

**THE INFLUENCE OF INTERNAL COMMUNICATION AND
WORKPLACE ENVIRONMENT TO EMPLOYEE
ENGAGEMENT**
[Study Case in PT. PLN (Persero) Yogyakarta Area]

A THESIS

Presented as Partial Fulfillment of the Requirements
to Obtain the Bachelor Degree in Management Department



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YOGYAKARTA

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A BACHELOR DEGREE THESIS

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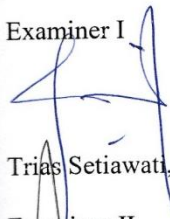
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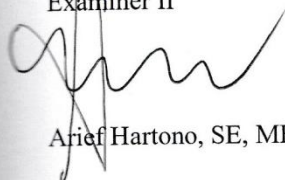
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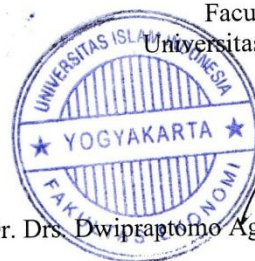


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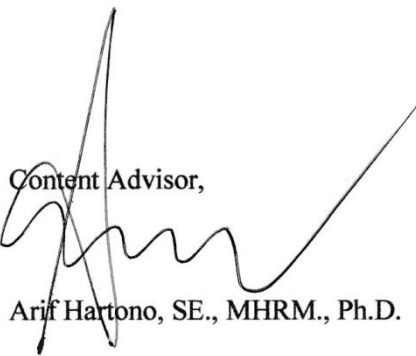
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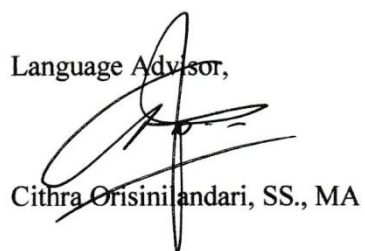
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DECLARATION OF AUTHENTICITY

Herein I declare the originality of the thesis; I have not presented anyone else's work to obtain my university degree, nor have I presented anyone else's words, ideas or expression without acknowledgement. All quotations are cited and listed in the bibliography of the thesis.

If in the future this statement is proven to be false, I am willing to accept any sanction complying with the determined regulation or its consequence.

Yogyakarta, 4 March, 2015



Nurtaqi Irzalia

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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ABSTRACT

Employee engagement is becoming a focus in human resource management study. Employee engagement refers to employee willingness to work physically, cognitively, and emotionally during their performance. Internal communication and workplace environment help the organization increase the level of engagement. Therefore, the purpose of this research is to identify the influence of internal communication and workplace environment to employee engagement. This research used survey questionnaire in collecting the data. The research data collected from questionnaires distributed to 90 employees in PT. PLN (Persero) Yogyakarta Area and 42 questionnaires were returned to the researcher. SPSS Statistics 20 is used to calculate the data collected. In addition, multiple regression analysis used to predict and to estimate the relationship. The internal communication is measured by using the internal communication indicator by Altinöz (2008). The workplace environment is measured by using Sedarmayanti's (2001). Then, the employee engagement is measured by using the short version of Utrecht Work Engagement Scale (UWES-9) by Schaufeli and Bekker (2003).

The result showed that there is significant and positive influence of internal communication to employee engagement. It also showed that there is significant and positive influence of workplace environment to employee engagement. Thus, internal communication and workplace environment influence to employee engagement, simultaneously.

Keywords: *Internal Communication, Workplace Environment, Employee Engagement*

ABSTRAK

Keterikatan pegawai (*employee engagement*) menjadi fokus dalam manajemen sumber daya manusia. *Employee engagement* diartikan sebagai keinginan pegawai dalam melaksanakan pekerjaan secara *physical, cognitive, and emotional*. Komunikasi internal dan lingkungan kerja membantu organisasi dalam meningkatkan tingkat *employee engagement*. Oleh karena itu, tujuan dari penelitian ini untuk mengetahui hubungan komunikasi internal dan lingkungan kerja terhadap *employee engagement*. Penelitian ini menggunakan kuesioner survey dalam mengumpulkan data. Data dikumpulkan dari kuesioner yang disebar kepada 90 pegawai di PT. PLN (Persero) Area Yogyakarta dan 42 kuesioner yang kembali kepada peneliti. SPSS Statistics 20 digunakan untuk menghitung data yang terkumpul. Selain itu, regresi linier berganda digunakan untuk memprediksi dan memperkirakan hubungan variabel. Komunikasi internal diukur menggunakan indikator dari Altinöz (2008). Lingkungan kerja diukur menggunakan indikator dari Sedarmayanti (2001). Sedangkan, *Employee engagement* diukur menggunakan versi pendek dari skala keterikatan pegawai Utrecht (UWES-9) oleh Schaufeli and Bekker (2003).

Hasil penelitian menunjukkan bahwa terdapat pengaruh yang positif dan signifikan antara komunikasi internal dan *employee engagement*. Hasil penelitian juga menunjukkan bahwa terdapat pengaruh yang positif dan signifikan antara lingkungan kerja dan *employee engagement*. Selain itu, hasil penelitian juga menunjukkan bahwa komunikasi internal dan lingkungan kerja secara bersama-sama mempengaruhi *employee engagement*.

Kata kunci: *Komunikasi Internal, Lingkungan Kerja, Employee Engagement*

CHAPTER I

INTRODUCTION

1.1. Research Background

Human Resource Management (HRM) is a fundamental theory of how to develop and manage the resources so that it can be used optimally in order to achieve organization goals. Arifin (2005) stated that in the conventional paradigm, human resource is as a complementary tool in organization, but now, in the fast growing environment, people needs to follow the changes and they should be seen as an organization asset not just as a tool. As an organization asset, people need to be developed and nurtured physically, emotionally, and cognitively so that they can achieve an optimal organization goal (Arifin, 2005). The failure in managing people in the organization, will decrease employee motivation, absenteeism, (Arifin, 2005, p. 17) and, of course, failure in achieving organization goals.

The success of developing organization's people brings to the success of engaging employee in organization. As stated by Richman (2006) and Saks (2011), employee engagement is one of the key factors for business success. According to Ouweneel et al. (2012), "the organizations need employees who are willing to psychologically invest in their work". Schaufeli and Baker (2010, p. 400) showed that a positive psychology refers to "positive emotions such as joy, satisfaction, enthusiasm, and interest". They also said that positive emotions related to employee engagement. It is

also supported from the previous research on Gallup Management Journal that showed that “78% of engaged workers feel their work lives have a positive effect on their psychological well being” (Crabtree, 2005). Thus, engagement leads to high level of performance (Kahn, 1990; Rana et al., 2014; Richman, 2006; Vosloban, 2013).

In the fast growing environment, employee engagement becomes a focus in the organization, because the engaged employee will work hard, perform better and stay longer in the company. Employee engagement refers to “a person’s attitude and attachment towards their organization. Engagement is not an attitude, but it is the degree to which an individual is attentive and absorbed in the performance of their roles” (Saks, 2006).

From the above explanation, it can be seen that human resources play an important role in organization. They give many contributions in day-to-day organization activities. Employees as an organization’s human resources, however, have different characteristics, needs, and wants (Prastawa, 2013). Consequently, organizations must give attention in fulfilling their needs and wants in order to create comfortable working condition. The contribution of human resource can help organization “to improve its productivity directly by finding a better ways to reach its goals and indirectly by improving the quality of work life (QWL) for employees” (Werther & Davis, 1993).

In order to be engaged, the organization should develop the QWL that provides the employee needs. According to Werther and Davis (1993),

“QWL means having good supervision, good working conditions, good pay and benefits, and an interesting, challenging, and rewarding job”. In other words, QWL means managing employee relations activities that “meet organizational objectives and employee needs” (Werther & Davis, 1993).

Employee relations cannot be carried out without any communication among employees in organization. Usually, employee relations are shared with the supervisor because of a complex structure and policy in organization (Werther & Davis, 1993). With this complex situation, communication, especially internal communication, is needed to distribute all of the information from bottom-up or vice versa. “Without information, managers cannot make an effective decision and it can cause stress and dissatisfaction among employees” (Werther & Davis, 1993). Hayase (2009) agreed that effective communication can be driven to increase employee engagement.

Furthermore, the organization should consider about the job design such as workplace environment in order to increase the employee satisfaction and productivity which in turn increasing the level of engagement. According to Yunanda (2012), in order to increase the employees’ productivity, workplace environment influences employees’ performance. It is because a good environment will give easiness in doing the jobs.

In this research, the researcher combines several study conducted by Anitha (2013), Leblebici (2012), Rahajeng (2012), and Yunanda (2013).

The previous research conducted by Rahajeng (2012) found that there is relationship between internal communication and employee engagement. The researcher is adding another variable in order to identify another variable that influences to employee engagement. Selecting the workplace environment as an additional independent variable, it is because a good workplace environment will create a supportive environment that influences to employee performance (Yunanda, 2013; Leblebici, 2012). In addition, Anitha (2013) found that the employee performance is affected by the employee engagement. Therefore, it indicated that the workplace environment influence to employee engagement.

PT. PLN (Persero) as the biggest and the only one electricity company in Indonesia is established in order to provide electricity for public interest and to develop economics and national security for public welfare. Even though, PT. PLN (Persero) does not have competitor in its area, they still concern in developing a better quality in terms of customer service (Priyadi, 2014). Furthermore, PT. PLN (Persero) has several branches in Indonesia. One of its branches is located in Yogyakarta.

In order to provide a better quality service for customer, PT. PLN (Persero) Yogyakarta always try to improve its performance. It can be seen from the company's improvement in the power outage. In the past, there is no information about the power outage, but now, the company's make an innovation in giving the information about the power outage through radio, social media and others. With this kind of innovation, it can be concluded

that the company's success in delivering the organization values and then implemented in the form of innovation and performance.

It may be predicted that PT. PLN (Persero) Yogyakarta Area already implemented the internal communication, so that the information about the organization objectives, policies, and procedures will be delivered clearly to the employees. In addition, the organization is willing to listen to the employees' opinion and ideas so that they have a sense of belonging to the organization which is affected to the engagement. Furthermore, the success of innovative workspace in PT. PLN (Persero) Yogyakarta Area is because the factor of workplace environment that may influence to the employees satisfaction and productivity. Thus, the supportive and healthy working environment will increase the level of engagement.

Following those explanations, this research discussed about internal communication, workplace environment, and employee engagement in PT. PLN (Persero) Area Yogyakarta. In this study, the independent variables used Internal Communication (X_1) also Workplace Environment (X_2) and the dependent variable Employee Engagement (Y) with the title: **The Influence of Internal Communication and Workplace Environment to Employee Engagement in PT. PLN (Persero) Area Yogyakarta.**

1.2. Research Identification

Employees are becoming an important asset in organization. In order to maintain and develop its asset, the organization must fulfill employees' needs and wants. Besides, the fulfillment of their needs and wants will lead

to increase their motivation and performance, salary, however, is not only the factor that can satisfy employees' needs. The needs of socialization, safety and comfort push organization to create a good relationship with organization member and a good atmosphere at work that can motivate employee to involve in organization activities.

With their desire to involve in organization without any coercion, it is becoming an advantage to organization in engaging its employees. Employee engagement is "the harnessing of organization members' selves to their work roles physically, cognitively, and emotionally" (Kahn, 1990). According to International Survey Research (cited in Ologbo & Sofian, 2012) employee engagement "enhances the commitment and contribution of its human resources to achieve greater business outcomes".

1.3. Problem Formulation

The problem formulations in this research are as follow:

1. Do internal communications influence employee engagement in PT. PLN (Persero) Yogyakarta Area?
2. Does workplace environment influence employee engagement in PT. PLN (Persero) Yogyakarta Area?
3. Do internal communication and workplace environment influence employee engagement in PT. PLN (Persero) Yogyakarta Area?
4. Does internal communication have the bigger influence to employee engagement than workplace environment in PT. PLN (Persero) Yogyakarta Area?

1.4. Research Limitation

Since there are many topics discussed in management study, the researcher chooses internal communication, workplace environment and employee engagement as the scope in the research study. Furthermore, in order to be more focused in conducting the research, the researcher limited the research object in PT. PLN (Persero) Yogyakarta.

1.5. Research Objectives

This research has objectives as mentioned in the followings:

1. To identify the influence of internal communication to employee engagement in PT. PLN (Persero) Yogyakarta Area.
2. To identify the influence of workplace environment to employee engagement PT. PLN (Persero) Yogyakarta Area.
3. To identify the influence of internal communication, workplace environment to employee engagement in PT. PLN (Persero) Yogyakarta Area.
4. To identify the internal communication has the bigger influence to employee engagement than workplace environment in PT. PLN (Persero) Yogyakarta Area.

1.6. Research Contribution

This research is expected to give contribution to the following parties:

1. For management study, especially in human resource management, this research provides empirical evidences about the influences of internal

communication and workplace environment towards employee engagement.

2. For the management of the company, this research gives suggestion to increase the level of employee engagement.
3. For research in human resource management area, this study can add and complement the previous research and it can be used as research material in order to increase the repertoire of academic, so that it becomes useful for the development of science particularly in human resource management.

1.7. Systematic of Writing

The systematical writing of this chapter is as follows:

Chapter I: Introduction. This chapter contains introduction which consist of research background, research identification, research formulation, research limitation, research objectives, research contribution and systematical writing.

Chapter II: Literature Review. This chapter consists of previous research, theoretical review, theoretical framework, and hypothesis formulation.

Chapter III: Research Method. This chapter consists of type of study, population and sample, data collection method, research variables and analysis technique.

Chapter IV: Data Analysis and Discussion. This chapter describes about statistical data analysis, reliability and validity test, hypothesis testing and discussion of the results.

Chapter V: Conclusions & Recommendations. This chapter provides summary from the whole research. Based on the conclusion, the writer will give suggestion for organization involved in order to develop the employee engagement of PT. PLN (Persero) Yogyakarta Area.

CHAPTER II

LITERATURE REVIEW

3.2. Previous Research

A research conducted by Rahajeng (2012) found a significant relation between internal communication and employee engagement. The research stated that internal communication is important to build a good relationship between employer and employee and also among co-workers, so that it will foster the engagement within the employees themselves. Questionnaires were distributed to 90 employees in PT. PLN (Persero) Bekasi, but only 63 questionnaires were returned. In this research, internal communication was measured by using communication climate survey from Dennis, as cited in Hayase, (2002), while employee engagement was measured by using Utrecht Work Engagement Scale (UWES) by Schaufeli et al. (2006).

Karanges et al. (2014) collected the research data from 200 respondents. It found that internal communication had significant influence to employee engagement directly and indirectly through social factors, including perceived support and identification, as a mediator. Furthermore, the research stated that internal communication develops the organization-employee relationship by strengthening the identification of the organization and perceived support from the supervisor. By that, the employee engagement will occur since the internal communication increase sense of pride and belonging.

Sarangi and Srivastava (2012) found that organizational culture and communication has significant impact to employee engagement. In addition, it found that 40% of variables independent –organizational culture and communication influenced the employee engagement. In this research, the sample consists of 247 executives taken from Indian Private Banks. In conducting this research, the organizational culture was measured by using the scale from Van den Berg and Wilderom (2004). Organizational communication was measured by using the scale from Clampitt and Downs (1977) and (1993). Employee engagement was measured by using the scale from Schaufeli et al. (2002).

Anitha (2013) conducted a research about key determinants of employee engagement and their impact to the employee performance. The key determinants of employee engagement are working environment, leadership, team and co-worker, training and career development, compensation, organizational policies, and workplace well-being. Based on 383 data respondents, it was found that working environment, and team and co-workers relationship are the most influential factors to employee engagement by 53% and 36% influence respectively. Therefore, it becomes an important key driver in employee engagement. Furthermore, the result also found that employee engagement had influence on employee performance.

Vosloban (2013) conducted a survey in 50 employees in a private company from Bucharest, Romania. The result found that the antecedents of

employee engagement – the benefits of the employees get, the available resources and opportunities for development, the recognition of their work, the relationships with the colleagues and managers, the working environment and the team activities – can increase the level of engagement. In addition, the research found that an engaged employee will not leave the company and tend to be loyal with any kinds of situation and condition of the company. An engaged employee is the one who is fully involved and interested about the company. Therefore, the company provides a better working environment to satisfy them while performing the job and maintains a relationship and interaction within the organization members in order to fulfill both the company and the employees need.

Andrew and Sofian (2012) conducted a research about the influence of individual factors of employee engagement to the work outcomes on 104 HR officers. The individual's factors are including employee communication, employee development, and co-employee support. The work outcomes are including job satisfaction, organization commitment, intention to quit, and organizational citizenship behavior. Employee engagement, as mediator, is including job engagement and organization engagement. Using the social exchange theory as a fundamental theory, it was found that individual factors had influenced the employee engagement. It means that the employees will increase the level of engagement after they perceived support from co-employee, provided with sufficient job development and employee communication. Consequently, it is also

influence work outcomes (job satisfaction, organization commitment, intention to quit, and organizational citizenship behavior).

Yunanda (2013) found the influence of workplace environment to employee satisfaction and employee performance in water quality laboratories sector in Perum Jasa Tirta I Malang. The questionnaire was distributed to 50 employees. In addition, physical and non-physical working environment, definition of employee performance and employee satisfaction was used as research theory. The research found that a comfortable working environment will increase the level of employee satisfaction and performance. The indirect influence between working environment to employee performance through employee satisfaction will gain the influence to employee performance, because the satisfied employee will give their best performance in doing the job.

