

Algorithm Design in the Procurement of Manpower with a Specific Time Work Agreement (Case Study at PT. Professional Indonesia Lantera Raga)

John Chaidir

Universitas Primagraha, Serang, Banten, Indonesia

intervalsix@gmail.com

Abstract

The purpose of this academic research is that to determine the actual condition of the construction service provider company in Indonesia in terms of procurement of construction workers. The research is purpose to evaluate of contractual labor procurement models of skilled workers and blue-collar labor. Researching locus is at PT. Professional Indonesia Lantera Raga in Serang City - Banten Province. This case research approach through interviews to the general superintendent, managers, and directors of the company, the opinion of the chairman of the construction entrepreneur at local association, and other resources in the form of theoretical data. After doing the research, it can be concluded that the company does a specific strategy in the procurement of contractual labor, by just in time (temporal), where the majority of construction workers are placed at job sites as contractual workers or workers with an agreement for a certain period refers to Indonesia Labor Law. Thus it becomes a common thing that is done by the construction company in Indonesia. The conclusion is that it can be drawn that the construction workers recruitment as the temporal workers, is entirely given to the recruitment and placement by the general superintendent; an activity that is not ideal yet from the point of view of HRM. Then the author made an ideal model for the recruitment of contractual workers in order to help companies to be more productive in the future and their expected algorithm impact. This academic research is hopefully useful for the scientific management of human resources and can contribute ideas to the stake holders in the field of construction services.

Keywords

algorithm design; procurement of labor; labor with specific time work agreement; construction service provider company



I. Introduction

Construction service players are currently optimistic about the economic development of the construction services sector in Indonesia. After experiencing an increase in the construction market value in 2012 of Rp. 330 trillion, in 2013 the market value of the construction sector for central government projects reached Rp. 400 trillion. In various forms, the growth of the construction market in Indonesia comes from various projects financed by the Central Government, Regional Governments, BUMN, BUMD and the private sector. In 2014, the central government construction project is estimated to have exceeded Rp. 500 trillion. If we add funds from Provincial/Regency/City Regional Government APBD projects

throughout Indonesia as well as projects originating from the private sector, in 2014 the total number of projects in Indonesia exceeded the value of Rp. 2,000 Trillion (60% percent of which are private sector projects according to information from the Minister of Public Works during the administration of President SBY). For information, in 2013 the value of construction projects in Indonesia was the second largest in Asia after China. According to the vice president of R.I. (at a meeting with construction service entrepreneurs at the presidential palace on February 23, 2015): the value of construction in Indonesia using APBN funds in 2015 doubled in value compared to 2014. In 2021, the value of construction projects in Indonesia has exceeded value of Rp. 10 thousand trillion.

Based on the information provided by the marketing director of PT. Pilar, the company gets continuous construction work every year. Around 1988, the founders of the company were project leaders from contractors from the City of Jakarta for road and tower building works in the City of Cirebon, as well as the implementation of the Garut – Tasikmalaya road work in West Java, until finally they founded their own company in 2003. Currently, PT . Pilar works on construction projects in various locations.

Professional Indonesia Lantera Raga itself has its head office in Serang City – Banten Province, but does not have branches in various other areas. Projects outside Serang City are monitored directly from their office in Serang City. Over the past eight years, the company's turnover has been around Rp. 80 Billion to Rp. 150 billion per year. The company's business is focused on the construction services sector, especially on road and bridge projects, supply of hot mix asphalt, high-rise building works, shop houses, and housing projects.

II. Review of Literature

2.1 Management

The role of management is very large to the success of a company's business. Today management is growing into one of the most important and absolute sciences needed by every company, and is related to human resources. The larger the company, the greater the number of workers needed; As a result, the role of management will also increase. Management is a specialty in dealing with time and human relations issues when they arise in an organization or company.

The definition of management is very much stated by various experts, so far there is no single established description of the meaning of the word management and is universally accepted. One definition of management can be taken from the opinion of Stephen P. Robbins and Mary Coulte (2010:7) in the following description: "Management is an activity that involves coordinating and supervising the work of others, so that the work can be completed efficiently and effectively. effective". Earnings management practices that are often carried out by management can reduce the quality of a company's financial statements (Sitanggang, 2020). The internal party in this case is the company's management who is obliged to prepare financial statements. External parties are shareholders, government, creditors and potential investors (Yannizar, 2020).

