INTRODUCTION
In the current era of globalization, changes in the business environment are increasingly dynamic and very competitive. This condition requires the management of each company to be able to create competitive advantage while maintaining sustainable competitive growth through the empowerment of professional and productive Human Resources (HR). In this regard, it is important for the management of the company to carry out various strategic efforts through planned and structured employment programs in order to continue to improve the work productivity of its employees.

According to Sedarmayanti (2001) argues that work productivity is how to produce or increase the yield of goods and services as high as possible by utilizing resources efficiently. Physical work environment is all physical conditions found around the workplace that can affect employees both directly and indirectly (Sedarmayanti, 2001). The physical work environment will greatly affect the level of comfort and security for employees in carrying out their work activities, so that the physical work environment is one of the factors that can determine the level of productivity work of employees. According to Sedarmayanti (2001), the physical work environment consists of an environment that is directly related to employees (work center, chair, table and so on), and an environment that is

The Effect of Physical Work Environment, Work Safety, Occupational Health and Work Discipline on Employee Productivity

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Abstract
This study entitled "The Effect of Physical Work Environment, Work Safety, Occupational Health and Work Discipline on Employee Productivity (Study on Employees of PT. PLN (Persero) Central Java & D.I.Y) Distribution Regulatory Areas". This study have a goal to determine and analyze the influence of the physical work environment, work safety, occupational health and work discipline on employee work productivity. The research was carried out on one of the owned companies that specialized in electricity in PT. PLN (Persero) APD Central Java and Yogyakarta Special Region. The research method used is a survey with judgment sampling sampling technique. The population in this study is PT. PLN APD Central Java and Special Region of Yogyakarta, the number of respondents taken in this research is 68 respondents. Based on the results of research and data analysis using Multiple Linear Regression Analysis shows that: (1) Physical work environment has a positive influence and significant effect on employee work productivity (2) Physical work environment has a positive influence and significant effect on employee work productivity (3) Work safety has a positive influence and significant effect on employee work productivity (4) Work discipline has a positive influence and significant effect on employee work productivity. The implication of this research is to continuously improve the work productivity of its employees, the management of PT. PLN (Persero) APD Central Java and Yogyakarta Special Region needs to maintain and improve various policies related to efforts to improve and improve the physical work environment, work safety, occupational health and employee work discipline.

Keywords
Physical Work Environment, Work Safety, Occupational Health, Work Discipline and Employee Productivity
indirectly related to employees or an intermediary environment that affects employee conditions at work, such as temperature, humidity, air circulation, lighting, noise, mechanical vibration, odor, color, etc. A supportive physical work environment will make employees feel comfortable and active in carrying out and completing their work activities.

In addition to the physical work environment, safety and occupational health are also important factors that affect the level of work productivity of employees. According to Suma'mur (2009), work safety is a series of businesses to create a safe and secure working atmosphere for employees who work in the company concerned. Workplace safety shows a safe condition or survivors of suffering, damage or loss or accidents that are felt by employees in the workplace. This condition can be achieved if the work safety program has been carried out properly by the management of the company with the support of all employees.

Notoatmojo (2009) suggested that the program work safety aims that employees are free from all work-related accidents and other disturbances that can reduce work productivity. In addition to work safety, the level of employee productivity is also influenced by the company's efforts to improve the work health of its employees. Occupational health is defined as an effort to maintain and improve the level of physical, mental, and social welfare of all workers as high as possible (Kurniawidjaja, 2010). Every company has an obligation to ensure that all employees employed or involved in achieving company goals must always be healthy, both physically and mentally. Employees who are physically and mentally healthy will certainly be able to work well so that it will produce optimal output from resources owned or available in the company.

Work discipline is defined as an attitude of respect, respect, obedience, and obedience to the rules that apply, both written and unwritten and able to run it and not avoid receiving sanctions if he violates the duties and authority granted to him (Siswaunto, 2005). Employee work discipline has a very important meaning for the company in realizing the stated goals, because without high employee work discipline it will be very difficult for companies to achieve optimal work productivity.


In order to realize the company's vision and mission to become one of the electricity distribution regulators that has world-class reliability, the management strives to continually improve the work productivity of its employees. This is a priority given that until now, one of the problems faced by the management of PT. PLN (Persero) Central Java Distribution & Regulatory Area in Yogyakarta is a level of employee productivity that is not optimal.