Leblebici (2012) found that workplace environment affects employee performance. It used theories physical and non-physical (behavioral) environment in conducting the research. Sample for the study consists of 50 employees from call centre personnel of a private bank in Turkey.

This research identify about the influence between internal organization and workplace environment to employee engagement. The previous research conducted by Rahajeng (2012) identify about the internal communication and employee engagement. The difference of this research with the previous research laid in the workplace environment which is adding another variable that influences to employee engagement. Selecting

the workplace environment as an additional independent variable, it is because a good workplace environment will create a supportive environment that influences to employee performance (Yunanda, 2013; Leblebici, 2012). In addition, Anitha (2013) found that the employee performance is affected by the employee engagement. Therefore, it indicated that the workplace environment influence to employee engagement.

3.3. Theoretical Review

2.2.1. Human Resource Management

Human resource (HR) management is the study about how to develop and to manage the people in the organization in order to achieve the organization goals. The basic function of HR management are planning, organizing, staffing, leading and controlling (Dessler, 2000). According to Dessler (2000), human resource management refers to “the practices and policies you need to carry out the people or personnel aspects of your management job” that include:

1. Conducting job analyses
2. Planning labor needs and recruiting job candidates
3. Selecting job candidates
4. Orienting and training new employees
5. Managing wages and salaries
6. Providing incentives and benefits
7. Appraising performance

8. Communicating
9. Training and developing
10. Building employee commitment

In managing the people, Dessler (2000) stated that the human resource (HR) manager has three different functions as follow:

1. A line function

As a line function, HR managers will give an order to their people in the same department and in service areas. It can be seen that the HR manager's suggestion is often seen as orders from top-side.

2. A coordinative function

HR managers as a coordinative function can also be seen as a functional control. It is because the HR managers play a role in coordinating the personnel activities to ensure that the organization's HR objectives and policies are already coordinated and implemented.

3. Staff (service) function

As a staff function, HR managers or department assist the job of the line managers, such as assisting in the hiring, training, evaluating, rewarding, counseling, promoting, firing and administration of the employees.

According to Werther and Davis (1993), the purpose of human resource management is "to improve the productive contribution of people to the organization in an ethical and socially responsible way". It means that the organization is responsible in treating the employees in the

fairness way and represents the interest of employees in order to give employees motivation and satisfaction. Furthermore, the motivated and satisfied employees will give their best contribution and performance to the organization.

In the fast growing environment, the organization, especially the HR management needs to build a competitive advantage that makes difference with its competitors to increase the market share (Dessler, 2000). The competitive advantage can be achieved through employee engagement. Furthermore, employee engagement can be achieved by having the integrated internal communication and the satisfying workplace environment in the workplace. By having a competitive advantage, it is possible to create low-cost and high quality services or products because the organization has high quality work force that allows the organizations to compete with others (Dessler, 2000).

2.2.2. Internal Communication

1. Definition

Internal communication is the communication occurred within the organization members from the top management, co-workers, and subordinates. Altinöz (2008) stated that internal communication contributes to coordinating among organization members. Organizational communication is an important tool in distributing information needed by employees (Altinöz, 2008). Organizational communication can be either formal or informal (Hayase, 2009). “Formal communication is the type that works in specified

structures within the organizational rules and towards the organizational goals. Informal communication, on the other hand, is the unofficial type taking place among staff as face-to-face or telephone interaction” (Altinöz, 2008).

Altinöz (2008) stated that “the function of communication is to raise mutual understanding and to create a spirit of solidarity among the members of the organization”. Thus, communication ensures employee to get free information through loyalty and mutual decision making. That is why internal communication has become a focus (Reid, 2012) and it plays a crucial role in the organization (Akkirman & Harris, 2004; Linke & Zerfass, 2011; Opitz & Hinner, 2003; Welch & Jackson, 2007) “which affects the ability of organizations to engage employees” (Kress, as cited in Welch & Jackson, 2007).

Frank and Brownell (as cited in Welch & Jackson, 2007, p.179) defined communication as “the transactions between individuals and/or groups at various levels and in different areas of specialization that are intended to design and redesign organizations, to implement designs, and to co-ordinate day-to-day activities”.

Interpersonal communication definition by Allen et al (as cited in Awad & Alhashemi, 2012) is suitable for discussing matters that require feedback between individuals. In discussing of organization matters, conversations feedback can be given through coaching, counseling or training sessions, because conversation outcomes can be the form of praise or criticism.

“Meetings and conferences are useful forms of interpersonal communication as well as brainstorming sessions, quality circles, committee meetings, and contract negotiations” (Allen et al, cited in Awad & Alhashemi, 2012, p. 136). In addition, Clampitt and Downs (as cited in Petitt, et al., 1997) found that personal feedback from supervisor has the biggest impact in productivity. Similarly, Linke & Zerfass (2011) argued that a feedback process is needed by organization members in order to manage the communication activities (two-way communication).

Another definition defined communication as “giving, receiving or exchanging information, opinions or ideas by writing, speech or visual means, so that the material communicated is completely understood by everyone concerned” (Taylor, 1999). Therefore, the internal communication is used to make sure that all of the information can be distributed clearly and equally throughout organization, so there are no barriers to communication (Taylor, 1999). In the small organization, there may be a few communication problems occurred in organization. In the larger and in the more complex organization, however, there is much communication problems occurred because its communication systems consist of vertical, horizontal and diagonal communication (Taylor, 1999). According to Opitz & Hinner (2003, p. 7), “communication problems have an impact on the satisfaction and motivation of employees. With less satisfaction, the rate of employee turnover increases, thus, the costs of labor are much higher than they should be.”

2. The Types of Internal Communication

Altinöz (2008) stated that there are three types of internal communication flow. It can be seen as follow:

1. Vertical communication

Vertical communication includes downward and upward communication. According to Altinöz (2008), vertical communication is the communication occurred from the supervisor to the subordinates (downward communication) and from the subordinates to the supervisor (upward communication).

a. Downward Communication

The purpose of downward communication is sharing the information from supervisor to subordinates about the organization's goals and policy and evaluating the employees' performance (Altinöz, 2008). The role of leader is important in this communication because the leader is the one who is responsible in delivering a clear messages or information through instructions, guidance and suggestions to the subordinates.

b. Upward Communication

The purpose of the upward communication is giving the information from the subordinates to supervisor about the condition in their level (Altinöz, 2008). It can be obtained from the progress reports and suggestions. The second is horizontal communication that involves the relations between employees in the same level.

2. Horizontal Communication

The horizontal communication is exchanging the information among the co-workers in the same unit (level). This communication occurs because of the need of relation among co-workers in the same group (level) (Altinöz, 2008). In addition, it will give easiness in conducting the coordination activities such as group activities. Furthermore, this communication is exchanging the information that is needed by the co-workers in order to help them in solving the problems effectively and efficiently.

3. Diagonal Communication

According to Altinöz (2008), the diagonal communication occurs between employees with different level (function). In the diagonal communication, the employees will understand about the situation and condition outside their group (level) so that they can get more various angles when analyzing the problems. Usually, this communication is occurred when there is coordination between managers and subordinates from different function. This kind of relationship, then, will create a sense of empathy.

2.2.3. Workplace Environment

1. Definition

With changing nature of work and increasing employee demand, the workplace environment became an important factor in managing organization that is more competitive and efficient (Levin, 2005). In addition, a supportive

working environment motivate employee to remain in healthy working environment and empower them to perform effectively (Oswald, 2012).

According to Ajala (2012), environment is “man’s immediate surrounding which he manipulates for his existence”. The wrongful in manipulating the environment will give danger to employee because such environment will create unsafe environment and obstruct the productivity.

Anorogo & Widiyanti (cited in Septianto, 2010) defined workplace environment as “all the things that is around employees and that could affect them in doing their jobs”.

According to Sedarmayanti (2001), workplace environment is “the entire instrument and materials surrounding the environment where the people, the methods, and the arrangements are good for the individuals and groups”.

Based on the definition, it can be concluded that the workplace environment is the physical and non-physical working condition that is affected to the employee performance.

According to Leblebici (2011), the office environment influences by two categories that are physical and behavioral environment. The physical environment includes office layout and office comfort, while behavioral environment includes the level of interaction and distraction (Leblebici, 2011). The physical environment, however, is one of the factors to attract employee remained in organization (Leblebici, 2011). An appropriate workplace environment resulted in high employee satisfaction and

productivity and reduces an employee absenteeism and turnover (Leblebici, 2011; Lee, 2006; Roelofsen, 2002). Besides, a study conducted by Leblebici (2011) found that 58% employee agree that behavioral environment is more important than physical factor and resulted in higher level of job satisfaction. In a similar context, Kato et al. (2009) discovered that green workplace offers greater psychological benefits (taking pride of the workplace environment) to occupiers than physical improvements (health and productivity gains).

2. The Types of Workplace Environment

Sedarmayanti (2001) divided workplace environment as follow:

a. Physical environment

Physical environment is “all the physical aspect that is around the workplace that may affect employee directly and indirectly” (Sedarmayanti, 2001). Therefore, the organization should provide an appropriate physical environment such as lighting, workspace, temperature, safety, cleanliness, work facilities, etc.

b. Non-physical environment

Non-physical environment is “the condition related with employee relations with the supervisor, with the co-workers, and/or also with subordinates” (Sedarmayanti, 2001). Therefore, the organization needs to build the relationship among the employees in the organization.

Physical and non-physical environment cannot be separated from the constructs of the workplace environment and it needs to be combined. It is because both of the factors will complement the employees’ need that will

affect the human sense and interpersonal relations which in turn influence to employee satisfaction and performance (Ajala, 2012).

2.2.4. Employee Engagement

1. Definition

Kahn (1990) defined personal engagement as “the harnessing of organization members’ selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performance”.

Kahn (1990) and May et al. (2004) found that meaningfulness, safety, and availability have a significant relationship with engagement. They also found that job enrichment and task accuracy (role fit) has a positive predictor for meaningfulness; rewarding coworkers and supported supervisor has a positive predictor of adherence to safety norms while co-workers and self-awareness is a negative predictor; and the availability of resources is a positive predictor for the availability of psychological (psychological availability), while participation in activities outside is as a negative predictor.

Schaufeli et al. (cited in Schaufeli & Salanova, 2003) defined engagement “as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption”. Vigor represents the high energy for work. Dedication represents a sense of pride in one’s work. Absorption represents being engrossed in work.

Hewitt Association (2014) defines engagement as “the psychological state and behavioral outcomes that lead to better performance”. In addition, the engaged employee will say, stay, strive. Say speaks positively about the organization. Stay has a desire to be a part of organization. Strive are motivated and giving the best performance to the one’s job.

Saks (2006) explained about employee engagement using social exchange theory (SET) that is a two-way relationship between employee and employer. The organization should give the best 'services' to the employee so that the employee will also give their best performance to the organization. When the employee engaged with the organization, they will seek a source beside a financial matter such as reward and career. The consequence is that they will do their works diligently and give their best to accomplish their job. After that, their individual performance level will increase and the organization performance will increase too.

According to International Survey Research (cited in Andrew & Sofian, 2012) employee engagement is “the practice by which a firm enhances the commitment and contribution of its human resources to achieve greater business outcomes”. In addition, International Survey Research (cited in Andrew & Sofian, 2012) found that “employee engagement is a mixture of an employee’s cognitive, behavioral and affective dedication to his or her organization”.

2. The Types of Employee Engagement

According to Schaufeli and Bakker (2003), employee engagement can be categorized as follow:

a. Vigor

Vigor refers to high energy and mental resilience in facing the job task so that the employees are ready to carrying out the job task and facing the work problems.

b. Dedication

Dedication refers to employees' involvement in performing the job task so that employees will obtain meaningful, inspiring and challenging work.

c. Absorption

Absorption refers to employees' concentration and preoccupation with the job task so that employees are difficult to separate from their work and they will feel that the time goes fast when performing the job.

2.3. Relationship among Variables

2.3.1. Internal Communication and Employee Engagement

According to Welch (2011, p. 339), "Engagement is affected by internal communication. It is an organizational practice with the potential to effectively convey the values of the organization to all employees, and involves them with the goals of the organization". Another study conducted by Vosloban (2013) stated that having a better communication in organization will help employee in understanding organization's goals

and developing their career plans as resulted of having a higher engagement level. Karanges et al. (2014) stated that in order to increase the higher level of engagement, organization and supervisor should focus in building the internal communication.

According to CIPD survey (cited in Andrew & Sofian, 2012), “the two most significant drivers of employee engagement are having opportunities to have their voice held and feeling well informed about what is going on in the organization. Communication also encompasses that employee receives feedback about their performance”. Another research conducted by Sarangi and Srivastava (2012) and Rahajeng (2012) also stated that internal communication is important in increasing the higher level of employee engagement.

Moreover, Rahajeng (2012) found that internal communication has a strong correlation to employee engagement. It is because an open communication between employer-employee and employee-co-employee will create accurate information that can be used in doing the job and also in achieving the organization goals. With engagement, the employees will give contribution in exchanging and distributing the information related to the job.

2.3.2. Workplace Environment and Employee Engagement

Kahn (1990) suggested that work contexts create conditions in which individuals can personally engage with their work. Bakker and Demerouti's (2007) job-demands-resources (JDR) model emphasizes the

role of job design in generating engagement. Furthermore, job resources such as social support will activate employee's motivation. Besides, job demand such as high work pressure will cause physical and mental health problems which in turn decreasing the level of engagement.

Sarangi and Srivastava (2012), found that organizational culture which affect workplace environment has the most influence to employee engagement rather than organizational communication. It is because the engagement will occur as a result from having the satisfaction of basic needs or the achievement of work goals (Schaufeli & Bakker, as cited in Bakker & Demerouti, 2008).

Moreover, the engaged employee "possess personal resources, including optimism, self-efficacy, self-esteem, resilience, and an active coping style" (Schaufeli & Bakker, as cited in Bakker & Demerouti, 2008). Based on Schaufeli et al. (2009) work environments that offer an overflowing resource encourage the willingness of employees to dedicate their efforts and abilities to the work task. In this case, it is possible to succeed in completing the work task and to achieve the organization goal.

2.3.3. Internal Communication, Workplace Environment and Employee Engagement

Even though employees can work individually, they are a part of organization that consists of several division and sub-division. Thus, the relationship between individuals is important in making similar vision and mission in order to achieve organization goals. Blau (cited in Arora &

Kamalanabhan, n.d.) stated that “social exchange occurs when an individual is attracted to another. These relationships create an environment of reciprocity between the supervisor-employee and coworker-employee”.

According to Moideenkutty (2006), “social exchange leads to the development of feelings of personal obligation, gratitude and trust”. Lockwood (in Parimalam & Mahadevan, 2012) stated that “to develop an engaging culture in work place, the organization should develop such an environment that support the factors like culture, communication style, managerial styles, leadership style and trust”.

Kahn (1990) emphasized that employee will feel safe in trusted situation and those situation will not weaken their personal engagement. The flexible environment encouraged employee to “try and perhaps to fail without fearing the consequences” (Kahn, 1990). Furthermore, employee participation is important to share their ideas and encouraged to feel that the criticisms that they may face are constructive rather than destructive. Thus perceived organizational support is important to encourage their participation at works. Hakanen (cited in Park et al., 2014) found that “individual work engagement promotes personal initiative, and consequently influences innovation”.

According to Arora & Kamalanabhan (n.d), innovation is one of an important factor in achieving competitive advantage. In addition, “employees’ willingness to invest in innovative activities may depend

upon the extent to which they perceive that they have support at the workplace” (Arora & Kamalanabhan, n.d).

2.4. Conceptual Framework

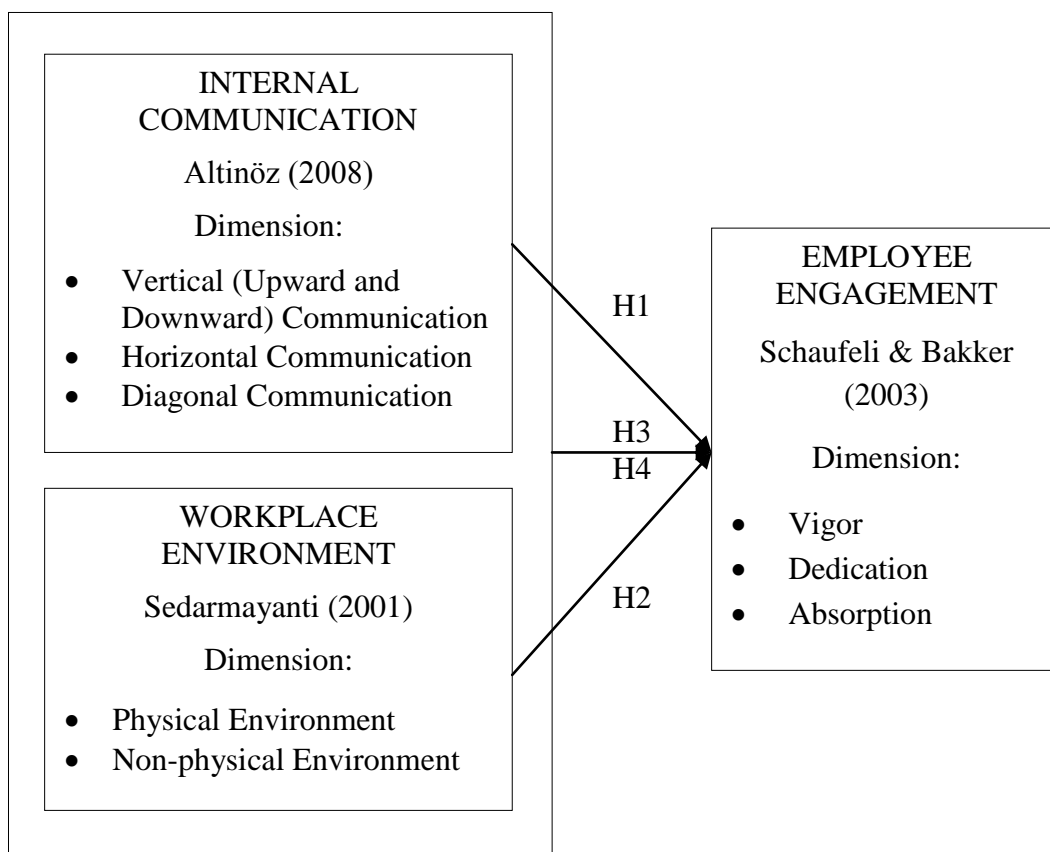


Figure 2.1. Figure of Conceptual Framework

Based on Figure 2.1, it tries to explain how internal communication and workplace environment influences employee engagement.

