



Research Paper

The Influence of Leadership Style and Work Environment on Employee Work Productivity Through Work Motivation as an Intervening Variable at PT Astra International Tbk

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Abstract

This study aims to determine and test 1). the influence of leadership style and work environment on work motivation, 2). the influence of leadership style and work environment on productivity, 3). Work motivation on work productivity and 4). Leadership style and work environment affect employee work productivity through work motivation. The study was conducted at PT Astra International Tbk with a sample size of 136 people. The sampling technique was random sampling and the data analysis technique used descriptive analysis and path analysis. The results of the study showed that: 1). leadership style and work environment affect work motivation, 2). leadership style and work environment affect work productivity, 3). work motivation affects employee work productivity and 4). work motivation can mediate namely leadership style and work environment in influencing employee work productivity. The company should be able to increase work motivation by increasing employee creativity, giving awards and respect to each employee, and allowing employees to participate in making policies for the progress of the company.

Keywords: Leadership Style, Work Environment, Work Motivation, Work Productivity

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I. Introduction

In an era of increasingly tight business competition, employees are required to increase productivity. One step to maintain or increase employee productivity can be done by evaluating employee performance and making a series of improvements to always improve the quality of these employees so that the company grows and excels in competition, or at least can survive. Human resources are the most important asset in achieving the goals of an organization/company because human resources have an important role in every activity of the organization/company. If human resources do not carry out their activities properly, then the company's activities cannot run as they should. This shows that human resources are the main key that must be considered in a company.

PT Astra International Tbk was founded in Jakarta in 1957 as a general trading company under the name Astra International Inc. PT Astra International Tbk, Indonesia is a leading automotive company in Indonesia, PT Astra International Tbk, Indonesia strives to provide the best possible service, one of which is by providing Honda dealers in every region throughout Indonesia. As a service to facilitate consumers in purchasing Honda motorbikes under the auspices of Astra Motor. The service and sales of PT Astra International Tbk, Indonesia which is responsible for Astra Honda Motor is not only a showcase for the company but also illustrates the company's leadership.

The era of globalization like today cannot be denied that the automotive industry plays an important role in several fields because, with the existence of automotive facilities, travel activities can be carried out more easily and efficiently. The increasingly competitive conditions require every company engaged in the automotive sector to continuously pay attention to the quality of service in addition to achieving company profits. To achieve these company profits, the company needs workers who can help the company realize the company's vision, mission, and goals. Increasing employee work productivity is a benchmark for the company's

success in achieving operational targets which are a benchmark for success. Of course, it is not easy for companies to maintain or increase employee work productivity.

Work productivity is very much needed in terms of coordinating and motivating employees in a company so that their work productivity can increase. In addition, employees must also have a high level of ability and a high level of awareness, to increase employee work productivity which will later affect the smoothness of the company's program in developing the company. Many factors can affect work productivity, one of which is leadership style.

Rivai (2014) stated that leadership style is a set of characteristics used by leaders to influence subordinates so that organizational goals are achieved or it can also be said that leadership style is a pattern of behavior and strategies that are preferred and often applied by a leader. Leadership style encourages higher performance by providing activities that influence subordinates to believe that valuable results can be achieved with serious effort. A leadership style that shows, directly or indirectly, a leader's belief in the abilities of his subordinates. This means that leadership style is behavior and strategy, as a result of a combination of philosophy, skills, traits, and attitudes, which are often applied by a leader when he tries to influence the performance of his subordinates. If the leader can carry out well innovate be creative and adapt to existing conditions, the organization may achieve the desired goals. Of course, this is not easy. An organization needs an effective leader who can influence the behavior of its members or subordinates. So, a leader of an organization will be recognized as a leader if he can have influence and can direct and be accepted and carried out by his subordinates following the direction of achieving the vision of the organization's goals. Of course, many types of leaders have different characteristics so this will greatly affect all aspects of the company.

