://doi.org/10.1016/s2212-5671(14)00111-7)

- Vara, S., Dwarapureddi, B. K., & Dash, S. (2022). Sustainable Agriculture and Organic Farming. In *Handbook of Research on Green Technologies for Sustainable Management of Agricultural Resources* (pp. 108–128). IGI Global.
- Wagner, M., & Lutz, E. M. (2017). Sustainability-improving innovation empirical insights and relationships with sustainability-oriented entrepreneurship. *Entrepreneurship, Innovation and Sustainability*, 237(July 2010), 279–296. <https://doi.org/10.4324/9781351277761-14>
- Zahra, S. A., & Wright, M. (2016). Understanding the Social Role of Entrepreneurship. *Journal of Management Studies*, 53(4), 610–629. <https://doi.org/10.1111/joms.12149>