2.5. Hypothesis Formulation

From the literature review (described above), we can draw up a simple set of hypotheses regarding to the influence of internal communication and

workplace environment towards employee engagement. Hypotheses formulations that will be tested in this research are:

Hypothesis 1: There is a significant influence of internal communication to employee engagement in PT. PLN (Persero) Yogyakarta Area.

Hypothesis 2: There is a significant influence of workplace environment to employee engagement in PT. PLN (Persero) Yogyakarta Area.

Hypothesis 3: Internal communication and workplace environment can influence employee engagement, simultaneously. There are significant influence between internal communication and workplace environment to employee engagement in PT. PLN (Persero) Yogyakarta Area.

Hypothesis 4: The internal communications has the bigger influence to employee engagement than workplace environment in PT. PLN (Persero) Yogyakarta Area.

CHAPTER III

RESEARCH METHOD

3.1. Type of Study

The researcher uses survey research in order to gather the data or the information in this research. According to Singarimbun and Effendi (1995), survey research is “the research that is taking sample from one population and using questionnaire as a tool to gather the main data”.

The survey research can be used with the purpose of an explanatory research that observes “the relationship between variables by using the framework first, and then formulated in the form of a hypothesis” (Suryana, 2010).

This research uses quantitative approach, because the majority of presented data is coming from numerical data. It, then, will be analyzed by using statistical analysis that will be proceeding into useful information (Kuncoro, 2007).

3.2. Research Object

3.2.1. Research Location

This research is conducted in PT. PLN (Persero) Yogyakarta Area. This company is located in Gedongkuning street no. 3, Banguntapan, Bantul, Yogyakarta, 55198. Telephone: (0274) 452200. Website: www.plndiy.co.id

3.2.2. Company Profile

PT. PLN (Persero) as the biggest and the only one electricity company in Indonesia is established in order to provide electricity for public interest and to develop economics and national security for public welfare. In the act of electricity number 30 of 2009 in article 1 paragraph 3, it is stated that electricity business provider is providing electricity including generation, transmission, distribution, and sales of electricity power to customer. Even though, PT. PLN (Persero) does not have competitor in its area, they still concern in developing the better quality in terms of customer service (Priyadi, 2014). Furthermore, PT. PLN (Persero) has several branches in Indonesia. One of its branches is located in Yogyakarta.

PT. PLN (Persero) Yogyakarta Area is a part of PT. PLN (Persero) in Central Java and Special District of Yogyakarta that is located in Semarang. PT. PLN (Persero) Yogyakarta Area supervises of eight districts included Kalasan, Wates, Sedayu, Bantul, Wonosari, Sleman, North Yogyakarta and South Yogyakarta. The revenue of PT. PLN (Persero) Yogyakarta Area is obtained from the sales account, the new power plug, added power, sweep rates, and P2TL (Publication of Electronic Consumption).

1. PT. PLN (Persero) Vision

The vision of PT. PLN (Persero) is to be recognized as the world class company that is flourishing, superior and reliable with human resources.

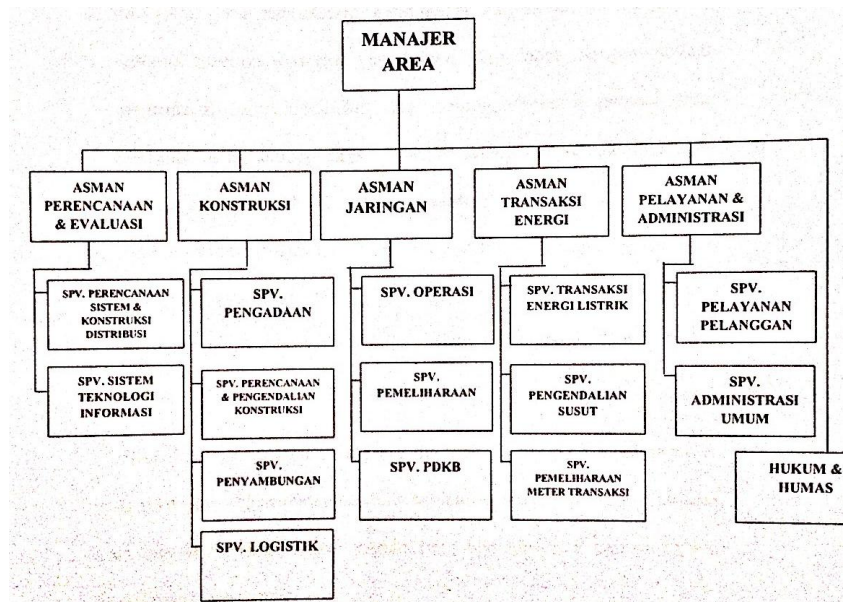
2. PT. PLN (Persero) Mission

- a. Running an electricity business and other related fields oriented to customer satisfaction, company members, and shareholder.
- b. Making electricity as a tool to improve the quality of people's lives.
- c. Keeping the power to drive the economy activity.
- d. Running a business activity that is environmentally sounding.

3. PT. PLN (Persero) Motto

Electricity for a Better Life

4. Organization Structure of PT. PLN (Persero) Yogyakarta Area



Source: Priyadi (2014)

Figure 3.1. Organization Structure of PT. PLN (Persero) Yogyakarta Area

Based on figure 3.1, that is the organization structure that is applied in PT. PLN (Persero) Yogyakarta and led by the manager area. The manager area as a leader has several assistant manager that is trusted to make coordination in their department. The available departments in PT. PLN (Persero) Yogyakarta Area are departments of planning and evaluation, department of construction, department of system, department of transaction energy, department of service and administration, and law and public relation. In addition, each of departments has another unit that is led by the supervisor.

In order to make coordination, the area manager, assistant manager, and supervisor in PT. PLN (Persero) Yogyakarta Area always make a communication to make sure that the information about the organization is distributed equally to the organization members. Conducting meeting, giving coaching and feedback, discussing about the work problems through face-to-face or using other media such as email are several ways in delivering messages or information that is needed by both management and employees.

3.3. Population and Sample

Population is “generalization territory consisting of the subject/object that has met certain qualities and characteristics of the research from which the researcher can study and draw conclusion” (Sugiyono, cited in Sudarmanto, 2013, p. 26). The population in this study is all full-time employees at PT. PLN (Persero) area Yogyakarta with the total 90

employees. According to Doane and Seward (cited in Sudarmanto, 2013), the study sample is “a subset of the population that will be actually analyzed”. The sampling technique used in this study is a census method because the population is small –less than 100 people (Arikunto, 1993).

3.4. Data collection method

In this research, the data collection method uses primary and secondary data. Primary data is collected directly from the field research. It is obtained from the result of the questionnaire distributed to respondent. Likert Scale, a four point scale, was used in the questionnaire administered for the studies ranging from strongly disagree to strongly agree. The scoring model based on Likert Scale as follow:

The score of 4 → Strongly agree

The score of 3 → Agree

The score of 2 → Disagree

The score of 1 → Strongly disagree

Then, those score model will be used in determining the research variable. After that, those score will be modified with the range scale with interval of 0.75 $[(4-1)/4]$ in calculating the questionnaire answer, as follow:

1,00 – 1,75 = Very Low (0 – 25%)

1,76 – 2,50 = Low (26 – 50%)

2,51 – 3,25 = High (51 – 75%)

3,26 – 4,00 = Very High (76 – 100%)

Furthermore, the secondary data collected comes from literature such as collecting data from books, journals, academic work, thesis, the internet and other sources that aim to obtain additional information and a deeper understanding of the issues that is discussed in this study (Indriantoro & Supomo, 2009).

3.5. Research variables

This research consists of independent variable (X) and dependent variable (Y) that are described as follows:

3.5.1. Internal Communication (X₁)

Altinoz (2008) stated that there are three types of internal communication flow. It can be seen as follow:

1. Vertical Communication

Vertical communication involves the communication between managers and subordinates running downward and upward.

a. Downward Communication

Downward communication is sharing the information from supervisor to subordinates about the organization's goals and policy and evaluating the employees' performance.

Indicators:

1. The supervisor give instruction
2. The supervisor give information about organization policies, rules, and goals
3. The supervisor give suggestion

b. Upward Communication

Upward communication is giving the information from the subordinates to supervisor about the condition in the subordinates' level. It can be obtained from the progress reports and suggestions.

Indicators:

1. Employees give a progress report
2. Employees give a final report
3. Employees give opinion and aspiration

2. Horizontal Communication

Horizontal communication involves the relations between employees in the same level. The horizontal communication occurs because of the need of relation among co-workers in the same group (level) in order to maintain the employee coordination and problem-solving.

Indicators:

1. Employees are sharing a relevant information among co-employee in the same level (unit)
2. There is coordination and cooperation among employees in the same level (unit)
3. There is a mutual support

3. Diagonal Communication

Diagonal communication occurs between employees with different level. In the diagonal communication, it is allowed the

employees to understand about the situation and condition outside their group (level). It is occurred when there is coordination between managers and subordinates from different function. This kind of relationship, then, will create a sense of empathy.

Indicators:

1. Employees are exchanging the information with other employees in different level (unit)
2. There is coordination and cooperation among employees in different level (unit)
3. Employees between one level (unit) with others are helping each other

Table 3.1. Table Operational Concept of Internal Communication

Variable	Dimension	Indicator
Internal communication	Vertical Communication (Downward Communication)	<ol style="list-style-type: none"> 1. Supervisor give clear instruction about the job to subordinates 2. Supervisor give information about organization policies, rules and goals 3. Supervisor give critics/suggestion about employees working
	Vertical Communication (Upward Communication)	<ol style="list-style-type: none"> 4. Employees tell Supervisor about their continuous working regularly 5. Employees give a final report to Supervisor regularly 6. Employees have an opportunity to give opinion and aspiration

(Continued from *Table 3.1. Table Operational Concept of Internal Communication*)

Internal communication	Horizontal Communication	<p>7. Sharing the relevant information between units</p> <p>8. There is coordination and cooperation to implement job tasks between units</p> <p>9. There is mutual support between employees</p>
	Diagonal Communication	<p>10. Employees exchange the information about working with other employee in different unit</p> <p>11. There is coordination and cooperation to implement job tasks between different units</p> <p>12. Helping each other in solving problems that occurs between different units</p>

Source: Altinöz (2008)

3.5.2. Workplace Environment (X_2)

According to Sedarmayanti (2001), workplace environment is “the entire instrument and materials surrounding the environment where the people, the methods, and the arrangements are good for the individuals and groups”. Sedarmayanti (2001) divided workplace environment into physical and non-physical environment.

1. Physical Environment

Physical environment is “all the physical aspect that is around the workplace that may affect employee directly and indirectly” (Sedarmayanti, 2001). Therefore, the organization should provide an appropriate physical environment such as lightning, workspace, temperature, safety, cleanliness, work facilities, etc.

Indicator:

1. Lightning

- a. The availability of lightning
- b. The availability of the maintenance system
- c. The lightning is based on the employee needs

2. Workspace

- a. The workspace is neither too narrow or too wide
- b. The workplace is located strategically
- c. The workspace has a good layout

3. Temperature

- a. The workspace has a good air conditioning and air circulation

4. Safety

- a. There is a security office
- b. The building has a good construction
- c. There is a security system

5. Cleanliness

- a. There is a cleanliness maintenance system inside the building
- b. There is a cleanliness maintenance system outside the building
- c. There is an officer to clean the building regularly

6. Work facilities

- a. There are supportive facilities in the office (computer, printer, office stationary, etc.)

2. Non-physical Environment

Non-physical environment is “the condition related with employee relations with the supervisor, with the co-workers, and/or also with subordinates” (Sedarmayanti, 2001).

Indicators:

1. There is a good structure
2. Employees know their responsibility
3. There is a support and attention from supervisor
4. There is a cooperation
5. There is an open communication

Table 3.2. Table Operational Concept of Workplace Environment

Variable	Dimension	Indicator
Workplace environment	Physical	<ol style="list-style-type: none"> 1. There is an adequate lighting 2. There is a good lighting maintenance system 3. The lighting provided has already fitted with the working needs 4. The work office is neither too narrow or too wide 5. The workspace is placed in the strategic location 6. The company is already arranged a good workspace for employees 7. There is a good air conditioner and air circulation in the workspace 8. There is a security by security office 9. Office building construction has ensured the employee safety 10. There is a security system (cctv, alarm) 11. There is good cleanliness maintenance in inside building (bathroom, pantry, etc.)

(Continued from *Table 3.2. Table Operational Concept of Workplace Environment*)

		<p>12. There is good cleanliness maintenance in outside building (garden, cafeteria, parking lot, etc.)</p> <p>13. There is an implementation of hygiene by officer regularly</p> <p>14. The supporting facilities are available in the office (computer, printer, office stationary, etc.)</p>
	Non-physical	<p>15. The company has a good work and organization structure</p> <p>16. Employees realize about their responsibility</p> <p>17. Supervisor give attention and support for the employee</p> <p>18. There is a good cooperation among workers</p> <p>19. There is a smooth and an open communication between employee and supervisor</p>

Source: Sedarmayanti (2001)

3.5.3. Employee Engagement (Y)

Schaufeli et al. (cited in Schaufeli & Bakker, 2003) define engagement “as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption”. This variable will be analyzed by using Utrecht Work Engagement Scale (UWES) with 17 items (Schaufeli & Bakker, 2003). According to Rurkkhum (2010), these 17 items in the UWES could be shortened to 9 items without impacting internal consistency.

1. Vigor

Vigor refers to high energy and mental resilience infacing the job task.

Indicators:

1. Full of energy in the work
2. Eager to work
3. Ready to work

2. Dedication

Dedication refers to employees' job as meaningful, inspiring and challenging.

Indicators:

1. Enthusiast in working
2. My work inspiring me
3. Proud of my work

3. Absorption

Absorption refers to employees' concentration and preoccupation with the job task.

Indicators:

1. Happy working intensely
2. Immersed at work
3. Carried away with the atmosphere at work

Table 3.3. Table Operational Concept of Employee Engagement

Variable	Dimension	Indicator
Employee engagement	Vigor	1. full of energy in the work 2. eager to work 3. ready to work
	Dedication	4. enthusiastic in working 5. my work inspiring me 6. proud of my work
	Absorption	7. happy working intensely 8. immersed at work 9. carried away with the atmosphere at work

Source: Schaufeli and Bekker (2003)

3.6. Analysis technique.

3.6.1. Validity and Reliability Test

1. Validity Test

According to Arikunto (1993), validity is the test to show the degree of validity of the instrument (questionnaire) used in the data collection. Validity test was conducted to determine whether the items were presented in the questionnaire is really able to express exactly what will be studied. The validity test is obtained by means of each indicator scores correlate with the total score of the indicator variables, then the correlation results are compared with the critical value of 0.05 significant level.

An instrument said to be valid if it is able to measure what is desired and the level of validity of the instrument indicates the extent to which the data collected does not deviate from the description of the variables in question.

The product moment correlation calculation by Pearson was used to calculate the degree of validity of the instrument, the formula as proposed by Sudarmanto (2013, p. 57):

$$r_{xy} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

Where:

r_{xy} = Pearson coefficient correlation

N = number of samples

X = Score of each respondent for each item of question

Y = score of each respondent from the whole item of question

The minimum requirement will be considered to be valid, if the value of r count $>$ r table of values.

2. Reliability test

Reliability is the test to make sure that the instrument (questionnaire) can be trusted to use in collecting the data. The instruments said to have higher or good reliability, if the research instrument always gives the same result when used multiple times at different times (Sudarmanto, 2013). According to Arikunto (1993), alpha formula is used to calculate the reliability test, in which the instrument score is ranging of some value (0 – 10 or 0 – 100) or some scale (1 – 5 or 1 – 7 etc). The alpha formula proposed by Arikunto (1993, p. 165):

$$r_{11} = \left(\frac{k}{k-1} \right) \left(1 - \frac{\sum \alpha_b^2}{\alpha_t^2} \right)$$

Where:

$r\alpha$ = instrument reliability

k = the number of questions

α_b^2 = the number of item variance

α_t^2 = total variance

According to Sekaran (1992), the reliability test will be analyzed by using a limited value of 0.6. The data is good if the value is above 0.6. In contrast, the data is poor if the value is below 0.6.

3.6.2. Descriptive Analysis

According to Arikunto (2005), descriptive analysis is statistical analysis that is used to know about the tendency of each research variables or objects by looking at the mean score, frequency, or percentage. By using this analysis, the data will be grouped based on their category so that it will be more organized. From this result, the data gathered will be easily presented to the readers.

3.6.3. Classic Assumption Test

1. Heteroscedasticity

Heteroscedasticity occurs “when there is a failure or residual from research model that does not have constant variance in one observation to others” (Hanke & Reitsche, cited in Kuncoro, 2007).