There are fluctuations in the achievement of work productivity in each department, only the Production & Engineering department remains stable while other departments experience fluctuations and tend to decline in 2021. A drastic decline can be seen from the Sales Development and Marketing & Business Development departments which received a rating of 3 to 3.5, which tends to be poor or underperformance. While the company targets each department to be able to achieve at least 4.25, which is a Good (B+) predicate, almost all departments get an average rating so during the past two years there have always been fluctuations in work productivity decline per department. In fact, in a company, the work productivity of each department will affect other departments. Even on a larger scale, the performance of a department can affect the achievement or failure of a company's goals. For example, as happened in the sales development department which experienced a decline in performance, if a department that has a role in handling sales and marketing in a company does not have good work productivity, the company's income is one of those threatened to be affected. If the company's finances worsen, this will certainly have a wider impact on all employees. Therefore, in a company organization, the role of work productivity in each department is no different from a pillar that supports the establishment of a company.

Another factor that can affect work productivity is the work environment. The work environment is a factor that affects an employee's work motivation. The environment plays an important role in achieving good work motivation from employees. The environment is indeed something that is always encountered by an employee at work, wherever and whenever an employee works they will be in contact with what is called the work environment. An employee who cannot cope with the pressure or disturbance caused by the work environment, then the employee's work motivation will be disturbed, where work motivation is the drive for an employee to do a good job, if an employee's work motivation is disturbed, it will trigger the enthusiasm and drive that employees have in doing a good job will be difficult to achieve.

However, what is seen in the results of the survey and interviews, is not a few employees of PT. Astra International feels disturbed by the work environment that is not conducive and less supportive. This is reflected in the physical work environment, namely the problem of lighting that is too dim and also the noise around the company. PT Astra has a less supportive physical environment, because it is adjacent to factories, and its building is integrated with (POLMAN) Astra manufacturing Polytechnic, Astra employees feel disturbed by the noise of machines and large vehicles belonging to factories around PT Astra. Conditions like this will affect employee concentration and make employees feel uncomfortable at work, feel bored and easily tired, lose creativity, and do not work optimally, resulting in decreased employee job satisfaction.

Another thing that researchers found regarding the less conducive work environment at PT Astra is the lack of facilities and infrastructure in the company. Facilities and infrastructure at PT Astra are inadequate and there are still some that are often damaged and are not available, such as some workrooms where the air conditioning is not cold enough so that the air is not too cool so that working is not comfortable, the lights are too dim for lighting, the toilets are not comfortable and rather dirty, some work tables and chairs are damaged, the minimum number of printers for work, photocopiers and paper cutters are not available. This causes employee work motivation to decrease due to the physical work environment. Another very clear thing that shows a less conducive work environment is inadequate lighting (too dim). The inadequate lighting at PT Astra, it will affect employee work. Another factor that can affect work productivity is work motivation. Motivation

has the most influence on developing employee performance. The purpose of providing work motivation to employees is so that employees can carry out their duties effectively and efficiently.

Therefore, motivation can also maintain and develop morale, enthusiasm, and work motivation, due to bearing challenging responsibilities. With this rule, a company can motivate increased performance motivation within the company, which accelerates the development and increase of healthy competition between employees/work teams in a company. However, in each individual, not all employees get motivation through their work environment which is sometimes called external motivation, but there are also employees who get motivation from within themselves (internal motivation) without any individual motivation obtained in their work environment. Lateness can be an indication of low work motivation. The standard for calculating employee lateness at PT Astra is seen from the punctuality of their attendance, if the employee does not arrive exactly at the time that has been set, then the employee is declared late. Then every employee who is late will be accumulated every month the number of employees who are late because they are not on time in their attendance. It can be seen from the data below that the researcher obtained from PT Astra.

II. Literature Review

Work Productivity

Productivity has different meanings among experts. To deepen the understanding of productivity, the researcher cites several definitions of productivity from various expert perceptions. According to Sutrisno (2017), work productivity is a mental attitude. A mental attitude that always seeks improvement on what already exists. A belief that someone can do a better job today than yesterday and tomorrow better than today. Meanwhile, according to Busro (2018), productivity is a comparison between output (results) and input. If productivity increases, it will increase efficiency (time-materials-energy) and work systems, production techniques, and an increase in the skills of its workforce.