LITERATURE REVIEW AND HYPOTHESES

Work Productivity

In general, work productivity is a number of goods and services that employees produce in a certain time. The word productivity itself means strength or ability to produce something, while in terms of psychology, productivity is the behavior of the output or output of various processes kinds of psychiatric components that lie behind it (Nilasari, 2016). Sinungan (2005) explains that the traditional formula for overall productivity is nothing but the ratio of what is produced (output) to the overall production equipment used (input); productivity is basically a mental attitude that always has the view that the quality of life today must be better than yesterday and tomorrow is better than today; and productivity is an integrated interaction harmoniously from three essential factors, namely investment including the use of knowledge and technology as well as research, management, and labor.

Every company always strives so that employees can achieve in the form of providing maximum work productivity. Productivity of employee work for a company is very important as a means of measuring the success in running a business. Because the higher the work productivity of employees in the company, means that the company's profit will increase (Afandi, 2016). Employee productivity shows the level of ability of employees to achieve results (output) with the resources they have. Therefore the level of work productivity of each employee can be different, can be high or can also be low depending on the level of persistence in carrying out their duties.

Furthermore, according to Sedarmayanti (2001), employee work productivity can be
measured using several indicators as follows: Constructive action; Believe in yourself; To be responsible; Have a love for work; Have a foresight; Able to overcome problems and adapt to a changing environment; Have a positive contribution to the environment (creative, imaginative, and innovative); Has the power to realize its potential.

2. Physical Work Environment
The work environment is a place where employees carry out activities every day. A conducive work environment provides a sense of security and allows employees to work optimally. The work environment can affect the emotional level of employees. If the employee likes the work environment where he works, then the employee will be at home at work, doing his activities so that time work is used effectively.

Physical work environment is defined as all physical conditions found around the workplace that can affect employees, both directly and indirectly (Sedarmayanti, 2001). According to Sastroadiptoera (2002), the physical work environment is the whole or every aspect of physical and socio-cultural symptoms that surround or influence individuals. Nitisemito (2002) defines the physical work environment as everything that exists around workers who can influence themselves in carrying out the tasks assigned, for example lighting, air temperature, space for movement, security, cleanliness, music and others.

From a number of opinions above, it can be concluded that the physical work environment is all physical conditions that are around employees that can affect their work.

The physical work environment can be divided into two categories, namely (Sedarmayanti, 2001):
a. Environment that is directly related to employees, such as work centers, chairs, tables and so on.
b. An intermediary environment or general environment can also be called a work environment that affects conditions humans, for example temperature, humidity, air circulation, lighting, noise, mechanical vibration, odor, color, etc.

Work Safety
Work safety is a series of businesses to create a safe and secure work atmosphere for employees who work in the company concerned (Suma'mur, 2009). Mangkunegara (2011) suggests that work safety shows a safe condition or survives suffering, damage and loss at work. Whereas according to Wilson (2012), work safety is the protection of work security experienced by workers, both physically and mentally in the work environment. The main objective of an effective work safety program at the company is to prevent accidents or work-related injuries.

Panggabean (2004) explains that work safety is the protection of employees from accidents at work. The workplace is any room or field, closed or open, movable or fixed, where labor works, or is often entered by workers for business purposes. Furthermore, according to Mondy (2008) work safety is a protection employees from injuries caused by work-related accidents. Things that fall within the scope of the definition of occupational safety are factors related to injury, recurrent stress and workplace violence.

Occupational Health
Occupational health programs are an important matter and need to be considered by the company. According to Mathis and Jackson (2002), employee health problems are very diverse and sometimes invisible. This disease can range from minor illnesses such as flu to serious illnesses related to his work. Some employees have emotional health problems, others have drug and alcohol problems. Some of these health problems are chronic, others are only temporary. However, all these diseases can affect the company's operations and individual productivity of employees.

Kurniawidjaja (2010) defines occupational health as an effort to maintain and improve the physical, mental, and social welfare of all workers as high as possible. According to Mangkunegara (2011), occupational health is a condition free from physical, mental, emotional or pain disorders caused by the environment work. Occupational health according to Mathis and Jackson (2002) refers to physical, mental and emotional stability in general, healthy individuals who are free from illness, injury and mental and emotional problems that can interfere with normal human activity in general. Furthermore, Panggabean (2004) argues that occupational health refers to employee freedom from physical and mental illness.