Statistical test used in testing heteroscedasticity is Glejser test. Glejser test is done by using regression between independent variable and residual absolute value. According to Sudarmanto (2013), there are three steps in

conducting Glejser test. The first step is calculating residual value of each independent variable. The second step is calculating absolute value from residual of independent variable. The last step is regressing independent variables with absolute residual variable obtained from the previous step. Two criteria used in analyzing heteroscedasticity in Glejser test are using probability value compares with the significant level of 5% ($\alpha=0.05$). The basis of decision-making is as follows:

- a. If probability value $> \alpha$ then heteroscedasticity does not occur
- b. If probability value $< \alpha$ then heteroscedasticity occur

2. Autocorrelation

According to Sudarmanto (2013), autocorrelation test is used to determine whether there is a correlation among residuals in given time series. The consequences of the presence of autocorrelation in the regression model are unable to describe the sample variance and t-test and F-test become invalid. Durbin-Watson test (DW test) is used to analyze autocorrelation in research with the hypothesis made as follow:

H_0 : There is no autocorrelation

H_a : There is autocorrelation

The bases of decision-making in DW test are as follows:

- a. If $d < d_L$ reject H_0
- b. If $d > d_U$ do not reject H_0
- c. If $d_L < d < d_U$ test is inconclusive

3. Multicollinearity

According to Sudarmanto (2013, p. 224), the purpose of multicollinearity is to test whether there is a correlation between one independent variable to another independent variables in multiple regression models.

The bases of decision-making in multicollinearity are as follows:

- a. If VIF value above 10 ($VIF > 10$) or tolerance value is smaller than 0.1 (tolerance < 0.1), then the multicollinearity is occurred
- b. If VIF values below or equal 10 ($VIF \leq 10$) or tolerance value is bigger than 0.1 (tolerance > 0.1), then the multicollinearity is not occurred.

3.6.4. Multiple Regression Analysis

According to Arikunto (2005, p. 371), "Regression analysis is used to predict the relationship between dependent and independent variable". The elaboration from regression technique is multiple regressions where there is more than one independent variable used in predicting dependent variable (Arikunto, 1993, p. 250). The formula of multiple regression analysis is as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e$$

Where:

Y = dependent variable

α = constant value

β_1 = the number of coefficient internal communication (X_1)

β_2 = the number of coefficient workplace environment (X_2)

X_1 = internal communication

X_2 = workplace environment

e = standard error

3.6.5. Hypothesis Testing

1. t-test

t-test is to test the influence of one independent variable to dependent variable. The formulations of hypotheses using the t-test are:

H_{01} : $\beta_1 \leq 0$: Internal communication has no a positive influence to employee engagement

H_{a1} : $\beta_1 \geq 0$: Internal communication has a positive influence to employee engagement

H_{02} : $\beta_2 \leq 0$: Workplace environment has no a positive influence to employee engagement

H_{a2} : $\beta_2 \geq 0$: Workplace environment has a positive influence to employee engagement

t-test compares t_{count} with t_{table} or significance value with significant level of 5% ($\alpha=0.05$) (Kuncoro, 2007). Criteria for acceptance and rejection of the hypothesis are as follows:

- a. If the probability value $< \alpha$, then H_0 is rejected and H_a is accepted
- b. If the probability value $> \alpha$, then H_0 is accepted and H_a is rejected

If H_0 is accepted, then it can be concluded that the influence among variables has no a positive influence, whereas if H_0 is rejected, it means that there is a positive influence among variables.

2. F-test

F-test is used to show that all independent variables have influence dependent variable simultaneously (Kuncoro, 2007). The hypotheses formulations in this research are:

$H_0: \beta \leq 0$: Internal communication and workplace environment have no a positive influence to employee engagement

$H_a: \beta \geq 0$: Internal communication and workplace environment have a positive influence to employee engagement

F-test compares F_{count} with F_{table} or significant level of 5% ($\alpha=0.05$), and then the criteria used are:

- a. $F_{count} > F_{table}$ then H_0 is rejected and H_a is accepted
- b. $F_{count} < F_{table}$ then H_0 is accepted and H_a is rejected

If H_0 is accepted, it means that the result of the multiple regressions model obtained is not significant, so that the result is also not significant in the influence of the independent variable simultaneously to the dependent variable.

3. Determination coefficient (R^2) test

Determination coefficient (R^2) is a test to measure the ability of independent variables in explaining the dependent variable. The value of the determination coefficient scale (R^2) is from 0 to 1. The value closed to 1 means that the independent variables provide almost all the information needed in predicting the dependent variable (Ghozali, 2005).

CHAPTER IV
DATA ANALYSIS AND DISCUSSION

4.1. Statistic Descriptive

This research is conducted by distributing the questionnaire to 90 respondents, and the number of questionnaire returned to the researcher is 42 respondents. The number of questionnaire returned to the researcher is less than 50 percent from the total questionnaire distributed, because the researcher conducting a research in limited time. The distributive questionnaire can be seen in table 4.1.

Table 4.1. Total Questionnaire

No	Description	Total	Percentage (%)
1	The number of questionnaire returned	42	46.67
2	The number of questionnaire not returned	48	53.33
Total		90	100

Source: Primary Data, 2015 (Appendix III, page 102)

After conducting survey on 42 employees in PT. PLN (Persero) Yogyakarta Area through distributing the questionnaire, the researcher will conduct the data analysis. The data analysis will be conducted by using descriptive and quantitative analysis. Descriptive analysis is analyzing the data by describing about employees background in PT. PLN (Persero) Yogyakarta Area, and by giving the score of respondent answer regarding

research variable. Besides, the quantitative analysis will be conducted by using multiple regression analysis.

4.2. Validity and Reliability Test

4.2.1. Validity Test

The validity test will be compared with the value of r_{count} with r_{table} .

The value of r_{table} is 0.257 with significance level 5% and $df = n-2 = 42-2 = 40$. The result of validity test can be seen in table 4.2 as follows:

Table 4.2. The Result of Validity Test

Item	Pearson Correlation	R Table	Description
Internal Communication			
Vertical (Downward) Communication			
13. My supervisor gives clear instruction about the job	0.978	0.257	Valid
14. My supervisor gives information about organization policies, rules and goals	0.953	0.257	Valid
15. My supervisor gives critics/suggestion about my working	0.890	0.257	Valid
Vertical (Upward) Communication			
16. I tell my supervisor about my working regularly	0.864	0.257	Valid
17. I give a final report to my supervisor regularly	0.896	0.257	Valid
18. I give opinion and aspiration related with working to my supervisor	0.829	0.257	Valid
Horizontal Communication			
19. I discuss with co-worker in the same unit in order to solve the working problem	0.855	0.257	Valid

(Continued from *Table 4.2. The Result of Validity Test*)

20. I am doing cooperation with another worker to conduct job tasks between units	0.902	0.257	Valid
21. I give support to other workers	0.917	0.257	Valid
Diagonal Communication			
22. I am exchanging the information about working with other employee in different unit	0.917	0.257	Valid
23. I am doing coordination with another co-workers in different units in order to conduct job tasks	0.945	0.257	Valid
24. I am helping to solve the problems that occurs in outside my unit	0.873	0.257	Valid
Workplace Environment			
Physical Environment			
25. There is an adequate lighting	0.581	0.257	Valid
26. There is a good lighting maintenance system	0.784	0.257	Valid
27. The lighting provided has already fitted with the working needs	0.762	0.257	Valid
28. The work office is neither too narrow or too wide	0.659	0.257	Valid
29. The workspace is placed in the strategic location	0.749	0.257	Valid
30. The company is already arranged a good workspace for employees	0.843	0.257	Valid
31. There is a good air conditioner and air circulation in the workspace	0.579	0.257	Valid

(Continued from *Table 4.2. The Result of Validity Test*)

32. There is a security by security office	0.648	0.257	Valid
33. Office building construction has ensured the employee safety	0.759	0.257	Valid
34. There is a security system (cctv, alarm)	0.741	0.257	Valid
35. There is good cleanliness maintenance inside the building (bathroom, pantry, etc.)	0.691	0.257	Valid
36. There is good cleanliness maintenance outside the building (garden, cafeteria, parking lot, etc.)	0.499	0.257	Valid
37. There is an implementation of hygiene by officer regularly	0.332	0.257	Valid
38. The supporting facilities are available in the office (computer, printer, office stationary, etc.)	0.657	0.257	Valid
Non-physical Environment			
39. The company has a good work and organization structure	0.798	0.257	Valid
40. As a worker, I realize about my responsibility	0.503	0.257	Valid
41. My supervisor gives attention and support to me	0.887	0.257	Valid
42. There is a good cooperation among workers	0.846	0.257	Valid
43. There is a smooth and an open communication between employee and supervisor	0.752	0.257	Valid
Employee Engagement			
Vigor			
44. At my work, I feel bursting with energy	0.950	0.257	Valid
45. At my job, I feel strong and vigorous	0.970	0.257	Valid

(Continued from *Table 4.2. The Result of Validity Test*)

46. When I get up in the morning, I feel like going to work	0.926	0.257	Valid
Dedication			
47. I am enthusiastic about my job	0.943	0.257	Valid
48. My job inspires me	0.958	0.257	Valid
49. I am proud of the work that I do	0.917	0.257	Valid
Absorption			
50. I feel happy when I am working intensely	0.794	0.257	Valid
51. I am immersed in my work	0.934	0.257	Valid
52. I get carried away when I'm working	0.898	0.257	Valid

Source: Primary Data Processed, 2015 (Appendix V, page 109-123)

Based on table 4.2, it can be seen that all researched item regarding internal communication, workplace environment and employee engagement is valid. It is because the value of r count is higher than r table ($r \text{ count} > 0.257$).

4.2.2. Reliability Test

Table 4.3. The Result of Reliability Test

Variable	Cronbach's Alpha	The minimum value	N of Items	Description
Internal Communication	0.942	0.6	12	Reliable
Workplace Environment	0.923	0.6	19	Reliable
Employee Engagement	0.931	0.6	9	Reliable

Source: Primary Data Processed, 2015 (Appendix VI, page 123-124)

Those three variables in table 4.5 are reliable, because the Cronbach's Alpha value of those variables – the value of internal communication, workplace environment, and employee engagement are 0.942, 0.923, and 0.931 respectively – are above the minimum value 0.6. Therefore, all items in this research variable can be used in the next research.

4.3. Descriptive Analysis

4.3.1. Descriptive Analysis of Respondent

Respondent characteristics will be used in order to give a brief description whether the respondent has similar characteristics. The total of respondents in this research is 42 employees of PT. PLN (Persero) Yogyakarta Area.

1. Respondent Characteristics Based on Gender

Table 4.4. Respondent Characteristics Based on Gender

Gender	Total	Percentage (%)
Male	26	61.9
Female	16	38.1
Total	42	100

Source: Primary data processed, 2015 (Appendix III, page 103-104)

Based on the result of the researched, from 42 respondents, it was found that most of the respondents in PT. PLN (Persero) Yogyakarta Area are male with the total of 26 respondents (61.9%), while the total of female respondents is 16 respondents (38.1%). The result can be seen in table 4.4.

2. Respondent Characteristics Based on Age

Table 4.5. Respondent Characteristics Based on Age

Age	Total	Percentage (%)
Less than 30 years old	5	11.9
31 - 40 years old	4	9.5
41 - 50 years old	11	26.2
More than 50 years old	22	52.4
Total	42	100

Source: Primary data processed, 2015 (Appendix III, page 103-104)

Based on table 4.5, it can be seen that most of the research respondents in PT. PLN (Persero) Yogyakarta Area is categorized as medium adult, because 33 respondents (78.6%) are more than 40 years old (Papalia, et al., cited in Rahajeng, 2012). Meanwhile, only 9 respondents (21.4%) are categorized as young adult that are less than 40 years old (Papalia, et al., cited in Rahajeng, 2012).

3. Respondent Characteristics Based on Education Level

Based on table 4.6, 22 respondents (52.4%) graduated from bachelor degree. There are 14 respondents (33.3%) graduated from senior high school, 5 respondents (11.9%) graduated from diploma, and only 1 respondent (2.4%) graduated from master degree.

Table 4.6. Respondent Characteristics Based on Education Level

Education Level	Total	Percentage (%)
Senior High School	14	33.3
D3 (Diploma)	5	11.9
S1 (Bachelor)	22	52.4
S2 (Master)	1	2.4
Total	42	100

Source: Primary data processed, 2015 (Appendix III, page 103-104)

4. Respondent Characteristics Based on Working Period

Based on the working period, from the total of 42 respondents, it was found that the majority of respondents have working period as long as 21 – 30 years with the total of 17 respondents (40.5%). In addition, 13 respondents (31%) have been working in PT. PLN (Persero) Yogyakarta Area in more than 30 years, and 12 respondents (28.5%) have been working in less than 20 years. The result of characteristics respondent based on working period can be seen in table 4.7.

Table 4.7. Respondent Characteristics Based on Working Period

Working Period	Total	Percentage (%)
Less than 5 years	4	9.5
6 - 10 years	4	9.5
11 - 20 years	4	9.5
21 - 30 years	17	40.5
More than 30 years	13	31.0
Total	42	100.0

Source: Primary data processed, 2015 (Appendix III, page 103-104)

Based on table 4.7, it was found that most respondents have been working in PT. PLN (Persero) Yogyakarta Area in more than 20 years. It

indicates that the engagement level in this company is high because they have been working for a long time in the company. Therefore, it can be described that the employees want to give more contribution in order to increase company's performance.

5. Respondent Characteristics Based on Division

Based on table 4.8, from 42 respondents, it was found that most respondents are from system division with 12 (28.6%) respondents. Besides, the number of respondents from division of administration, functional expert, construction, and finance are as much as 10 (23.8%), 9 (21.4%), 7 (16.7%), and 4 (9.5%) respondents respectively.

Table 4.8. Respondent Characteristics Based on Division

Division	Total	Percentage (%)
Administration	10	23.8
Functional Expert	9	21.4
Finance	4	9.5
Construction	7	16.7
System	12	28.6
Total	42	100

Source: Primary data processed, 2015 (Appendix III, page 103-104)

6. Respondent Characteristics Based on Status

From 42 respondents, 39 (92.9%) respondents are already married and only 3 (7.1%) respondents are still single. The characteristics of respondents based on status can be seen in table 4.9.

Table 4.9. Respondent Characteristics Based on Status

Status	Total	Percentage (%)
Single	3	7.1
Married	39	92.9
Total	42	100.0

Source: Primary data processed, 2015 (Appendix III, page 103-104)

4.3.2. Descriptive Analysis of Research Variable

Descriptive analysis of research variable is the analysis of respondents' answer on the research variable in order to get a description about variables conducted in this research. The analysis is conducted by using interval of 0.75 $[(4-1)/4]$ in calculating the questionnaire answer.

The range scale of using interval of 0.75 will be described as follows:

$$1,00 - 1,75 = \text{Very Low (0 - 25\%)}$$

$$1,76 - 2,50 = \text{Low (26 - 50\%)}$$

$$2,51 - 3,25 = \text{High (51 - 75\%)}$$

$$3,26 - 4,00 = \text{Very High (76 - 100\%)}$$

1. Internal Communication Variable (X_1)

The internal communication variable consists of vertical (downward and upward) communication, horizontal communication, and diagonal communication.

Table 4.10. Internal Communication Variable (X₁)

Item	Mean	Mean Total	Percentage (%)	Mean Percentage (%)	Category
Vertical (Downward) Communication					
1. My supervisor gives clear instruction about the job	3.07	3.08	76.8	77	High
2. My supervisor gives information about organization policies, rules and goals	3.12		78		High
3. My supervisor gives critics/suggestion about my working	3.05		76.2		High
Vertical (Upward) Communication					
4. I tell my supervisor about my working regularly	3.05	3.06	76.2	76.4	High
5. I give a final report to my supervisor regularly	3.12		78		High
6. I give opinion and aspiration related with working to my supervisor	3.00		75		High

(Continued from Table 4.10. Internal Communication Variable)

Horizontal Communication					
7. I discuss with co-worker in the same unit in order to solve the working problem	3.14	3.14	78.6	78.6	High
8. I am doing cooperation with another worker to conduct job tasks between units	3.12		78		High
9. I give support to other workers	3.17		79.2		High
Diagonal Communication					
10. I am exchanging the information about working with other employee in different unit	3.02	2.96	75.6	74	High
11. I am doing coordination with another co-workers in different units in order to conduct job tasks	3.00		75		High
12. I am helping to solve the problems that occurs in outside my unit	2.86		71		High
Mean		3.06		76	High

Source: Primary Data Processed, 2015 (Appendix IV, page 105-106)

The internal communication is influenced by three factors: vertical (downward and upward) communication, horizontal communication and diagonal communication. Based on table 4.10, the mean score of downward, upward, horizontal and diagonal communication are 3.08 (77%), 3.06 (76.4%), 3.14 (78.6%) and 2.96 (74%) respectively. The total mean score of internal communication is 3.06 (76%) means that internal communication has been properly implemented in PT. PLN (Persero) Yogyakarta Area.

The mean score of horizontal communication has the highest score in internal communication dimension (3.14 or 78.6%). The indicator 'I give support to other employee' has the highest mean score (3.17 or 79.2%) in horizontal communication. It means that employees in PT. PLN (Persero) Yogyakarta Area have a mutual support within the employees in PT. PLN (Persero) Yogyakarta Area.