Based on the understanding of experts, the researcher concludes that productivity is the mental attitude of employees that reflects the employee's ability to do work and the results obtained based on the resources used. Increased productivity will make it easier for the company to achieve its desired goals. Therefore, the company must pay close attention to employee work productivity. To find out whether employee work productivity has increased or not, a productivity assessment is needed. Productivity assessment can be done by looking at several indicators. According to Sutrisno (2017), productivity indicators include:

- a) Ability. Having the ability to carry out tasks. An employee's ability is highly dependent on the skills they have and their professionalism in working.
- b) Improving the results achieved. Trying to improve the results achieved. Results can be felt by both those who do and those who enjoy the results of the work, so efforts to utilize work productivity for each person involved in a job.
- c) Work spirit. Efforts to be better than yesterday. This indicator is by the work ethic and results achieved in one day compared to the previous day.
- d) Self-development. Always build yourself to improve your work skills. Self-development can be done by looking at what challenges and expectations will be faced.
- e) Quality. Quality is the result of work that can show the quality of an employee's work, so improving quality aims to provide the best results which in turn will be very useful for the company and himself.
- f) Efficiency. Comparison between the results achieved with the total resources used. Input and output are aspects of productivity that have a significant influence.

Leadership Style

Leadership style is a way used by leaders to interact with their subordinates. A leader influences the behavior of subordinates to cooperate and work productively to achieve organizational goals. According to Nikmat (2022), leadership style is a pattern of a leader behavior in influencing his followers, the definition of leadership style is dynamic, leadership style can change depending on the followers and the situation.

Zaharuddin (2021) said that leadership style is the behavior or method chosen and used by leaders to influence the thoughts, attitudes, and behavior of members of their subordinate organizations. Hasibuan (2017) said that leadership style is the way a leader influences subordinates intending to encourage high work enthusiasm, job satisfaction, and employee productivity in order to achieve maximum company goals. From the description of the leadership style above, the researcher concludes that leadership style is a set of characteristics used by leaders to influence subordinates so that targets are achieved or leadership style is a pattern of behavior and strategies that are preferred and often applied by a leader.

Indicators are control variables that can be used to measure changes that occur in an event or activity. Researchers have raised several indicators of leadership style that have been explained by several previous experts. According to Sari and Putra (2019), the indicators of leadership style are:

- a) Decision-making ability. Decision-making is a systematic approach to the nature of the alternatives faced and taking action that is calculated to be the most appropriate action.
- b) Motivating ability. Motivating ability is the driving force that causes a member of an organization to be willing and ready to mobilize his abilities (in the form of expertise or skills) energy and time to carry out various activities that are his responsibility and fulfill his obligations, to achieve the goals and various targets of the organization that have been previously determined.
- c) Communication ability. Communication ability is the ability or capability to convey messages, ideas, or thoughts to others with the aim that others understand what is meant well, directly verbally, or indirectly.
- d) Ability to Control Subordinates. A leader has the desire to make others follow his wishes by using personal power or positional power effectively and appropriately for the long-term interests of the company. This includes telling others what to do in a tone that varies from a firm tone to asking or even threatening. The goal is so that tasks can be completed properly.
- e) Ability to Control Emotions. Emotions The ability to control emotions is very important for the success of our lives. The better our ability to control emotions, the easier it is for us to achieve happiness.

Work Environment

According to Budiasa (2021), the work environment is everything that is around employees when working, whether physical or non-physical, directly or indirectly, which can affect the employee's self and work while working. According to Afandi (2021), the work environment is something that exists in the environment of workers that can affect them in carrying out their duties such as temperature, humidity, ventilation, lighting, noise, cleanliness of the workplace, and the adequacy of work equipment. The work environment can be interpreted as all the tools faced, the surrounding environment where a person works, and his work methods, as an influence on his work both as an individual and as a group.

According to Budiasa (2021), the indicators of the work environment are as follows:

- a) Work atmosphere. Conditions around employees create an atmosphere and influence the implementation of the work.
- b) Relationships with coworkers. Relationships with coworkers can be seen from the harmony without bringing each other down. In a harmonious work relationship, employees will stay in the company and of course, will affect employee performance.
- c) Availability of work facilities or equipment. Is the equipment to support smooth work. The availability of complete work facilities is an important support in carrying out work to improve employee performance.

Work Motivation

In a company, employees are needed who work with healthy motivation, this is because motivation greatly influences employees in completing every task and responsibility given by their superiors. According to Duha (2020), "motivation is something or something that is given to another party, so that the other party is moved, influenced, or challenged to do or not do something".