According to Mangkunegara (2011) Occupational health indicators include: Maintain cleanliness and order, and harmony in the work environment; Regulate air temperature and ventilation in the workplace;
Clean waste disposal system; Provision of clean water and bathroom facilities; Workforce health services; Work Discipline.

Work discipline is an attitude of respect, respect, obedience, and obedience to the rules that apply, both written and unwritten and able to run it and do not avoid receiving sanctions if he violates the duties and authority granted to him (Siswanto, 2005) Definition

This affirms that discipline is a very important factor in the development of an employee’s personality characteristics such as responsibility, confidence, perseverance in work and self-control and can maintain and develop the right behavior at work. According to Simamora (2010), work discipline is a procedure that corrects or punishes subordinates for violating regulations. Understanding of work discipline according to Hasibuan (2007) is the awareness and willingness of someone to obey all applicable company regulations and social norms. Furthermore, Rivai (2004) defines work discipline as a tool used by managers to communicate with employees so that they are willing to change a behavior and as an effort to increase one's awareness and willingness to comply with all applicable company regulations and social norms.

Some indicators that can be used to measure work discipline are as follows (Malayu S.P Hasibuan, 2010): Comply with all organizational or company regulations; Effective use of time; Responsibility for work and duties; Attendance level.

Based on the explanation of the theory and the results of previous research, the hypothesis can be developed as follows:

H1: Physical work environment has a positive effect on employee work productivity
H2: Work safety has a positive effect on employee work productivity
H3: Occupational health has a positive effect on work productivity of H4 employees: Work discipline has a positive effect on employee work productivity.

METHODS
The sampling method in this study uses non-probability sampling in the form of judgment sampling. According to Maholtra (2009) judgment sampling is one of the convenience sampling forms where respondents are chosen based on the consideration of the researcher. The researcher, with judgment or expertise, chooses sample elements because a researcher believes that the sample can represent and match the population studied.

In this method, the research sample is selected based on the suitability of the characteristics of the sample with the specified sample selection criteria. The researcher will use a sample of 68 respondents. Which means that the researcher distributed 68 questionnaires to the respondents.

The analysis technique uses regression methods, namely multiple regression analysis with previous classical assumption tests that are required in the model. Hypothesis testing is done by using the coefficient of determination (Rsquare) test, partial test (t test) and simultaneous test (F test).

RESULTS AND DISCUSSION
Based on result, the R2 value is 0.697. It means the ability of the Physical Work Environment variable, Work Safety, Occupational Health and Work Discipline in combating Work Productivity variables are 69.7 percent whereas the remaining 30.3 percent is influenced by other variables not included in this research model.

Based on result, it is known that the significance value of F count is 0.000. because the significance value is less than alpha 0.05 then it can was concluded that the physical work environment, work safety, health work and work discipline simultaneously influence the work productivity variable or the model is included in the criteria of fit or fit.

Based on the results of the t test of multiple regression analysis obtained t count calculated Physical Work Environment variable of 2.415 greater than the value of t table (1,664) supported also by the significance value of the Physical Work Environment of 0.019 smaller than a (0.05). The results of the statistical tests show that the physical work environment has an effect significantly positive for work productivity. Thus, the first hypothesis states that the physical work environment has an effect significantly positive effect on work productivity is accepted.

Based on the results of the t test of multiple regression analysis, the value of the variable t count of 2.302 is greater than the value of the t table (1.664) supported also by the significance of Work Safety of 0.025 smaller than a (0.05). The results of the statistical tests show that work safety has an effect significantly positive for work productivity. Thus, the second hypothesis which states
that work safety has a significant positive effect on work productivity is accepted. Based on the results of the t test of multiple regression analysis obtained the value of the t count variable occupational health equal to 2.415 greater than the value of the t table (1.664) supported also by the significance value of interpersonal relationships of 0.019 smaller than a (0.05). The results of these statistical tests show that occupational health has a significant positive effect on work productivity. Thus, the third hypothesis states that occupational health has a positive effect on work productivity.