The second higher number of the mean score is vertical communication which involves downward and upward communication (3.07 or 76.7%). The mean score of downward communication itself is 3.08 (77%) with the highest mean score of indicator 'My supervisor gives information about organization policies, rules and goals' which is 3.12 (78%). Then, the mean score of upward communication is 3.06 (76.4%) with the highest mean score of indicator 'I give a final report to my supervisor regularly' (3.12 or 78%). It can be seen that the communication flow from top-bottom or vice versa plays an important role in enhancing the relationship between supervisor and

employee, because the information between supervisor and employee has clearly understandable.

The last position is occupied by the mean score of diagonal communication that is 2.96 (74%) with the main indicator mean score of 'I am exchanging the information about working with other employee in different unit' (3.02 or 75.6%). It means that employees in PT. PLN (Persero) Yogyakarta Area are doing a communication outside their division by exchanging the information regarding the job.

2. Workplace Environment Variable (X_2)

Workplace environment variable consists of physical and non-physical environment.

Table 4.11. Workplace Environment Variable (X_2)

Item	Mean	Mean Total	Percentage (%)	Mean Percentage (%)	Category
Physical					
1. There is an adequate lighting	3.14		78.6		High
2. There is a good lighting maintenance system	2.86		71.4		High
3. The lighting provided has already fitted with the working needs	2.90		72.6		High
4. The work office is neither too narrow or too wide	2.90		72.6		High
5. The workspace is placed in the strategic location	2.83		70.8		High

(Continued from *Table 4.11. Workplace Environment Variable*)

6. The company is already arranged a good workspace for employees	2.81	2.91	70	72.2	High
7. There is a good air conditioner and air circulation in the workspace	3.05		76.2		High
8. There is a security by security office	2.86		71.4		High
9. Office building construction has ensured the employee safety	2.76		69		High
10. There is a security system (cctv, alarm)	2.76		69		High
11. There is good cleanliness maintenance inside the building (bathroom, pantry, etc.)	2.93		73		High
12. There is good cleanliness maintenance outside the building (garden, cafeteria, parking lot, etc.)	3.05		76.2		High
13. There is an implementation of hygiene by officer regularly	3.05		76.2		High
14. The supporting facilities are available in the office (computer, printer, office stationary, etc.)	2.81		70.2		High

(Continued from *Table 4.11. Workplace Environment Variable*)

Non-physical					
15. The company has a good work and organization structure	2.88	2.94	72	73.6	High
16. As a worker, I realize about my responsibility	3.17		79.2		High
17. My supervisor gives attention and support to me	2.81		70.2		High
18. There is a good cooperation among workers	2.90		72.6		High
19. There is a smooth and an open communication between employee and supervisor	2.95		73.8		High
Mean	2.92		73.1	High	

Source: Primary Data Processed, 2015 (Appendix IV, page 106-107)

Workplace environment is influenced by two factors that are physical and non-physical. From table 4.11, it can be seen that the mean score of physical and non-physical are 2.91 (72.2%) and 2.94 (73.6%) respectively. With the total mean score of workplace environment 2.92 (73.1%), it means that employees in PT. PLN (Persero) Yogyakarta Area have been satisfied with the workplace environment in PT. PLN (Persero) Yogyakarta Area.

The mean score of non-physical is the higher number in workplace environment dimension (2.94 or 73.6%). 'As a worker, I realize about my responsibility' is the main indicator in non-physical dimension (3.17 or 79.2%). It can be concluded that by realizing their responsibility, employees

in PT. PLN (Persero) Yogyakarta Area have already given their best contribution to achieve the company's vision, mission, and objective.

The mean score of physical environment has a slightly difference with the mean score of non-physical environment that is 2.91 (72.2%). The main indicator in physical environment dimension is owned by 'there is an adequate light' with the mean score 3.14 (78.6%). It is mean that with the sufficient facilities such as lightning in the office helped the employee to work optimally

3. Employee Engagement Variable (Y)

Employee engagement can be categorized as vigor, dedication, and absorption.

Table 4.12. Employee Engagement Variable (Y)

Item	Mean	Mean Total	Percentage (%)	Mean Percentage (%)	Category
Vigor					
1. At my work, I feel bursting with energy	3.19	3.17	79.8	79.2	High
2. At my job, I feel strong and vigorous	3.12		78		High
3. When I get up in the morning, I feel like going to work	3.19		79.8		High
Dedication					
4. I am enthusiastic about my job	3.21	3.17	80.4	79.2	High
5. My job inspires me	3.12		78		High
6. I am proud of the work that I do	3.17		79.2		High

(Continued from *Table 4.12. Employee Engagement Variable*)

Absorption					
7. I feel happy when I am working intensely	3.14	2.94	78.6	73.6	High
8. I am immersed in my work	2.76		69		High
9. I get carried away when I'm working	2.93		73.2		High
Total		3.09		77.3	High

Source: Primary Data Processed, 2015 (Appendix IV, page 107-108)

Employee engagement can be categorized as vigor, dedication and absorption. Based on table 4.12, the mean score of vigor, dedication and absorption are 3.17 (79.2%) for vigor, 3.17 (79.2%) for dedication, and 2.94 (73.6%) for absorption. With the total mean score of 3.09 (77.3%) in the overall indicator of employee engagement, it means that employee in PT. PLN (Persero) Yogyakarta Area has a high level of employee engagement.

Vigor and dedication has the highest mean score which is 3.17 (79.2%). The highest indicator score of vigor is owned by 'At my work, I feel bursting with energy' and 'When I get up in the morning, I feel like going to work' with the mean score 3.19 (79.8%). It showed that employees in PT. PLN (Persero) Yogyakarta Area have a feeling of readiness and eagerness in doing the job. Meanwhile, the highest indicator score of dedication is 'I am enthusiastic with my job' with the mean score 3.21 (80.4%). It means that employee in PT. PLN (Persero) Yogyakarta Area is giving contribution to the company's without any coercion from anyone in the company or from the company itself.

The mean score of absorption is 2.94 (73.6%) with the main indicator of 'I feel happy when I am working intensely' (3.14 or 78.6%). It can be seen that once the employees of PT. PLN (Persero) Yogyakarta Area started to work, they will focus to finish the job task.

4.3.3. Summary of Each Variable Assessment Result

Table 4.13. The Summary of Each Variable Assessment Result

Variable	Mean	Percentage (%)	Categories
Internal Communication (X ₁)	3.06	76	High
Workplace Environment (X ₂)	2.92	73.1	High
Employee Engagement (Y)	3.09	77.3	High

Source: Primary Data Processed, 2015 (Appendix IV, page 105-108)

4.4. Classic Assumption Test

4.4.1. Heteroscedasticity

Heteroscedasticity occurs "when there is a failure or residual from research model that does not have constant variance in one observation to others" (Hanke&Reitsche, cited in Kuncoro, 2007).

Two criteria used in analyzing heteroscedasticity are comparing the probability value with significance level of 5% ($\alpha=0.05$).The basis of decision-making is as follows:

- a. If Sig. > alpha then heteroscedasticity does not occur
- b. If Sig. < alpha then heteroscedasticity occurs

Table 4.14. Statistic Analysis of Heteroscedasticity

Model		Sig.
1	(Constant)	.756
	Internal Communication	.440
	Workplace Environment	.220

Source: Primary data processed, 2015 (Appendix VII, page 124)

Based on table 4.14, it can be seen that the significance coefficient of internal communication (X_1) and workplace environment (X_2) are 0.440 and 0.220 respectively which is bigger than 0.05. It means that the heteroscedasticity does not occur in both variables.

4.4.2. Autocorrelation

According to Sudarmanto (2013), autocorrelation test is used to determine whether there is a correlation among residuals in given time series. Durbin-Watson test (DW test) is used to analyze autocorrelation in research with the hypothesis made as follow:

H_0 : There is no autocorrelation

H_a : There is autocorrelation

The bases of decision-making in DW test are as follows:

- a. If $d < d_L$ reject H_0
- b. If $d_U < d < 4 - d_U$ do not reject H_0
- c. If $d_L < d < d_U$ test is inconclusive

Table 4.15. Statistic Analysis of Autocorrelation

Model	Durbin-Watson
1	2.182

Source: Primary data processed, 2015 (Appendix VIII, page 125)

From table 4.15, we can see that the value of DW is 2.182. This value will be compared by DW table with 5% of significance value, 42 of sample size (n), and 2 variable independent (k=2). Then, it will get the value of dU as much as 1.606.

The value of DW (2.182) is bigger than the value of dU that is 1.606 and smaller than the value of 4-dU (4-1.606) that is 2.394. Because the value of DW in between dU and 4-dU ($1.606 < 2.182 < 2.394$), H_0 is accepted, it means that there is no autocorrelation in this research.

4.4.3. Multicollienarity

According to Sudarmanto (2013), the aim of multicollinearity is to test whether there is a correlation between one independent variable to another independent variable in multiple regression models. The bases of decision-making in multicollinearity are as follows:

- a. If VIF value above 10 ($VIF > 10$) or tolerance value is smaller than 0.1 ($tolerance < 0.1$), then the multicollinearity occurs
- b. If VIF values below or equal 10 ($VIF \leq 10$) or tolerance value is bigger than 0.1 ($tolerance > 0.1$), then the multicollinearity does not occur.

Table 4.16. Statistic Analysis of Multicollinearity

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
Internal Communication	0.895	1.117
Workplace Environment	0.895	1.117

Source: Primary data processed, 2015 (Appendix VIII, page 125)

Based on table 4.16, the tolerance value of both internal communication (X_1) and workplace environment (X_2) is 0.895 which is bigger than 0.1 ($0.895 > 0.1$). Besides, the VIF value of both internal communication (X_1) and workplace environment (X_2) is 1.117 which is below or equal 10 ($1.117 \leq 10$). From those indicators, it can be concluded that multicollinearity does not occur within the independent variables.

4.5. Multiple Regression Analysis

Table 4.17. The Result of Multiple Regression Analysis

Item	Regression Coefficient	T count	F count	Sig.
Constant	2.024			
Internal Communication	0.378	3.779		0.001
Workplace Environment	0.215	2.531		0.016
Regression			15.018	0.000
Adjusted R Square = 0.406				
T table = 2.023				
F table = 3.24				

Source: Primary data processed, 2015 (Appendix VIII, page 125)

Based on the multiple regression analysis, it can be seen that the variables equation that influenced employee engagement in PT. PLN (Persero) Yogyakarta Area is as follow:

$$Y = 2.024 + 0.378X_1 + 0.215X_2$$

The interpretations from above regression equation are:

1) Constant (α)

The constant value is 2.024. It means that if there is no variable of internal communication (X_1) and workplace environment (X_2) that influenced the employee engagement, and then the value of employee engagement variable is 2.024.

2) Regression coefficient of internal communication (β_1)

The internal communication variable (X_1) has a positive influence to employee engagement, with coefficient regression 0.378. It means that if internal communication variable increase by one unit, then employee engagement will increase by 0.378 with the condition that other variables are constant. By having a positive influence, it means that the variable of internal communication and employee engagement showed a direct relationship. If internal communication variable increase then the employee engagement variables will also increase. In contrast, if internal communication variable decrease then the employee engagement variable will also decrease.

3) Regression coefficient of workplace environment (β_2)

The workplace environment variable (X_2) has a positive influence to employee engagement, with coefficient regression 0.215. It means that if workplace environment variable increase by one unit, then the employee engagement will increase by 0.215 with the condition that other variables are constant. By having a positive influence, it means that the variable of workplace environment and employee engagement showed a direct relationship. If workplace environment variable increase then the employee engagement variables will also increase. In contrast, if workplace environment variable decrease then the employee engagement variable will also decrease.

4.6. Hypothesis Testing

4.6.1. t-test

t-test is to test the influence of independent variable (internal communication and workplace environment) to dependent variable (employee engagement) partially. t-test will be conducted by comparing t_{count} and t_{table} . With alpha 0.05, $df = n - k = 42 - 3 = 39$, the value of t_{table} is 2.023. The results of hypothesis testing using t-test are as follow:

- 1) **H_1 : There is a significant influence of internal communication to employee engagement in PT. PLN (Persero) Yogyakarta Area**

Research hypothesis:

H_{01} : $\beta_1 \leq 0$: Internal communication has no a positive influence to employee engagement

$H_{a1}: \beta_1 \geq 0$: Internal communication has a positive influence to employee engagement

From Table 4.17, the value of t_{count} in internal communication is 3.779. It showed that t_{count} is bigger than t_{table} . Because $t_{count} > t_{table}$ ($3.779 > 2.023$) and $sig < \alpha$ ($0.001 < 0.05$), then H_{01} is rejected and H_{a1} is accepted. Therefore, it proves H_1 which stated that there is a significant influence of internal communication to employee engagement in PT. PLN (Persero) Yogyakarta Area.

2) **H_2 : There is a significant influence of workplace environment to employee engagement in PT. PLN (Persero) Yogyakarta Area.**

Research hypothesis:

$H_{02}: \beta_2 \leq 0$: Workplace environment has no a positive influence to employee engagement

$H_{a2}: \beta_2 \geq 0$: Workplace environment has a positive influence to employee engagement

From table 4.17, the value of t_{count} in workplace environment is 2.531. It can be seen that t_{count} is more than t_{table} . Because $t_{count} > t_{table}$ ($2.531 > 2.023$) and $sig. < \alpha$ ($0.016 < 0.05$), then H_{a2} is accepted and H_{02} is rejected. Therefore, it proves H_2 which stated that there is a significant influence of workplace environment to employee engagement in PT. PLN (Persero) Yogyakarta Area.

3) **H_4 : The internal communication has the bigger influence to Employee Engagement than workplace environment in PT. PLN (Persero) Yogyakarta Area.**

Based on the result of t-test, it is obtained that the value of t_{count} of internal communication is bigger than the value of t_{count} of workplace environment ($3.779 > 2.531$). Therefore, it proves H_4 stated that the internal communication has the bigger influence to employee engagement than workplace environment in PT. PLN (Persero) Yogyakarta Area.

4.6.2. F-test

F-test is used to show that all independent variables have influence dependent variable simultaneously (Kuncoro, 2007). F-test compares F_{count} with F_{table} . With alpha 0.05, $df_1 = k-1 = 3-1=2$, and $df_2 = n-k = 42-3=39$, f_{table} value is 3.24.

Research hypothesis:

H_3 : There are significant influence between internal communication and workplace environment to employee engagement in PT. PLN (Persero) Yogyakarta Area.

$H_0: \beta \leq 0$: Internal communication and workplace environment have no a positive influence to employee engagement

$H_a: \beta \geq 0$: Internal communication and workplace environment have a positive influence to employee engagement

By comparing F_{count} and F_{table} , it can be seen from table 4.17 that $F_{\text{count}} > F_{\text{table}}$ ($15.018 > 3.24$) and $\text{sig.} < \alpha$ ($0.000 < 0.05$). Therefore, we can decide that H_a is accepted and H_0 is rejected. Thus, it proves H_3 which stated that internal communication (X_1) and workplace environment (X_2)

simultaneously have a significant influence to employee engagement in PT. PLN (Persero) Yogyakarta Area.

4.6.3. Coefficient Determination (R^2) Analysis

Determination coefficient (R^2) is a test to measure the ability of independent variables in explaining the dependent variable.

In table 4.17, the value of adjusted R square is 0.406 (40.6%). It can be concluded that internal communication and workplace environment influence employee engagement as much as 40.6 percent, while 59.4 percent is influenced by other variables that are not included in this researched.

4.6.4. Summary of Hypothesis Testing

The result of hypothesis testing can be summarized on the following table:

Table 4.18. Hypotheses Testing Result

Hypotheses	Notes
H ₁ : There is a significant influence of internal communication to employee engagement in PT. PLN (Persero) Yogyakarta Area	Proven
H ₂ : There is a significant influence of workplace environment to employee engagement in PT. PLN (Persero) Yogyakarta Area.	Proven
H ₃ : There are significant influence between internal communication and workplace environment to employee engagement in PT. PLN (Persero) Yogyakarta Area.	Proven
H ₄ : The internal communications has the bigger influence to employee engagement than workplace environment in PT. PLN (Persero) Yogyakarta Area.	Proven

Source: Primary data processed, 2015 (Appendix VIII, page 125)

4.7. Research Discussion

4.7.1. The Influence of Internal Communication to Employee Engagement

The hypothesis result using t-test between internal communication and employee engagement is 3.779 means that there is a positive influence between these two variables. It means that the higher internal communication level, the higher the level of employee engagement and vice versa. The significance level 0.001 ($p < 0.05$) showed that there is a significant influence between internal communication and employee engagement. Therefore, the first hypothesis stated that there is a significant influence of internal communication to employee engagement in PT. PLN (Persero) Yogyakarta Area can be accepted. It is in accordance with the previous research conducted by Karanges et al. (2014), Rahajeng (2012) and Sarangi and Srivastava (n.d.) who found significant influences between internal communication and employee engagement.

The descriptive analysis of internal communication showed that the total mean score of internal communication is 3.06 (68.46%) which is categorized in high level. It means that internal communication has been properly implemented in PT. PLN (Persero) Yogyakarta Area. This result is in accordance with research conducted by Vosloban (2013) stated that by having a good internal communication, employee will easy to understand about the organization goals and want to get involved in achieving it.

This research found that the internal communication has increased the level of engagement, because the internal communication flow in the organization help to distribute information about the situation and condition of the organization or to share the relevant information about the job. It is in accordance with Andrew and Sofian (2012) stated that an engaged employee contribute to the business foundation line where the internal communication enrich the knowledge of employee group membership and identification of their organization.