According to Winardi (2018), Motivation is the result of several processes, both internal and external, for an individual so that it creates an attitude of enthusiasm and enthusiasm in carrying out certain activities. As for other definitions of motivation. From each statement put forward by many experts above, the author argues that work motivation is an encouragement from within a person without any coercion from anyone to do certain things that are of interest to that person in achieving the goals that have been set.

According to Afandi (2018) mentions several indicators of motivation, namely:

- a) Reward. Everything in the form of goods, services, and money that is compensation received by employees for their services involved in the organization.
- b) Working conditions. Conditions or conditions of the work environment of a company that is the place of work for employees who work in that environment.
- c) Work facilities. Everything in the organization that is occupied and enjoyed by employees, both in direct relation to work and for the smooth running of work.
- d) Work performance. The results achieved or desired by everyone in working. For each person, the size is not the same because humans are different from each other.
- e) Recognition from superiors
- f) A statement given by superiors whether their employees have implemented the motivation that has been given or not.

III. Research Methods

Research Design

Research design is a very important part of a study. This section provides an explanation of what kind of design will be used for data collection so that the research design is a research strategy for identifying

problems before the final planning of data collection; and second, the research design is used to define the structure of the research to be carried out (Nursalam, 2017) The approach in this study is a quantitative approach, because this research is presented with numbers. This is in accordance with the opinion of Arikunto (2019) who stated that quantitative research is a research approach that is widely required to use numbers, starting from data collection, interpretation of the data, and the appearance of the results, namely trying to get the most complete information possible regarding the influence of leadership and work discipline on work productivity through work motivation. Information is obtained through questionnaires and observations. To test how much contribution the leadership style and work environment variables make as independent variables (exogenous), work motivation as a mediating variable (intervening), and work productivity as a dependent variable (endogenous). Intervening variables or variables that influence the relationship between exogenous variables and endogenous variables are stated in the work motivation variable. Furthermore, it is combined with relevant theories using data analysis techniques concerning the variables used.

Population & Sample

Population according to Sugiyono (2017) is a generalization area consisting of objects or subjects that have certain qualities and characteristics that are determined by researchers to be studied and then conclusions are drawn. Population is not only humans but also other objects and natural objects. Population is also not just the number of objects or objects being studied but includes all the characteristics or properties possessed by the subject or object. Meanwhile, the population in this study were employees of PT Astra International Tbk, totaling 206 people.

The sample is part of the population used for research. According to Sugiyono (2017), the sample is part of the number and characteristics possessed by the population. The number of units in the sample is symbolized by the notation n. Determination of the number of samples used in this study was determined using the Slovin formula. According to Nalendra, et al (2021), the Slovin formula is a formula for calculating the minimum number of samples if the behavior of a population is not yet known with certainty. The size of the research sample with the Slovin formula is determined by the error rate value.

Based on the existing population of 206 people, where the entire population is a representative that is considered by researchers to have the appropriate criteria used by researchers. Based on the calculation above, the number of samples determined is 136 people. The number of respondents is considered representative of obtaining writing data that reflects the state of the population.

IV. Research Results and Discussion

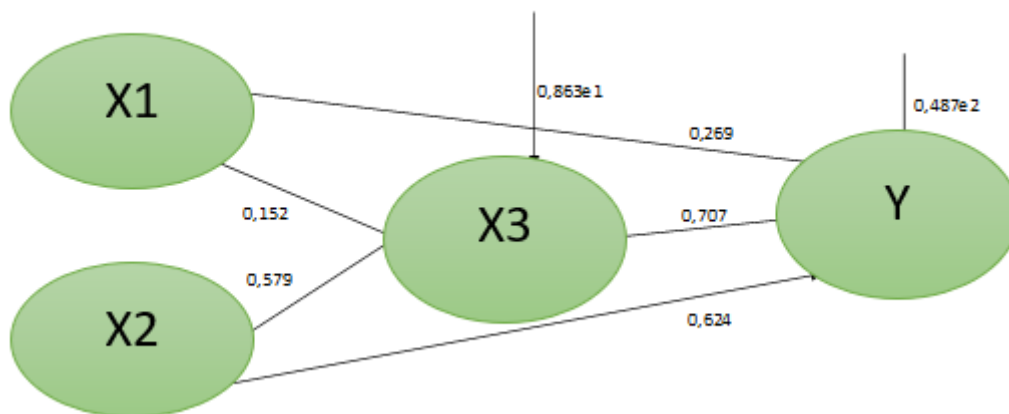


Figure 1. Path Analysis Model

a. The Influence of Leadership Style and Work Environment on Work Motivation

To find out this, it is necessary to use the F test. The following is the test of each variable:

Table 1. Results of the F test The Influence of Leadership Style and Work Environment on Work Motivation

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	916.682	2	458.341	22.698	,000 ^b
Residual	2685.663	133	20.193		
Total	3602.346	135			

a. Dependent Variable: Work_Motivation_X3

b. Predictors: (Constant), Work_Environment_X2, Leadership_Style_X1

From Table 1, the calculated F-value of the leadership style and work environment variables is 22,698, while the F-table is 2.67. Thus, $f\text{-count} > f\text{-table}$ ($22,698 > 2.67$), H_0 is rejected and H_1 is accepted at the real level. This provides the conclusion that leadership style and work environment affect work motivation. Thus, the first hypothesis is tested and proven.

b. The Influence of Leadership Style and Work Environment on Work Productivity

To find out this, it is necessary to use the F-test. The following is the test of each variable:

Table 2. Results of the F test of the Influence of Leadership Style and Work Environment on Work Productivity

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	3778.137	2	1889.069	212.787	,000 ^b
Residual	1180.738	133	8.878		
Total	4958.875	135			

From Table 2, the calculated F-value of the leadership style and work environment variables is 212,787, while the F-table is 2.67. Thus, $f\text{-count} > f\text{-table}$ ($212,787 > 2.67$), H_0 is rejected and H_1 is accepted at the real level. This provides the conclusion that leadership style and work environment affect work productivity. Thus, the second hypothesis is tested and proven.

c. The Influence of Work Motivation on Work Productivity

Table 3. The Influence of Work Motivation on Work Productivity

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	17.345	3.004		5.774	.000
Motivasi_Kerja_X3	.830	.072	.707	11.582	.000

a. Dependent Variable: Work_Productivity_Y

The t-test results for the work motivation variable obtained a calculated t-value of 11.582 and a t-table of 1.977. This means that $t\text{-count} > t\text{-table}$ ($11.582 > 1.977$), which means that H_0 is rejected and H_1 is accepted. This provides the conclusion that work motivation affects employee work productivity. Thus, the third hypothesis is tested and proven.

d. The Influence of Leadership Style and Work Environment on Work Productivity Through Work Motivation

$$X_1 \rightarrow X_3 \rightarrow Y = (\rho_{X_3 X_1}) \times (\rho_{Y X_3}) = 0,152 \times 0,707 = 0,107$$

$$X_2 \rightarrow X_3 \rightarrow Y = (\rho_{X_3 X_2}) \times (\rho_{Y X_3}) = 0,579 \times 0,707 = 0,409$$

In the leadership style variable, the indirect influence value is obtained from the path coefficient value $\rho_{X_3 X_1}$ multiplied by the path coefficient value $\rho_{Y X_3}$. The multiplication result shows that the indirect influence coefficient value is smaller than the direct influence coefficient value. In the work environment variable, the

indirect influence value is obtained from the path coefficient value $\rho_{x_3x_2}$ multiplied by the path coefficient value ρ_{yx_3} . The multiplication result shows that the indirect influence coefficient value is smaller than the direct influence coefficient value. This shows that work motivation can mediate, namely leadership style and work environment in influencing employee work productivity.

Discussion

1. The Influence of Leadership Style and Work Environment on Work Motivation

Based on the results of the analysis of the description of the leadership style variable, it shows that the majority of PT Astra International employees tend to agree that the ability to make decisions, the ability to motivate, the ability to communicate, the ability to control subordinates, and the ability to control emotions form the leadership style variable. The indicator that makes the greatest contribution to the formation of the leadership style variable is the ability to make decisions, that decision making is very important for a leader in a company. Because every decision taken by the leader will affect the company's performance in the future, both in terms of increasing company productivity, and building trust with employees and others.