3. Effect of Occupational Health on Work Productivity

The results of this study find evidence that occupational health has a positive effect on the work productivity of employees in the technical field at PT. PLN (Persero) APD Central Java & D.I.Y. This means that when employees of the technical field are assured of the various guaranteed work safety guarantees that are available to employees, employees feel protected by the company and the completeness of work safety equipment for technical employees who are adequate and according to the standard of work. So employees of the technical field can improve their work productivity. This condition shows that the better the company policies related to work safety, the better the level of work productivity of the employees in the technical field at PT. PLN (Persero) APD Central Java & D.I.Y.

Theoretically, the results of this study are in accordance with the opinion of Setiawan (2013) which states that safety work is an important aspect in an effort to improve employee welfare and productivity. Empirically, the findings of this study are consistent with the results of previous studies conducted by Muhlisin (2015) who found evidence that work safety has a positive and significant effect on work productivity.

2. Effect of Work Safety on Work Productivity

The results of this study find evidence that work safety has a positive effect on the work productivity of employees in the technical field at PT. PLN (Persero) APD Central Java & D.I.Y. This means that when employees of the technical field have met the facilities related to the physical work environment, such as they feel comfortable with lighting in the workplace that can help them in completing work. Employees feel comfortable with air circulation in the workplace because they can breathe adequately. So with the fulfillment of facilities at PT. PLN (Persero) APD Central Java & D.I.Y employees can improve their work productivity and always have a positive contribution to the work environment. These conditions indicate that the better the company policies associated with the work environment of employees, the better the level of work productivity of the employees of the technical field at PT. PLN (Persero) APD Central Java & D.I.Y.

The causal relationship mentioned above can be explained that the work environment is a very important organizational element, besides being a provider of work facilities as well as a social system that has a strong influence in forming employee behavior in the organization and influences the work performance of the organization. Good and effective working environment conditions will increase comfort and security of employees in carrying out their duties and work activities, so that their work productivity will also be able to increase optimally.
for every employee who works. So with the fulfillment of these facilities productivity employee work can continue to increase. The causal relationship mentioned above shows that the better the company policies related to occupational health, the better the level of work productivity of employees in the field technical field at PT. PLN (Persero) APD Central Java & D.I.Y. Such conditions explain the importance of employee health programs for increasing work productivity of employees which will further improve the work productivity of the organization as a whole. Theoretically, the results of this study are in accordance with the opinion of Ridley (2008) which states that a healthy workforce will work productively, so it is expected that employee work productivity will increase which can support the company's business success in building and raising its business. Empirically, the results of this study are consistent with the results of research conducted by Ukhisia (2013), Busyairi (2014) and Muhlisin (2015) which concluded that occupational health has a positive and significant effect on work productivity.

4. Effect of Work Discipline on Work Productivity

The results of this study find evidence that work discipline has a positive effect on the work productivity of employees in the technical field of PT. PLN (Persero) APD Central Java & D.I.Y. This means that employees carry out work that is indeed their responsibility and has been determined by the company to employees of PT. PLN (Persero) APD Central Java & D.I.Y. Furthermore, respondents felt they were able to complete the work given with enthusiasm and always gave news when they were unable to enter work. So with this fulfillment, employee work productivity can continue to increase.

**CONCLUSION**

1. The physical work environment has a positive and significant influence on the work productivity of employees in the technical field of PT. PLN (Persero) APD Central Java & D.I. Yogyakarta. That is, when all the facilities and infrastructure of the physical work environment increase, the work productivity of the employees of PT. PLN (Persero) APD Central Java & D.I. Yogyakarta will increase.

2. Work safety has a positive and significant influence towards work productivity of the field technical staff of PT. PLN (Persero) APD Central Java & D.I. Yogyakarta. That is, when the work safety system increases, the work productivity of PT. PLN (Persero) APD Central Java & D.I. Yogyakarta will increase.

3. Occupational health has a positive and significant influence on work productivity of the employees of the technical field of PT. PLN (Persero) APD Central Java & D.I. Yogyakarta. That is, when occupational health increases, the work productivity of PT. PLN (Persero) APD Central Java & D.I. Yogyakarta will increase.

4. Work discipline has a positive and significant influence on employee productivity in the technical field of PT. PLN (Persero) APD Central Java & D.I. Yogyakarta. That is, when the level of employee discipline increases, then work productivity of PT. PLN (Persero) APD Central Java & D.I. Yogyakarta will increase.