2.2 Procurement of Human Resources

The procurement of human resources or workers referred to by the researcher in this study includes the relocation of project workers who have worked in the company, the recruitment of new workers, as well as the placement of workers brought by vendors/sub-contractors. Workers brought by vendors or sub-contractors do not become a cost burden for the company because it includes the price of the products produced by the vendor/sub-contractor. In a construction project, workers will usually end their relationship firmly with

the company when the project has been completed and then they can return to work if the company has another similar project contract, through a working relationship for a certain period of time.

2.3 Algorithm Design

At first, the word algorithm is a term that refers to the arithmetic rules for solving problems using Arabic numeric numbers. In the 18th century, this term evolved into an algorithm, which includes all procedures or a clear sequence of steps needed to solve a problem.

III. Research Methods

PT. Pilar (Professional Indonesia Lantera Raga) for the last five years needs to recruit workers directly with a certain time work agreement (contract) of about 100 to 150 people each year. During this time, the company recruited skilled and unskilled workers through the company's permanent employees (and especially by project managers), with procurement procedures that were not in full accordance with the theory contained in Human Resource Management. Thus, a certain research is needed to be able to understand and present the best pattern in the recruitment of temporal employees in construction project activities. Temporal employees arise because of the nature of projects that have a certain duration.

Therefore, researchers are interested in conducting scientific research in the form of designing a labor procurement algorithm with a certain time work agreement against PT. Pillar. In the thematic research on this algorithm, it will be discussed how a design (step by step) must be carried out by PT. The ideal pillar is in the provision of temporal labor (with a certain time work agreement), especially skilled labor and unskilled workers. This needs to be discussed because the pattern carried out by PT. Pillar is a common condition that occurs in construction service providers in Indonesia (general in nature), and at the same time answers the question: why do most construction workers work irregularly.

IV. Results and Discussion

4.1 Results

a. Company Data

PT. Professional Indonesia Lantera Raga (PT. Pilar) is a medium qualification contractor based on his work ability or project contract value. Based on Government Regulation No. 22 of 2020, PT. Pilar can work on a single project starting from Rp. 5 billion to Rp. 50 billion. This limited liability company was established based on the Notarial Deed of Ny. Subandiyah Ammar Asof SH. in 2002 in Serang City – Banten Province, with ratification from the Ministry of Justice and Human Rights No. C-19049 HT.01.01.TH.2002 Dated October 2, 2002, and the latest amendment deed No. 06 dated January 8, 2010 by Notary Berliana Utami SH, and has a Construction Services Business License No. 1-003990-3604-2-00194 Dated January 16, 2012 from the City Government of Serang – Banten.

In addition to being engaged in the business of Construction Services and Procurement of Goods, PT. Professional Indonesia Lantera Raga also produces Hotmix Asphalt from their Mixing Plant in Serang Regency – Banten, and owns heavy equipment. The main work is carrying out the construction work of buildings, housing houses, irrigation canals, docks, and especially road and bridge projects. Head office of PT. Indonesian Professional Lantera Raga is located at the Rau II Office Complex – Jl. TB. No. 11 Block A1 - Serang City.

For PT. Pillar, human resources is a very important element for increasing organizational productivity, including for most companies in the construction industry which are included in the labor-intensive sector. Most of the project workers are casual workers, which means they are not permanent employees of the company or workers with a certain time work agreement. They are paid when the project is running or the company has a work contract and quit after the project is completed without any compensation. The number of workers with a work agreement for a certain time required is regulated based on the value and type of project being worked on.

In addition to skilled labor and manual labor, construction projects also require skilled labor. Skilled labor is a term that was always used by the former Deputy Minister of Public Works (Mr. Ir. Hermanto Dakdak) during the SBY presidency to refer to the foreman, chief handyman (executive), and handyman. This is also stated in the regulations of the Construction Services Development Agency. Experts with a minimum education of D3 and skilled workers with an education of less than D3. In projects with APBN, APBD, and BUMN funding sources, it is usually determined how many skilled workers, skilled workers, and unskilled workers are needed, depending on the value and type of project being auctioned off, so that generally construction service providers are relatively unable to determine exactly how many experts, skilled workers, and unskilled workers are needed to become permanent workers in the company.