Based on the analysis of the description of the work environment variable, it shows that the majority of PT Astra International employees agree that the work atmosphere, relationships with coworkers, and the availability of work facilities or equipment form the work environment variable. The indicator that gives the greatest value to the formation of the work environment variable is the work atmosphere, that creating a comfortable and conducive work environment is needed to increase employee productivity. By creating a work atmosphere that respects each other, and the facilities are well-maintained, will create high work enthusiasm.

Based on the results of the path analysis, it show that leadership style and work environment have an impact on increasing work motivation. These results are in line with research conducted by Hastuti, Winarno, Cahyani (2017), Dziziyana et al (2020), Alfian et al (2023), Kusnadi et al (2020), Noneng et al (2023), Putu et al (2020).

2. The Influence of Leadership Style and Work Environment on Work Productivity

Based on the results of the analysis of the description of the leadership style variables, it shows that the majority of PT Astra International employees tend to agree that the ability to make decisions, the ability to motivate, the ability to communicate, the ability to control subordinates, and the ability to control emotions form leadership style variables. The indicator that provides the greatest contribution to the formation of leadership style variables is the ability to make decisions, decision-making is very important for a leader in a company. Because every decision taken by the leader will affect the company's performance in the future, both related to increasing company productivity, and building trust with employees and others.

Based on the analysis of the description of the work environment variables, it shows that the majority of PT Astra International employees agree that the work atmosphere, relationships with coworkers, and the availability of work facilities or equipment formwork environment variables. The indicator that provides the greatest value to the formation of work environment variables is the work atmosphere, which creates a comfortable and conducive work environment to increase employee productivity. Creating a work atmosphere that respects each other, respects and well-maintained facilities, will create high work enthusiasm.

Based on the results of the path analysis, it show that leadership style and work environment have an impact on increasing work productivity. These results are in line with research conducted by Anggitaningsih, Handriyono (2019), Noneng et al (2023), Alfian et al (2023), Hastutiet et al (2017), Fadly et al (2021).

3. The Influence of Work Motivation on Work Productivity

Based on the analysis of the description of the work motivation variable, it shows that the majority of PT Astra International employees tend to agree that rewards, working conditions, work facilities, work performance, and recognition from superiors formwork motivation variables. The indicator that makes the greatest contribution to the formation of work motivation variables is rewards, which in a company the role of rewards is very large. This is because rewards greatly determine the progress of the company. If a company provides large rewards to employees, then the employees will be more active and enthusiastic in working which will increase the amount of production from the company. So that the company can continue to progress. And conversely, if the company provides relatively low rewards to employees, then the employees will be too lazy to work which will hurt the company, namely the amount of production of the company will be low.

Based on the analysis of the description of the work productivity variable, it shows that they tend to agree that ability, increasing the results achieved, work enthusiasm, self-development, quality, and efficiency formwork productivity variables. The indicator that provides the greatest contribution to the formation of work productivity variables is quality, that improving quality means paying attention to work quality where good work quality can be seen from hard work, focus on details, and target orientation.

Based on the results of the path analysis, it shows that work motivation has an impact on increasing work productivity. These results are in line with research conducted by Irfan (2023), Tri Hastuti, Winarno,

Cahyani (2017), Dziziyana et al (2020), Alfian et al (2023), Kusnadi et al (2020), Noneng et al (2023), Putu et al (2020).

4. The Influence of Leadership Style and Work Environment on Work Productivity Through Work Motivation

Based on the results of the analysis of the description of the leadership style variable, it shows that the majority of PT Astra International employees tend to agree that the ability to make decisions, the ability to motivate, the ability to communicate, the ability to control subordinates, and the ability to control emotions form the leadership style variable. The indicator that makes the greatest contribution to the formation of the leadership style variable is the ability to make decisions, decision-making is very important for a leader in a company. Because every decision taken by the leader will affect the company's performance in the future, both in terms of increasing company productivity and building trust with employees and others.

Based on the analysis of the description of the work environment variable, it shows that the majority of PT Astra International employees agree that the work atmosphere, relationships with coworkers, and the availability of work facilities or equipment form the work environment variable. The indicator that gives the greatest value to the formation of the work environment variable is the work atmosphere, which creates a comfortable and conducive work environment to increase employee productivity. Creating a work atmosphere that respects each other, and the facilities are well-maintained, will create high work enthusiasm.