The internal communication can be built through a good internal communication flow vertically, horizontally, and diagonally. Based on this research, as vertical communication, employee will give a report and an opinion to the supervisor and the supervisor will give a feedback based on their action. As horizontal communication, a mutual support occurred among employees in the organization and employee also shared relevant information regarding the job task to another employee in the same unit or in different unit (diagonal communication). For instance, internal communication plays a role as corporate communicators since they need to understand about organization as a whole and it will affect on employee engagement and also on the output in achieving organization goal.

4.7.2. The Influence of Workplace Environment and Employee Engagement

The hypothesis result using t-test between internal communication and employee engagement is 2.531 means that there is a positive influence between these two variables. The significance level 0.016 ($p < 0.05$)

showed that there is a significant influence between workplace environment and employee engagement. Therefore, the second hypothesis stated that there is a significant influence of workplace environment to employee engagement in PT. PLN (Persero) Yogyakarta Area can be accepted.

Based on the result, it found that the higher workplace environment level is, the higher the level of employee engagement and vice versa. It is in accordance with the previous research conducted by Leblebici (2012) that found the influence between workplace environments to employee's productivity. In addition, Yunanda (2013) also found that workplace environment has influenced the employee satisfaction and employee performance where performance and satisfaction are the output of employee engagement (Andrew & Sofian, 2012; Anitha, 2013). Anitha (2013) also found that working environment influences employee engagement.

The descriptive analysis of workplace environment showed that the research object has high level of workplace environment with the total mean score of 2.92 (73.6%). It means that employee in PT. PLN (Persero) Yogyakarta Area has been satisfied with the workplace environment in PT. PLN (Persero) Yogyakarta Area.

In this research, it found that the workplace environment has been designed properly in PT. PLN (Persero) Yogyakarta Area. The workplace environment creates conditions in which individuals can personally engage

with their work. The designed workplace makes employee feel safe and satisfy when carrying out the job. Furthermore, a good workplace environment is not only created by the physical factor but it also created from behavioral factor such as the relationship among employees. Thus, these environments will create a healthy environment which consists of comfortable and fun environment that will decrease the level of job stress, job strain and absenteeism. Based on that situation, the employees can work optimally and vigorously because a good workplace environment can trigger employees' motivation in performing the job which in turn influences the employee engagement.

4.7.3. The Influence of Internal Communication and Workplace Environment to Employee Engagement

The hypothesis result using F-test between internal communication and workplace environment to employee engagement is 15.018, it means that there is a positive influence between internal communication and workplace environment to employee engagement simultaneously. The significance level 0.001 ($p < 0.05$) showed that there is a significant influence between internal communication and workplace environment to employee engagement. Therefore, the third hypothesis stated that there is a significant influence between internal communication and workplace environment to employee engagement in PT. PLN (Persero) Yogyakarta Area can be accepted.

Based on multiple regression analysis, adjusted R square value is 0.406. It means that 40.6 percent of internal communication and workplace environment variable simultaneously has influenced to employee engagement. Thus, 59.4 percent influenced by other variables that are not included in this research.

The descriptive analysis of employee engagement showed that the research object has high level of employee engagement with the total mean score of 3.09 (62.17%). It means that employee in PT. PLN (Persero) Yogyakarta Area has a high level of employee engagement. In addition, it showed that employee in PT. PLN (Persero) Yogyakarta Area has vigorous, dedicated and absorbed in doing the job task.

Based on this research, the internal communication and workplace environment has influence employee engagement, because the positive interaction among employees will create a supportive environment that gives motivation and innovation to employees. The motivated employees will help them to become flexible, persistent and goal-oriented and also to achieve organization goal. Furthermore, internal communication help employees in PT. PLN (Persero) Yogyakarta Area understand about organization goal by sharing the relevant information about the job. By communication, employee is invited to participate in conducting the business activity. By involving employee in business activity, employee will have an authority to make a decision which in turn increasing their sense of belongingness.

In addition, workplace environment is increasing a sense of comfort and a sense of dedication of employee effort and ability to the job task. Furthermore, receiving support from supervisor and coworkers is crucial for developing employee innovation. In this kind of environment, employee engagement will occur in which they are physically, cognitively, and emotionally during their performance. By doing so, it is possible to complete the job task successfully and the organization goal will be achieved.

4.7.4. The Internal Communication has the Bigger Influence to Employee Engagement than Workplace Environment

From multiple regression analysis, it was found that the value of t_{count} of internal communication is bigger than the value of t_{count} of workplace environment ($3.779 > 2.531$). It indicates that internal communication variable has the stronger relationship to employee engagement variable than workplace environment variable, because an engaged employee acts as an employee's interest to organizations in which they are attached to the organization activities such as groups activities – discussion, meeting, etc. The better the internal communication is, the higher the level of the employee engagement. It is supported from the previous research conducted by Rahajeng (2012) that stated internal communication has a strong relationship to employee engagement. In addition, it is against the previous research conducted by Sarangi and Srivastava (2012) who found the workplace environment has the most

influence to employee engagement rather than organizational communication.

Even though workplace environment is not as strong as internal communication in affecting employee engagement, the result of workplace environment has positive and significant influence to employee engagement. It is mean that workplace environment still has a role in influencing employee engagement. Therefore, both of internal communication and workplace environment variable are important in determining employee engagement.

CHAPTER V

CONCLUSIONS & RECOMMENDATIONS

Based on the research result, the researcher can draw conclusions and give some recommendations that are expected to be an input and consideration for the human resource department in PT. PLN (Persero) Yogyakarta Area and also for the future research.

5.1. Conclusions

The result of the research can be summarized as follow:

1. There is influence of internal communication to employee engagement in PT. PLN (Persero) Yogyakarta with the amount of 0.378.
2. There is influence of workplace environment to employee engagement in PT. PLN (Persero) Yogyakarta with the amount of 0.215.
3. There is influence of internal communication and workplace environment to employee engagement in PT. PLN (Persero) Yogyakarta in as much as 15.018.
4. The internal communication has the bigger influence to employee engagement than workplace environment ($0.378 > 0.215$).

5.2. Recommendations

Based on the result of the research, there are some recommendations that can be used for the following parties:

1. For the management of PT. PLN (Persero) Yogyakarta Area, it is proven that internal communication and workplace environment will increase the employee engagement, because by exchanging the information among the organization members and having satisfaction in the workplace, it will increase the level of engagement. In order to maintain and to increase the employee engagement, the company should give attention in the following indicators:
 - a. 'I am helping to solve the problems that occur in outside my unit' has the lowest mean score in internal communication (2.86 or 71%). This shows that the managers have to keep attention to the employee relationship outside their unit (level) in order to increase the sense of caring among them.
 - b. 'There is a good lightening maintenance system' and 'the lighting provided has already fitted with the working needs' has the mean score 2.86 (71.4%) and 2.90 (72.6%) respectively. This shows that the company should increase the maintenance system in order to provide the lightning based on employees preference.
 - c. 'The workspace is placed in the strategic location' and 'The company is already arranged a good workspace for employees' has the mean score 2.83 (70.8%) and 2.81 (70%) respectively. This shows that the company should arrange better office layout and location.

- d. 'There is a security by security office', 'Office building construction has ensured the employee safety', and 'There is a security system (cctv, alarm)' has the mean score 2.86 (71.4%), 2.76 (69%), and 2.76 (69%) respectively. This shows that the company should provide more facilities and service regarding to employees safety.
- e. 'There is good cleanliness maintenance inside the building (bathroom, pantry, etc.)' has the mean score 2.93 (73%). This shows that the company should provide more cleanliness service.
- f. 'The supporting facilities are available in the office (computer, printer, office stationary, etc.)' has the mean score 2.81 (70.2%). This shows that the company should provide more facilities in order to support the employees' job.
- g. 'The company has a good work and organization structure', 'My supervisor gives attention and support to me', 'There is a good cooperation among workers', and 'There is a smooth and an open communication between employee and supervisor' has the mean score 2.88 (72%), 2.81 (70.2%), 2.90 (72.6%), and 2.95 (73.8%) respectively. This shows that the company should give attention regarding the interaction and the relationship between supervisor-employee and employee-co-employee.
- h. 'I am immersed in my work' and 'I get carried away when I'm working' has the mean score 2.76 (69%) and 2.93 (73.2%) respectively. This

shows that the company should make sure that the employees are being focused when conducting the job.

2. For the future research, the researcher should make instrument that may describe the actual condition. Furthermore, the researchers can identify more about the factors that influences employee engagement. Then, the sample can be bigger and broad in order to increase the number of representatives. The further research can also be done in different company and location in order to ensure the factors that influence employee engagement and used an optimal data analysis technique in collecting the data.

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APPENDIX 1: LETTER OF THE RESEARCH COMPLETION



PT PLN (Persero)
DISTRIBUSI JAWA TENGAH DAN D.I. YOGYAKARTA
AREA YOGYAKARTA

Jalan : Jl.Gedongkuning No.3 Baguntapan Yogyakarta
Telepon : (0274) 452200 hunting 6 sambungan sambungan
Kotak Pos : 55198
Facsimile : (0274) 452452
E-mail : plnjogja@telkom.net Website : www.plndiy.co.id

SURAT - KETERANGAN

No. : 0004 .Skt/310/A.YGK/2015

Yang bertanda tangan dibawah ini, Manajer PT. PLN (Persero) Area Yogyakarta,
menerangkan bahwa :

Nama : NURTAQI IRZALIA
NIM : 11311226
Prodi : Program Internasional
Fakultas : Ekonomi

Adalah Mahasiswa Universitas Islam Indonesia Yogyakarta, berdasarkan surat
ijin Penelitian No. 0063/310/AREA.YGK/2014 tanggal 3 Desember 2014 yang
bersangkutan telah selesai melaksanakan Penelitian di PT. PLN (Persero) Area
Yogyakarta, mulai bulan Desember 2014.

Demikian surat keterangan ini dibuat agar digunakan sebagaimana mestinya.

Yogyakarta, 27 Maret 2015



MOCHAMAD SOFFIN HADI

APPENDIX II: RESEARCH QUESTIONNAIRE

KUESIONER PENELITIAN

Kepada Yth.
Karyawan/Karyawati
PT. PLN (Persero)
Di Yogyakarta

Assalamu'alaikum wr.wb.

Saya adalah mahasiswi jurusan Manajemen School of Business and Economics, International Program, Universitas Islam Indonesia yang sedang melakukan penelitian untuk menyelesaikan tugas akhir mengenai “**Pengaruh Komunikasi Internal Dan Lingkungan Kerja terhadap Keterikatan Karyawan (*Employee Engagement*) pada PT. PLN (Persero) Area Yogyakarta**”.

Sehubungan dengan hal itu, saya meminta kesediaan Bapak/Ibu/Saudara-i untuk mengisi kuesioner penelitian ini. **Tidak ada jawaban yang benar maupun salah dalam mengisi kuesioner ini.** Semua jawaban yang Bapak/Ibu tuliskan sangat membantu saya dalam melakukan penelitian.

Atas bantuan dan kerjasama yang Bapak/Ibu/Saudara-i berikan, saya ucapkan terima kasih.

Wassalamu'alaikum wr.wb.

Peneliti,

Nurtaqi Irzalia
NIM:
11311226

I. DATA RESPONDEN

- Jenis Kelamin : Laki-laki / Perempuan *
- Usia : a. ≤ 20 tahun
b. 21 tahun – 30 tahun
c. 31 tahun – 40 tahun
d. 41 tahun – 50 tahun
e. > 50 tahun
- Pendidikan : a. SMA/Sederajat
b. D3 (Diploma)
c. S1 (Sarjana)
d. S2 (Master)
- Masa Kerja : a. < 5 tahun
b. 6 – 10 tahun
c. 11 – 20 tahun
d. 21 – 30 tahun
e. > 30 tahun
- Divisi :
- Status : Menikah / Belum Menikah *

*** coret yang tidak perlu**

II. Pengaruh Komunikasi Internal Dan Lingkungan Kerja terhadap Keterikatan Karyawan (*Employee Engagement*) pada PT. PLN (Persero) Area Yogyakarta

Pilihlah satu jawaban yang sesuai dari pernyataan berikut dengan memberikan tanda silang (X) pada kolom yang tersedia. Jawablah dengan jujur dan seksama, berdasarkan apa yang Bapak/Ibu/Saudara-i pahami pada setiap pernyataan.

Keterangan:

STS = Sangat Tidak Setuju (1) S = Setuju (3)

TS = Tidak Setuju (2) SS = Sangat Setuju (4)

No.	Pernyataan	STS	TS	S	SS
A. Komunikasi Internal					
1. Vertical Communication					
1.	Atasan Saya memberikan instruksi yang jelas mengenai pekerjaan	1	2	3	4
2.	Atasan Saya memberikan informasi mengenai kebijakan, peraturan dan tujuan organisasi	1	2	3	4
3.	Atasan Saya memberikan teguran/masukan atas pekerjaan yang Saya lakukan	1	2	3	4
4.	Saya rutin memberitahu atasan Saya mengenai pekerjaan yang sedang berlangsung	1	2	3	4
5.	Saya rutin memberikan hasil laporan pekerjaan kepada atasan Saya.	1	2	3	4
6.	Saya memberikan saran dan aspirasi yang	1	2	3	4

	berhubungan dengan pekerjaan kepada atasan Saya.				
2. Horizontal Communication					
7.	Saya berdiskusi dengan rekan karyawan satu unit untuk memecahkan masalah pekerjaan .	1	2	3	4
8.	Saya melakukan kerjasama dengan karyawan lain untuk melaksanakan tugas pekerjaan antar unit.	1	2	3	4
9.	Saya memberikan dukungan kepada karyawan lain.	1	2	3	4
3. Diagonal Communication					
10.	Saya bertukar informasi mengenai pekerjaan dengan rekan karyawan dalam unit yang berbeda.	1	2	3	4
11.	Saya melakukan koordinasi dengan karyawan lain dalam unit (level) yang berbeda untuk melaksanakan tugas pekerjaan.	1	2	3	4
12.	Saya membantu menyelesaikan masalah yang terjadi di luar unit Saya.	1	2	3	4
B. Lingkungan Kerja					
1. Physical					
13.	Penerangan lampu dalam ruang kerja sudah memadai.	1	2	3	4

14.	Adanya system pemeliharaan penerangan yang baik di ruang kerja.	1	2	3	4
15.	Penerangan diberikan sesuai dengan kebutuhan dan keperluan kerja.	1	2	3	4
16.	Ruangan tidak terlalu sempit dan tidak terlalu lebar.	1	2	3	4
17.	Penempatan ruang kerja yang strategis.	1	2	3	4
18.	Perusahaan telah mengatur ruang gerak yang baik bagi karyawan dalam melakukan mobilitas.	1	2	3	4
19.	Ruangan memiliki penyejuk ruangan dan sirkulasi udara yang baik	1	2	3	4
20.	Adanya pengamanan dan pengawasan oleh petugas keamanan kantor.	1	2	3	4
21.	Konstruksi gedung perusahaan menjamin keselamatan kerja.	1	2	3	4
22.	Adanya sistem pengamanan di tempat kerja (cctv, alarm)	1	2	3	4
23.	Adanya pemeliharaan kebersihan di dalam lingkungan gedung perusahaan yang baik (kamar mandi, dapur, dll)	1	2	3	4
24.	Adanya pemeliharaan kebersihan di luar lingkungan gedung perusahaan yang baik (taman, kantin, ruangan parker, dll)	1	2	3	4

25.	Adanya pelaksanaan kebersihan oleh petugas yang dilakukan secara rutin	1	2	3	4
26.	Tersedianya fasilitas pendukung pekerjaan di lingkungan kerja (komputer, printer, alat tulis kantor, dll)	1	2	3	4
2. Non-physical					
27.	Perusahaan memiliki struktur kerja dan organisasi yang baik	1	2	3	4
28.	Kesadaran Saya sebagai pegawai atas tanggung jawab yang saya emban	1	2	3	4
29.	Pemimpin yang memberikan perhatian dan dukungan untuk Saya	1	2	3	4
30.	Kerjasama kelompok yang terjalin dengan baik antara Saya dengan karyawan yang lain	1	2	3	4
31.	Kelancaran komunikasi yang lancar dan terbuka antara Saya dan pimpinan	1	2	3	4
C. Employee Engagement					
1. Vigor					
32.	Saya merasa sangat berenergi saat melakukan pekerjaan.	1	2	3	4
33.	Saya merasa kuat dan bersemangat saat bekerja.	1	2	3	4
34.	Saat bangun pagi, saya merasa bersemangat	1	2	3	4

	dan siap untuk bekerja.				
2. Dedication					
35.	Saya merasa antusias dengan pekerjaan saya.	1	2	3	4
36.	Pekerjaan saya memberikan inspirasi.	1	2	3	4
37.	Saya bangga dengan pekerjaan saya.	1	2	3	4
3. Absorption					
38.	Saya merasa senang ketika saya bekerja secara intens.	1	2	3	4
39.	Saya hanyut dalam pekerjaan hingga lupa waktu.	1	2	3	4
40.	Saya terbawa suasana ketika sedang bekerja.	1	2	3	4