**Implications**

In order to continue to improve employee work productivity optimally, the management of PT. PLN (Persero) APD Central Java & D.I. Yogyakarta should pay attention to the factors that are able to maintain and improve the work productivity of its employees. The things that need to be considered are:

1. The results of research in the study show that to maintain and improve work productivity is determined by the factors of employee work discipline. In this study the more dominant variables affect the work productivity of employees at PT. PLN APD Central Java & D.I.Y is a work discipline. So to improve work productivity, the company employees must improve company regulations, for example by giving policies regarding the obligations of employees in the use of personal protective equipment and uniforms when working hours set by the company, giving some strict sanctions if employees do not comply with working hours like coming late, not carrying out the service that has been assigned by the company. To maintain work productivity, company employees must give full responsibility to employees in doing work and tasks. Appreciating employees who are disciplined in work, giving morning stars to employees who are on time. Along with prioritizing this, employees will work harder and work productivity will continue to increase.

2. To maintain and improve work productivity through a physical work environment, PT. PLN (Persero) APD Central Java & D.I. Yogyakarta can do this by maintaining and
maintaining a physical work environment, namely a physical environment that can affect employees, both directly and indirectly. The ways that can be done include providing a complete range of work facilities for employees and lighting and lighting in the workplace. Factors such as working conditions are enough air circulation so that employees can breathe enough to support work implementation. To improve employee work productivity through a physical work environment, the company must improve sound or mechanical vibrations that interfere with the process employees at work such as noise, unrestricted space for work so employees can freely creativity. By prioritizing this, employees feel safe and comfortable in carrying out their work activities and productivity can continue to increase.

3. To maintain and improve work productivity through work safety, a way that can be done by PT. PLN (Persero) APD Central Java & D.I. Yogyakarta to implement an effective safety and security guarantee system in supporting employee work activities, that is giving a symbol or image to warns employees who work in the field to avoid accidents. Check various work safety tools that are overall already adequate. To improve work productivity by giving orders or training so that employees when working using personal protective equipment in accordance with established K3 standards. PT. PLN (Persero) APD Central Java & D.I. Yogyakarta needs to implement administrative controls and personnel needed to manage risks related to the activities of technical employees. By paying attention to these priorities, productivity can continue to increase so that the company's goals are achieved.

4. To maintain and increase employee productivity through occupational health, that is, it is expected that the company can maintain a health insurance system such as hospitals that are referred to as good and professional hospitals, healthy PLN cards that can continue to be used by sick employees, always clean working environment and healthy, landfills are well separated so that employees are not disturbed by dirty environments. To increase work productivity, companies must provide medicines for first aid in the event of an accident in the workplace, improve bathroom facilities to make it cleaner and more comfortable for employees, so that later the level of employee health will have a positive impact. By paying attention to these priorities, productivity can continue to increase so that the company's goals are achieved.

Limitations and Suggestions for Research
Based on conclusions and implications, this study still has various weaknesses and shortcomings. For academics or further researchers who are interested in researching, are expected to be able to develop and add the following:

1. This study only focuses on testing the direct effect of several independent variables on the dependent variable. If it is possible in theory or practice, further researchers also need to develop the model research with add variable moderating and mediating variables such as job satisfaction, morale, loyalty and work motivation.

2. This study only took a sample of 68 respondents. At least the number of samples was taken due to limited costs and researchers. So for the next researcher, it is expected to be able to increase the number of samples, expand the population and increase the reference of research supported by strong theory to support the topic under study in order to get better results.

3. Variables in this study only examine the effect of physical work environment, work safety, occupational health and work discipline on work productivity.

4. There are still questionnaire answers that are not consistent according to the observations of researchers. Because researchers consider respondents who tend to be less careful about the existing questions so that they occur inconsistent with the answers to the questionnaire. Answer respondents tend to answer agree and strongly agree not like the real situation. This can be anticipated by researchers by assisting and supervising respondents in choosing answers so that respondents focus on answering questions.

5. The subject of this study is also limited to employees of the field technical department at PT. PLN (Persero) APD Central Java and D.I. Yogyakarta. It is recommended for future researchers who are interested in conducting research on factors that affect work productivity employees can develop research on employees in other state-owned companies such as banking, processing and construction industries, so that the results of their research can be more objective and generalizable.

REFERENCES