Based on the analysis of the description of work motivation variables, it shows that the majority of PT Astra International employees tend to agree that rewards, working conditions, work facilities, work performance, and recognition from superiors form work motivation variables. The indicator that makes the greatest contribution to the formation of work motivation variables is rewards, which in a company the role of rewards is very large. This is because rewards greatly determine the progress of the company. If a company provides large rewards to employees, then the employees will be more active and enthusiastic in working which will increase the amount of production from the company. So that the company can continue to progress. Conversely, if the company provides relatively low rewards to employees, then the employees will be too lazy to work which will hurt the company, namely the amount of production of the company will be low.

Based on the analysis of the description of work productivity variables, it shows that they tend to agree that ability, increasing the results achieved, work enthusiasm, self-development, quality, and efficiency are work productivity variables. The indicator that makes the greatest contribution to the formation of work productivity variables is quality, that improving quality means paying attention to work quality where good work quality can be seen from hard work, focusing on details, and being target-oriented.

Based on the results of the path analysis, it show that leadership style and work environment have an impact on increasing work productivity through work motivation. These results are in line with research conducted by Irfan (2023), Hastuti, Winarno, Cahyani (2017), Dziziyana et al (2020), Alfian et al (2023), Kusnadi et al (2020), Noneng et al (2023), Putu et al (2020), Britain et al (2023).

V. Conclusion

Based on the results of the study and hypothesis testing of the proposed problem formulation, the following conclusions can be drawn:

1. Work productivity is the ability of employees to produce compared to the input used, an employee can be said to be productive if they can produce goods or services as expected in a short or precise time. Work productivity indicators consist of ability, increasing the results achieved, work enthusiasm, self-development, quality, and efficiency.
2. Leadership style variables are a set of characteristics used by leaders to influence subordinates so that targets are achieved. Leadership style indicators are the ability to make decisions, the ability to motivate, communication skills, the ability to control subordinates, and the ability to control emotions.
3. Work environment variables are everything related to employee activities in the office. Work environment indicators are the work atmosphere, relationships with coworkers, and the availability of work facilities or equipment.
4. Work motivation variables are stimuli or incentives for each employee to work in carrying out their duties. Indicators that form work motivation are rewards, working conditions, work facilities, work performance, and recognition from superiors.
5. The calculated f value of the leadership style and work environment variables is 22,698, while the f-table is 2.67. Thus, $f_{count} > f_{table}$ ($22,698 > 2.67$), thus H_0 is rejected and H_1 is accepted at the real level. This provides the conclusion that leadership style and work environment affect work motivation. Thus, the first hypothesis is tested and proven.
6. The calculated f value of the leadership style and work environment variables is 212,787, while the f-table is 2.67. Thus, $f_{count} > f_{table}$ ($212,787 > 2.67$), H_0 is rejected and H_1 is accepted at the real level. This

provides the conclusion that leadership style and work environment affect work productivity. Thus, the second hypothesis is tested and proven.

7. The results of the t-test for the work motivation variable obtained a calculated t-value of 11.582 and a t-table of 1.977. This means that t-count > t-table (11.582 > 1.977), which means that H₀ is rejected and H₁ is accepted. This provides the conclusion that work motivation affects employee work productivity. Thus, the third hypothesis is tested and proven.

VI. Suggestions

Based on the results of the research and discussion of the tests as above, the following suggestions are recommended:

1. Regarding leadership at PT Astra International:
 - a. Leaders still have to develop themselves further in terms of
 - a) leadership and learn the knowledge and leadership styles that they have never received.
 - b) Leaders must better understand the importance of leadership factors which if implemented properly will affect the motivation of their employees.
 - c) Leaders must be more familiar with and sensitive to the personality and nature of each individual who works for them.
 2. To improve a good working environment, fellow employees should build good relationships, with these good relationship can make employees enthusiastic about working because they have coworkers who can work together and can help when in trouble.
 3. The company should be able to increase work motivation by increasing employee creativity, giving awards and respect to each employee, and allowing employees to participate in making policies for the progress of the company.
 4. This study only focuses on leadership style, work environment, work motivation, and work productivity. There are still other factors such as organizational culture, and work discipline that can be used as opportunities to conduct new research.
 5. For future researchers, the results of this study are expected to be used as a reference in compiling further research designs that are relevant to a varied approach.

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