APPENDIX III: CHARACTERISTIC OF RESPONDENT

Respondent	Gender	Age	Education Level	Working Period	Division	Status
1	Female	41 - 50 years	S1(Bachelor)	21 - 30 years	Functional Expert	Married
2	Male	41 - 50 years	Senior High School	11 - 20 years	Construction	Married
3	Female	> 50 years	D3 (Diploma)	> 30 years	Administration	Married
4	Male	41 - 50 years	Senior High School	> 30 years	Construction	Married
5	Male	> 50 years	Senior High School	21 - 30 years	Construction	Married
6	Female	> 50 years	S1(Bachelor)	> 30 years	Administration	Married
7	Female	> 50 years	S1(Bachelor)	> 30 years	Functional Expert	Married
8	Female	> 50 years	D3 (Diploma)	> 30 years	Finance	Married
9	Female	> 50 years	S1(Bachelor)	21 - 30 years	Administration	Married
10	Female	31 - 40 years	S1(Bachelor)	21 - 30 years	Administration	Married
11	Male	> 50 years	S1(Bachelor)	> 30 years	Administration	Married
12	Female	> 50 years	Senior High School	> 30 years	Administration	Married
13	Female	31 - 40 years	S1(Bachelor)	6 - 10 years	Administration	Married
14	Male	> 50 years	Senior High School	21 - 30 years	Construction	Married
15	Female	41 - 50 years	D3 (Diploma)	21 - 30 years	Finance	Married
16	Male	41 - 50 years	S2 (Master)	21 - 30 years	Functional Expert	Married
17	Female	> 50 years	Senior High School	> 30 years	Administration	Married
18	Male	> 50 years	S1(Bachelor)	> 30 years	Functional Expert	Married
19	Male	41 - 50 years	S1(Bachelor)	11 - 20 years	Functional Expert	Married
20	Male	> 50 years	S1(Bachelor)	> 30 years	Functional Expert	Married
21	Male	41 - 50 years	S1(Bachelor)	21 - 30 years	Functional Expert	Married
22	Male	> 50 years	Senior High School	> 30 years	Construction	Married
23	Female	21 - 30 years	D3 (Diploma)	6 - 10 years	Administration	Married
24	Female	> 50 years	S1(Bachelor)	21 - 30 years	Functional Expert	Married
25	Female	41 - 50 years	D3 (Diploma)	21 - 30 years	Administration	Married
26	Male	> 50 years	S1(Bachelor)	21 - 30 years	Construction	Married
27	Male	> 50 years	S1(Bachelor)	21 - 30 years	Functional	Married

					Expert	
28	Male	> 50 years	S1(Bachelor)	21 - 30 years	Finance	Married
29	Female	> 50 years	S1(Bachelor)	21 - 30 years	System	Married
30	Male	> 50 years	Senior High School	21 - 30 years	Construction	Married
31	Female	21 - 30 years	S1(Bachelor)	< 5 years	System	Married
32	Male	> 50 years	Senior High School	21 - 30 years	Finance	Married
33	Male	> 50 years	S1(Bachelor)	> 30 years	System	Married
34	Male	21 - 30 years	Senior High School	< 5 years	System	Single
35	Male	31 - 40 years	Senior High School	6 - 10 years	System	Married
36	Male	41 - 50 years	S1(Bachelor)	21 - 30 years	System	Married
37	Male	> 50 years	S1(Bachelor)	> 30 years	System	Married
38	Male	21 - 30 years	Senior High School	< 5 years	System	Married
39	Male	21 - 30 years	Senior High School	< 5 years	System	Single
40	Male	31 - 40 years	Senior High School	6 - 10 years	System	Single
41	Male	41 - 50 years	S1(Bachelor)	11 - 20 years	System	Married
42	Male	41 - 50 years	S1(Bachelor)	11 - 20 years	System	Married

24	3	2	3	3	3	3	3	2	2
25	3	3	3	3	3	3	3	2	3
26	3	3	2	3	3	3	3	2	2
27	4	4	4	4	3	4	3	3	3
28	2	2	3	3	3	3	3	2	2
29	3	3	3	3	3	3	3	3	3
30	3	3	4	4	4	4	3	2	2
31	3	3	3	3	3	3	3	3	3
32	4	4	4	3	3	3	3	3	3
33	3	3	3	3	3	3	3	3	3
34	3	3	3	3	3	3	3	3	3
35	3	3	3	3	3	3	3	3	3
36	4	3	3	3	3	4	4	4	3
37	4	4	4	4	4	4	4	2	2
38	4	4	4	4	4	3	3	3	3
39	4	4	4	4	4	4	4	4	4
40	2	2	3	3	2	2	2	2	3
41	3	3	3	4	4	4	4	4	4
42	3	3	3	3	2	3	3	3	3
Mean	3.19	3.12	3.19	3.21	3.12	3.17	3.14	2.76	2.93

APPENDIX V: VALIDITY TEST**A. Internal Communication****Correlations**

		Question 1	Question 2	Question 3	Downward Communication
Question 1	Pearson Correlation	1	.935**	.815**	.978**
	Sig. (1-tailed)		.000	.000	.000
	N	42	42	42	42
Question 2	Pearson Correlation	.935**	1	.734**	.953**
	Sig. (1-tailed)	.000		.000	.000
	N	42	42	42	42
Question 3	Pearson Correlation	.815**	.734**	1	.890**
	Sig. (1-tailed)	.000	.000		.000
	N	42	42	42	42
Downward Communication	Pearson Correlation	.978**	.953**	.890**	1
	Sig. (1-tailed)	.000	.000	.000	
	N	42	42	42	42

** . Correlation is significant at the 0.01 level (1-tailed).

		Question 4	Question 5	Question 6	Upward Communication
Question 4	Pearson Correlation	1	.765**	.510**	.864**
	Sig. (1-tailed)		.000	.000	.000
	N	42	42	42	42
Question 5	Pearson Correlation	.765**	1	.580**	.896**
	Sig. (1-tailed)	.000		.000	.000
	N	42	42	42	42
Question 6	Pearson Correlation	.510**	.580**	1	.829**
	Sig. (1-tailed)	.000	.000		.000
	N	42	42	42	42
Upward Communication	Pearson Correlation	.864**	.896**	.829**	1
	Sig. (1-tailed)	.000	.000	.000	
	N	42	42	42	42

** . Correlation is significant at the 0.01 level (1-tailed).

Correlations

		Question 7	Question 8	Question 9	Horizontal Communication
Question 7	Pearson Correlation	1	.673**	.709**	.855**

	Sig. (1-tailed)		.000	.000	.000
	N	42	42	42	42
Question 8	Pearson Correlation	.673**	1	.711**	.902**
	Sig. (1-tailed)	.000		.000	.000
	N	42	42	42	42
Question 9	Pearson Correlation	.709**	.711**	1	.917**
	Sig. (1-tailed)	.000	.000		.000
	N	42	42	42	42
Horizontal Communication	Pearson Correlation	.855**	.902**	.917**	1
	Sig. (1-tailed)	.000	.000	.000	
	N	42	42	42	42

** . Correlation is significant at the 0.01 level (1-tailed).

Correlations

		Question 10	Question 11	Question 12	Diagonal Communication
Question 10	Pearson Correlation	1	.867**	.658**	.917**
	Sig. (1-tailed)		.000	.000	.000
	N	42	42	42	42
Question 11	Pearson Correlation	.867**	1	.716**	.945**
	Sig. (1-tailed)	.000		.000	.000

	N	42	42	42	42
Question 12	Pearson Correlation	.658**	.716**	1	.873**
	Sig. (1-tailed)	.000	.000		.000
	N	42	42	42	42
Diagonal Communication	Pearson Correlation	.917**	.945**	.873**	1
	Sig. (1-tailed)	.000	.000	.000	
	N	42	42	42	42

** . Correlation is significant at the 0.01 level (1-tailed).

B. Workplace Environment

Correlations

		Question 13	Question 14	Question 15	Question 16
Question 13	Pearson Correlation	1	.641**	.650**	.422**
	Sig. (1-tailed)		.000	.000	.003
	N	42	42	42	42
Question 14	Pearson Correlation	.641**	1	.882**	.576**
	Sig. (1-tailed)	.000		.000	.000
	N	42	42	42	42
Question 15	Pearson Correlation	.650**	.882**	1	.552**
	Sig. (1-tailed)	.000	.000		.000

	N	42	42	42	42
	Pearson Correlation	.422**	.576**	.552**	1
Question 16	Sig. (1-tailed)	.003	.000	.000	
	N	42	42	42	42
	Pearson Correlation	.435**	.491**	.539**	.613**
Question 17	Sig. (1-tailed)	.002	.000	.000	.000
	N	42	42	42	42
	Pearson Correlation	.436**	.606**	.590**	.590**
Question 18	Sig. (1-tailed)	.002	.000	.000	.000
	N	42	42	42	42
	Pearson Correlation	.496**	.370**	.307*	.234
Question 19	Sig. (1-tailed)	.000	.008	.024	.068
	N	42	42	42	42
	Pearson Correlation	.066	.381**	.288*	.223
Question 20	Sig. (1-tailed)	.339	.006	.032	.078
	N	42	42	42	42
	Pearson Correlation	.197	.365**	.346*	.346*
Question 21	Sig. (1-tailed)	.105	.009	.012	.012
	N	42	42	42	42
Question 22	Pearson Correlation	.138	.512**	.412**	.412**

Question 23	Sig. (1-tailed)	.192	.000	.003	.003
	N	42	42	42	42
	Pearson Correlation	.144	.372**	.402**	.402**
	Sig. (1-tailed)	.181	.008	.004	.004

Correlations

		Question 17	Question 18	Question 19	Question 20
Question 13	Pearson Correlation	.435	.436**	.496**	.066**
	Sig. (1-tailed)	.002	.002	.000	.339
	N	42	42	42	42
Question 14	Pearson Correlation	.491**	.606	.370**	.381**
	Sig. (1-tailed)	.000	.000	.008	.006
	N	42	42	42	42
Question 15	Pearson Correlation	.539**	.590**	.307	.288**
	Sig. (1-tailed)	.000	.000	.024	.032
	N	42	42	42	42
Question 16	Pearson Correlation	.613**	.590**	.234**	.223
	Sig. (1-tailed)	.000	.000	.068	.078
	N	42	42	42	42
Question 17	Pearson Correlation	1**	.713**	.534**	.374**
	Sig. (1-tailed)		.000	.000	.007
	N				

	N	42	42	42	42
	Pearson Correlation	.713**	1**	.524**	.644**
Question 18	Sig. (1-tailed)	.000		.000	.000
	N	42	42	42	42
	Pearson Correlation	.534**	.524**	1*	.319
Question 19	Sig. (1-tailed)	.000	.000		.020
	N	42	42	42	42
	Pearson Correlation	.374	.644**	.319*	1
Question 20	Sig. (1-tailed)	.007	.000	.020	
	N	42	42	42	42
	Pearson Correlation	.499	.698**	.352*	.736*
Question 21	Sig. (1-tailed)	.000	.000	.011	.000
	N	42	42	42	42
	Pearson Correlation	.406	.556**	.231**	.627**
Question 22	Sig. (1-tailed)	.004	.000	.070	.000
	N	42	42	42	42
	Pearson Correlation	.441	.519**	.112**	.656**
Question 23	Sig. (1-tailed)	.002	.000	.241	.000

Correlations

		Question 21	Question 22	Question 23	Question 24
Question 13	Pearson Correlation	.197	.138**	.144**	.335**
	Sig. (1-tailed)	.105	.192	.181	.015
	N	42	42	42	42
Question 14	Pearson Correlation	.365**	.512	.372**	.227**
	Sig. (1-tailed)	.009	.000	.008	.074
	N	42	42	42	42
Question 15	Pearson Correlation	.346**	.412**	.402	.228**
	Sig. (1-tailed)	.012	.003	.004	.073
	N	42	42	42	42
Question 16	Pearson Correlation	.346**	.412**	.402**	.020
	Sig. (1-tailed)	.012	.003	.004	.450
	N	42	42	42	42
Question 17	Pearson Correlation	.499**	.406**	.441**	.160**
	Sig. (1-tailed)	.000	.004	.002	.156
	N	42	42	42	42
Question 18	Pearson Correlation	.698**	.556**	.519**	.161**
	Sig. (1-tailed)	.000	.000	.000	.154
	N	42	42	42	42

Question 19	Pearson Correlation	.352**	.231**	.112*	.466
	Sig. (1-tailed)	.011	.070	.241	.001
	N	42	42	42	42
Question 20	Pearson Correlation	.736	.627**	.656*	.242
	Sig. (1-tailed)	.000	.000	.000	.062
	N	42	42	42	42
Question 21	Pearson Correlation	1	.666**	.666*	.499*
	Sig. (1-tailed)		.000	.000	.000
	N	42	42	42	42
Question 22	Pearson Correlation	.666	1**	.684**	.461**
	Sig. (1-tailed)	.000		.000	.001
	N	42	42	42	42
Question 23	Pearson Correlation	.666	.684**	1**	.436**
	Sig. (1-tailed)	.000	.000		.002

Correlations

		Question 25	Question 26	Physical Environment
Question 13	Pearson Correlation	.372	.106**	.581**
	Sig. (1-tailed)	.008	.252	.000
	N	42	42	42

	Pearson Correlation	.400**	.362	.784**
Question 14	Sig. (1-tailed)	.004	.009	.000
	N	42	42	42
	Pearson Correlation	.402**	.409**	.762
Question 15	Sig. (1-tailed)	.004	.004	.000
	N	42	42	42
	Pearson Correlation	.035**	.409**	.659**
Question 16	Sig. (1-tailed)	.413	.004	.000
	N	42	42	42
	Pearson Correlation	.070**	.509**	.749**
Question 17	Sig. (1-tailed)	.329	.000	.000
	N	42	42	42
	Pearson Correlation	.078**	.479**	.843**
Question 18	Sig. (1-tailed)	.311	.001	.000
	N	42	42	42
	Pearson Correlation	.400**	.213**	.579*
Question 19	Sig. (1-tailed)	.004	.088	.000
	N	42	42	42
	Pearson Correlation	.053	.306**	.648*
Question 20	Sig. (1-tailed)	.369	.024	.000
	N	42	42	42
	Pearson Correlation	.093	.594**	.759*
Question 21	Sig. (1-tailed)	.278	.000	.000
	N	42	42	42

Question 22	Pearson Correlation	.111	.707**	.741**
	Sig. (1-tailed)	.242	.000	.000
	N	42	42	42
Question 23	Pearson Correlation	.035	.566**	.691**
	Sig. (1-tailed)	.413	.000	.000

Correlations

		Question 27	Question 28	Question 29
Question 27	Pearson Correlation	1	.262*	.688**
	Sig. (1-tailed)		.047	.000
	N	42	42	42
Question 28	Pearson Correlation	.262*	1	.391**
	Sig. (1-tailed)	.047		.005
	N	42	42	42
Question 29	Pearson Correlation	.688**	.391**	1
	Sig. (1-tailed)	.000	.005	
	N	42	42	42
Question 30	Pearson Correlation	.690**	.400**	.742**
	Sig. (1-tailed)	.000	.004	.000
	N	42	42	42
Question 31	Pearson Correlation	.445**	.124	.547**
	Sig. (1-tailed)	.002	.217	.000

	N	42	42	42
	Pearson Correlation	.798**	.503**	.887**
Non-physical Environment	Sig. (1-tailed)	.000	.000	.000
	N	42	42	42

Correlations

		Question 30	Question 31	Non-physical Environment
Question 27	Pearson Correlation	.690	.445*	.798**
	Sig. (1-tailed)	.000	.002	.000
	N	42	42	42
Question 28	Pearson Correlation	.400*	.124	.503**
	Sig. (1-tailed)	.004	.217	.000
	N	42	42	42
Question 29	Pearson Correlation	.742**	.547**	.887
	Sig. (1-tailed)	.000	.000	.000
	N	42	42	42
Question 30	Pearson Correlation	1**	.472**	.846**
	Sig. (1-tailed)		.001	.000
	N	42	42	42
Question 31	Pearson Correlation	.472**	1	.752**
	Sig. (1-tailed)	.001		.000
	N	42	42	42
Non-physical Environment	Pearson Correlation	.846**	.752**	1**

	Sig. (1-tailed)	.000	.000	
	N	42	42	42

*. Correlation is significant at the 0.05 level (1-tailed).

** Correlation is significant at the 0.01 level (1-tailed).

C. Employee Engagement

Correlations

		Question 32	Question 33	Question 34	Vigor
Question 32	Pearson Correlation	1	.912**	.793**	.950**
	Sig. (1-tailed)		.000	.000	.000
	N	42	42	42	42
Question 33	Pearson Correlation	.912**	1	.847**	.970**
	Sig. (1-tailed)	.000		.000	.000
	N	42	42	42	42
Question 34	Pearson Correlation	.793**	.847**	1	.926**
	Sig. (1-tailed)	.000	.000		.000
	N	42	42	42	42
Vigor	Pearson Correlation	.950**	.970**	.926**	1
	Sig. (1-tailed)	.000	.000	.000	
	N	42	42	42	42

** Correlation is significant at the 0.01 level (1-tailed).

Correlations

		Question 35	Question 36	Question 37	Dedication
Question 35	Pearson Correlation	1	.883**	.781**	.943**
	Sig. (1-tailed)		.000	.000	.000
	N	42	42	42	42
Question 36	Pearson Correlation	.883**	1	.808**	.958**
	Sig. (1-tailed)	.000		.000	.000
	N	42	42	42	42
Question 37	Pearson Correlation	.781**	.808**	1	.917**
	Sig. (1-tailed)	.000	.000		.000
	N	42	42	42	42
Dedication	Pearson Correlation	.943**	.958**	.917**	1
	Sig. (1-tailed)	.000	.000	.000	
	N	42	42	42	42

** . Correlation is significant at the 0.01 level (1-tailed).

Correlations

		Question 38	Question 39	Question 40	Absorption
Question 38	Pearson Correlation	1	.629**	.553**	.794**
	Sig. (1-tailed)		.000	.000	.000
	N	42	42	42	42
Question 39	Pearson Correlation	.629**	1	.780**	.934**
	Sig. (1-tailed)	.000		.000	.000

	N	42	42	42	42
	Pearson Correlation	.553**	.780**	1	.898**
Question 40	Sig. (1-tailed)	.000	.000		.000
	N	42	42	42	42
	Pearson Correlation	.794**	.934**	.898**	1
Absorption	Sig. (1-tailed)	.000	.000	.000	
	N	42	42	42	42

** . Correlation is significant at the 0.01 level (1-tailed).

APPENDIX VI: RELIABILITY TEST

Case Processing Summary

		N	%
	Valid	42	100.0
Cases	Excluded ^a	0	.0
	Total	42	100.0

a. Listwise deletion based on all variables in the procedure.

A. Internal Communication

Reliability Statistics

Cronbach's Alpha	N of Items
.942	12

B. Workplace Environment

Reliability Statistics

Cronbach's Alpha	N of Items
.923	19

C. Employee Engagement

Reliability Statistics

Cronbach's Alpha	N of Items
.931	9

APPENDIX VII: HETEROSCEDASTICITY TEST

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.889	2.848		.312	.756
1 Internal Communication	-.045	.057	-.129	-.780	.440
Workplace Environment	.061	.049	.206	1.245	.220

a. Dependent Variable: RES2

APPENDIX VIII: REGRESSION ANALYSIS

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.660 ^a	.435	.406	3.335	2.182

a. Predictors: (Constant), Workplace Environment, Internal Communication

b. Dependent Variable: Employee Engagement

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	334.063	2	167.032	15.018	.000 ^b
	Residual	433.770	39	11.122		
	Total	767.833	41			

a. Dependent Variable: Employee Engagement

b. Predictors: (Constant), Workplace Environment, Internal Communication

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.024	4.974		.407	.686		
	Internal Communication	.378	.100	.481	3.779	.001	.895	1.117
	Workplace Environment	.215	.085	.322	2.531	.016	.895	1.117

a. Dependent Variable: Employee Engagement

APPENDIX IX: R TABLETable of Critical Values for Pearson's r

<i>df</i>	Level of Significance for a One-Tailed Test					
	.10	.05	.025	.01	.005	.0005
	Level of Significance for a Two-Tailed Test					
	.20	.10	.05	.02	.01	.001
1	0.951	0.988	0.997	0.9995	0.9999	0.99999
2	0.800	0.900	0.950	0.980	0.990	0.999
3	0.687	0.805	0.878	0.934	0.959	0.991
4	0.608	0.729	0.811	0.882	0.917	0.974
5	0.551	0.669	0.755	0.833	0.875	0.951
6	0.507	0.621	0.707	0.789	0.834	0.925
7	0.472	0.582	0.666	0.750	0.798	0.898
8	0.443	0.549	0.632	0.715	0.765	0.872
9	0.419	0.521	0.602	0.685	0.735	0.847
10	0.398	0.497	0.576	0.658	0.708	0.823
11	0.380	0.476	0.553	0.634	0.684	0.801
12	0.365	0.457	0.532	0.612	0.661	0.780
13	0.351	0.441	0.514	0.592	0.641	0.760
14	0.338	0.426	0.497	0.574	0.623	0.742
15	0.327	0.412	0.482	0.558	0.606	0.725
16	0.317	0.400	0.468	0.542	0.590	0.708
17	0.308	0.389	0.456	0.529	0.575	0.693
18	0.299	0.378	0.444	0.515	0.561	0.679
19	0.291	0.369	0.433	0.503	0.549	0.665
20	0.284	0.360	0.423	0.492	0.537	0.652
21	0.277	0.352	0.413	0.482	0.526	0.640
22	0.271	0.344	0.404	0.472	0.515	0.629
23	0.265	0.337	0.396	0.462	0.505	0.618
24	0.260	0.330	0.388	0.453	0.496	0.607
25	0.255	0.323	0.381	0.445	0.487	0.597
26	0.250	0.317	0.374	0.437	0.479	0.588
27	0.245	0.311	0.367	0.430	0.471	0.579
28	0.241	0.306	0.361	0.423	0.463	0.570
29	0.237	0.301	0.355	0.416	0.456	0.562
30	0.233	0.296	0.349	0.409	0.449	0.554
40	0.202	0.257	0.304	0.358	0.393	0.490
60	0.165	0.211	0.250	0.295	0.325	0.408
120	0.117	0.150	0.178	0.210	0.232	0.294

APPENDIX X: F TABLE***Critical values of F for the 0.05 significance level:***

	1	2	3	4	5	6	7	8	9	10
1	161.45	199.50	215.71	224.58	230.16	233.99	236.77	238.88	240.54	241.88
2	18.51	19.00	19.16	19.25	19.30	19.33	19.35	19.37	19.39	19.40
3	10.13	9.55	9.28	9.12	9.01	8.94	8.89	8.85	8.81	8.79
4	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04	6.00	5.96
5	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.77	4.74
6	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.10	4.06
7	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68	3.64
8	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.39	3.35
9	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18	3.14
10	4.97	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02	2.98
11	4.84	3.98	3.59	3.36	3.20	3.10	3.01	2.95	2.90	2.85
12	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.80	2.75
13	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77	2.71	2.67
14	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70	2.65	2.60
15	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.59	2.54
16	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.54	2.49
17	4.45	3.59	3.20	2.97	2.81	2.70	2.61	2.55	2.49	2.45
18	4.41	3.56	3.16	2.93	2.77	2.66	2.58	2.51	2.46	2.41
19	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48	2.42	2.38
20	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.39	2.35
21	4.33	3.47	3.07	2.84	2.69	2.57	2.49	2.42	2.37	2.32
22	4.30	3.44	3.05	2.82	2.66	2.55	2.46	2.40	2.34	2.30
23	4.28	3.42	3.03	2.80	2.64	2.53	2.44	2.38	2.32	2.28
24	4.26	3.40	3.01	2.78	2.62	2.51	2.42	2.36	2.30	2.26
25	4.24	3.39	2.99	2.76	2.60	2.49	2.41	2.34	2.28	2.24
26	4.23	3.37	2.98	2.74	2.59	2.47	2.39	2.32	2.27	2.22
27	4.21	3.35	2.96	2.73	2.57	2.46	2.37	2.31	2.25	2.20
28	4.20	3.34	2.95	2.71	2.56	2.45	2.36	2.29	2.24	2.19
29	4.18	3.33	2.93	2.70	2.55	2.43	2.35	2.28	2.22	2.18
30	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.21	2.17
31	4.16	3.31	2.91	2.68	2.52	2.41	2.32	2.26	2.20	2.15
32	4.15	3.30	2.90	2.67	2.51	2.40	2.31	2.24	2.19	2.14
33	4.14	3.29	2.89	2.66	2.50	2.39	2.30	2.24	2.18	2.13
34	4.13	3.28	2.88	2.65	2.49	2.38	2.29	2.23	2.17	2.12
35	4.12	3.27	2.87	2.64	2.49	2.37	2.29	2.22	2.16	2.11
36	4.11	3.26	2.87	2.63	2.48	2.36	2.28	2.21	2.15	2.11
37	4.11	3.25	2.86	2.63	2.47	2.36	2.27	2.20	2.15	2.10
38	4.10	3.25	2.85	2.62	2.46	2.35	2.26	2.19	2.14	2.09
39	4.09	3.24	2.85	2.61	2.46	2.34	2.26	2.19	2.13	2.08
40	4.09	3.23	2.84	2.61	2.45	2.34	2.25	2.18	2.12	2.08

APPENDIX XI: T TABLE

df	0.10	0.05	0.025	0.01
2	2.9200	4.3027	6.2054	9.9250
3	2.3534	3.1824	4.1765	5.8408
4	2.1318	2.7765	3.4954	4.6041
5	2.0150	2.5706	3.1634	4.0321
6	1.9432	2.4469	2.9687	3.7074
7	1.8946	2.3646	2.8412	3.4995
8	1.8595	2.3060	2.7515	3.3554
9	1.8331	2.2622	2.6850	3.2498
10	1.8125	2.2281	2.6338	3.1693
11	1.7959	2.2010	2.5931	3.1058
12	1.7823	2.1788	2.5600	3.0545
13	1.7709	2.1604	2.5326	3.0123
14	1.7613	2.1448	2.5096	2.9768
15	1.7531	2.1315	2.4899	2.9467
16	1.7459	2.1199	2.4729	2.9208
17	1.7396	2.1098	2.4581	2.8982
18	1.7341	2.1009	2.4450	2.8784
19	1.7291	2.0930	2.4334	2.8609
20	1.7247	2.0860	2.4231	2.8453
21	1.7207	2.0796	2.4138	2.8314
22	1.7171	2.0739	2.4055	2.8188
23	1.7139	2.0687	2.3979	2.8073
24	1.7109	2.0639	2.3910	2.7970
25	1.7081	2.0595	2.3846	2.7874
26	1.7056	2.0555	2.3788	2.7787
27	1.7033	2.0518	2.3734	2.7707
28	1.7011	2.0484	2.3685	2.7633
29	1.6991	2.0452	2.3638	2.7564
30	1.6973	2.0423	2.3596	2.7500
31	1.6955	2.0395	2.3556	2.7440
32	1.6939	2.0369	2.3518	2.7385
33	1.6924	2.0345	2.3483	2.7333
34	1.6909	2.0322	2.3451	2.7284
35	1.6896	2.0301	2.3420	2.7238
36	1.6883	2.0281	2.3391	2.7195
37	1.6871	2.0262	2.3363	2.7154
38	1.6860	2.0244	2.3337	2.7116
39	1.6849	<u>2.0227</u>	2.3313	2.7079
40	1.6839	2.0211	2.3289	2.7045
41	1.6829	2.0195	2.3267	2.7012

APPENDIX XII: TABLE OF DURBIN-WATSON**Table of Durbin-Watson (DW), $\alpha = 5\%$**

n	k=1		k=2		k=3		k=4		k=5	
	dL	dU	dL	dU	dL	dU	dL	dU	dL	dU
6	0.6102	1.4002								
7	0.6996	1.3564	0.4672	1.8964						
8	0.7629	1.3324	0.5591	1.7771	0.3674	2.2866				
9	0.8243	1.3199	0.6291	1.6993	0.4548	2.1282	0.2957	2.5881		
10	0.8791	1.3197	0.6972	1.6413	0.5253	2.0163	0.3760	2.4137	0.2427	2.8217
11	0.9273	1.3241	0.7580	1.6044	0.5948	1.9280	0.4441	2.2833	0.3155	2.6446
12	0.9708	1.3314	0.8122	1.5794	0.6577	1.8640	0.5120	2.1766	0.3796	2.5061
13	1.0097	1.3404	0.8612	1.5621	0.7147	1.8159	0.5745	2.0943	0.4445	2.3897
14	1.0450	1.3503	0.9054	1.5507	0.7667	1.7788	0.6321	2.0296	0.5052	2.2959
15	1.0770	1.3605	0.9455	1.5432	0.8140	1.7501	0.6852	1.9774	0.5620	2.2198
16	1.1062	1.3709	0.9820	1.5386	0.8572	1.7277	0.7340	1.9351	0.6150	2.1567
17	1.1330	1.3812	1.0154	1.5361	0.8968	1.7101	0.7790	1.9005	0.6641	2.1041
18	1.1576	1.3913	1.0461	1.5353	0.9331	1.6961	0.8204	1.8719	0.7098	2.0600
19	1.1804	1.4012	1.0743	1.5355	0.9666	1.6851	0.8588	1.8482	0.7523	2.0226
20	1.2015	1.4107	1.1004	1.5367	0.9976	1.6763	0.8943	1.8283	0.7918	1.9908
21	1.2212	1.4200	1.1246	1.5385	1.0262	1.6694	0.9272	1.8116	0.8286	1.9635
22	1.2395	1.4289	1.1471	1.5408	1.0529	1.6640	0.9578	1.7974	0.8629	1.9400
23	1.2567	1.4375	1.1682	1.5435	1.0778	1.6597	0.9864	1.7855	0.8949	1.9196
24	1.2728	1.4458	1.1878	1.5464	1.1010	1.6565	1.0131	1.7753	0.9249	1.9018
25	1.2879	1.4537	1.2063	1.5495	1.1228	1.6540	1.0381	1.7666	0.9530	1.8863
26	1.3022	1.4614	1.2236	1.5528	1.1432	1.6523	1.0616	1.7591	0.9794	1.8727
27	1.3157	1.4688	1.2399	1.5562	1.1624	1.6510	1.0836	1.7527	1.0042	1.8608
28	1.3284	1.4759	1.2553	1.5596	1.1805	1.6503	1.1044	1.7473	1.0276	1.8502
29	1.3405	1.4828	1.2699	1.5631	1.1976	1.6499	1.1241	1.7426	1.0497	1.8409
30	1.3520	1.4894	1.2837	1.5666	1.2138	1.6498	1.1426	1.7386	1.0706	1.8326
31	1.3630	1.4957	1.2969	1.5701	1.2292	1.6500	1.1602	1.7352	1.0904	1.8252
32	1.3734	1.5019	1.3093	1.5736	1.2437	1.6505	1.1769	1.7323	1.1092	1.8187
33	1.3834	1.5078	1.3212	1.5770	1.2576	1.6511	1.1927	1.7298	1.1270	1.8128
34	1.3929	1.5136	1.3325	1.5805	1.2707	1.6519	1.2078	1.7277	1.1439	1.8076
35	1.4019	1.5191	1.3433	1.5838	1.2833	1.6528	1.2221	1.7259	1.1601	1.8029
36	1.4107	1.5245	1.3537	1.5872	1.2953	1.6539	1.2358	1.7245	1.1755	1.7987
37	1.4190	1.5297	1.3635	1.5904	1.3068	1.6550	1.2489	1.7233	1.1901	1.7950
38	1.4270	1.5348	1.3730	1.5937	1.3177	1.6563	1.2614	1.7223	1.2042	1.7916
39	1.4347	1.5396	1.3821	1.5969	1.3283	1.6575	1.2734	1.7215	1.2176	1.7886
40	1.4421	1.5444	1.3908	1.6000	1.3384	1.6589	1.2848	1.7209	1.2305	1.7859
41	1.4493	1.5490	1.3992	1.6031	1.3480	1.6603	1.2958	1.7205	1.2428	1.7835
42	1.4562	1.5534	1.4073	1.6061	1.3573	1.6617	1.3064	1.7202	1.2546	1.7814
43	1.4628	1.5577	1.4151	1.6091	1.3663	1.6632	1.3166	1.7200	1.2660	1.7794
44	1.4692	1.5619	1.4226	1.6120	1.3749	1.6647	1.3263	1.7200	1.2769	1.7777
45	1.4754	1.5660	1.4298	1.6148	1.3832	1.6662	1.3357	1.7200	1.2874	1.7762
46	1.4814	1.5700	1.4368	1.6176	1.3912	1.6677	1.3448	1.7201	1.2976	1.7748
47	1.4872	1.5739	1.4435	1.6204	1.3989	1.6692	1.3535	1.7203	1.3073	1.7736

APPENDIX XIII: CV of WRITER



Qualification Summary

A highly motivated and enthusiastic student. Willing to learn and to have new experiences. Able to adapt with dynamic environment.

Nurtaqi Irzalia
Wonosari street km.6
Demblaksari, Banguntapan, Bantul
Yogyakarta, 55198. Indonesia
 +6287738764093
arbi1109@yahoo.com

Personal Information

Place/Date of Birth : Cirebon, 11 September 1993
 Gender : Female
 Nationality : Indonesia
 Religion : Moslem

Education

- **Business and Economics Department,**
International Faculty, Universitas Islam Indonesia
Yogyakarta, Indonesia
 College. 2011-present
 Major in Human Resource Management, Language of instruction: English.
 Current GPA: 3.61
- **SMA Negeri 9**
Yogyakarta, Indonesia.
 Senior High School. 2008-2011
 Major in Science

Experiences

- **Terracotta Hijab**
Start-Up Online Business
Yogyakarta, Indonesia
 Owner. 2013-2014
 Profit: Rp 2.000.000,00/month
Responsibilities: Managing the marketing, production, and distribution activities, makes financial report, researching and analyzing about the current trends
- **Amigos Event Organizer**
Colors of Children Event
Yogyakarta, Indonesia
 Public Relation. 2012
Responsibilities: Managing sponsor, publication and booth vendor.
- **OSIS (Student Council)**
SMA Negeri 9
Yogyakarta, Indonesia.
 Coordinator of Health Department. 2010-2011

- **Roomantique Event**
SMA Negeri 9
Yogyakarta, Indonesia.
Coordinator of Venture Funds. 2010
Responsibilities: Looking for the source of funds in order to financing the event, managing the sponsor and the activities related to venture funds

Seminar, Training and Courses

- **Young Entrepreneur Show**
Universitas Gadjah Mada.
Participant. 2014
- **Outbound Management Training**
Universitas Islam Indonesia.
Participant. 2014
- **SAP**
SAP01 – SAP Overview
Universitas Islam Indonesia. 2013
- **Intermediate Islamic Leadership Training**
Unversitas Islam Indonesia.
Participant. 2013

Skills

- **Computer Skills**
(MS. Office, Photoshop, Internet Browser)
- **Language Skills**
Indonesia (Native) and English (Oral and Written)
- **Social Media Skills**
(Twitter, Facebook, Instagram, etc.)

Interests

*Travelling, Photography,
Swimming, Physical Exercise,
Singing*

Responsibilities: maintain the health room, preparing the event related to health.

I hereby certify this curriculum vitae describes myself, my qualifications, and my experiences. I understand that my misleading statements described herein may lead to the disqualification or dismissal of my application.