Because PT. Pilar always gets a job, so according to the company's directors, they have 52 permanent workers in which there are also technical experts. Every year they also need 100 to 150 workers with a certain time work agreement (foreman, handyman, and manual labor). Meanwhile, the company's organizational structure can be seen in Figure 4 above.

Lately, many technological advances have resulted in the shift of human power to be replaced by machines or other production equipment. In developing countries such as Indonesia, the notion of increasing productivity is more directed to all efforts that can be made using existing human resources, not to additional capital to create or bring in sophisticated equipment so as to increase productivity tremendously.

PT. Pilar gets continuous construction work every year. In this case, the marketing mix implemented by the company to support the market position it wants to achieve is based on 'price-based marketing'. The control system is implemented to ensure the achievement of products in accordance with the established standards and the training provided to permanent employees as well as technical/managerial direction to the workforce with a certain time work agreement PT. Pillars, all of which will have an impact on the creation of efficiency in the construction process. These include time efficiency and reduced errors in work, which in turn will save costs.

b. Analysis of the Implementation of Manpower Procurement with a Specific Time Work Agreement Done by PT. Pillar

Based on the results of the researchers' observations at the research locus; in the implementation of project work, it is known that the proportion of human resource costs is in the lowest rank compared to the proportion of expenditures for equipment or material resources, which ranges from 5% to 7% of the unit price of each work unit, which is equivalent to 5% to 7 % of the total project cost. This proportion identifies the fact that human resources require a non-dominant proportion of costs, but rather determines the success of the project itself.

At this time, the procurement of manpower with a certain time work agreement for PT. Pillar, handed over to the project leader (a position under the operational manager structure) who is commonly referred to as the General Superintendent. The project leader fully has the authority to recruit workers with a certain time work agreement, both in terms of job

descriptions, job specifications, job performance standards, as well as in terms of numbers. Project implementation costs (including labor costs) submitted by the general superintendent to the operational manager to the company's president director, are implemented through a budget proposal for project implementation costs, including costs for the recruitment of temporal workers themselves. This has been going on for a long time since the company was founded, so the company depends on the workings of the project leader (who is a permanent employee of the company). So, the project leader based on the Company's Operational Standards carries out labor recruitment activities with a work agreement for a certain time as shown in Figure 5 below.

As a result, the general superintendent position becomes very important in the procurement of manpower with a certain time work agreement. The General Superintendent together with his subordinates (site engineers) and the project foreman become a kind of 'agent' for manpower procurement with a work agreement for a certain time; a practice that according to Soemarsono (Chairman of the Certification Division of the Central Executive Board of the Association of Indonesian Experts and Technical Workers / ASTATINDO) is common in construction service providers. Soemarsono further said that there were several BUMN contractors who were less successful in their corporate business due to the company's disharmony with the existing project leaders. Soemarsono agrees with the researcher that contractors need a pattern of labor procurement with a certain time work agreement that is more ideal which does not entirely depend on the rights and authority of the project leader alone.

c. The Inhibiting Factors of the Manpower Procurement Program With a Certain Time Work Agreement Done by PT. Pillar

The inhibiting factors of the labor procurement program with a certain time work agreement carried out by PT. The pillars consist of:

1. External Factors:

- 1) Intense competition between construction service providers in obtaining workers with a certain time work agreement.
- 2) Not including the cost of social benefits (layoff benefits, work accident or death insurance at work, sickness benefits, etc.) by the employer (certain) for workers from construction service providers.
- 3) Employers do not include tax costs for workers' wages taxes in construction project contracts.
- 4) Application changes in construction engineering.
- 5) Effect of job location.
- 6) The size of the project value and the duration of the work.

2. Internal Factors:

- 1) Workers who resign and become permanently sick (or die).
- 2) Coordination between permanent workers and workers with a work agreement for a certain time at the beginning of the project usually does not run smoothly.
- 3) At certain times and conditions, workers with a certain time work agreement refuse the offer to be rehired to a project, for the following reasons: difficult work location, has worked in another company, problems with increasing wages, work safety insurance problems, long working hours strict conditions, leave or time off issues, and other issues.

d. Results of the Design of Labor Procurement Algorithm with a Specific Time Work Agreement which is ideal for PT. Pilar

Based on the HRM theory, project worker recruitment activities should ideally be carried out close to what the researcher has conveyed in the description above, namely the involvement of the company's management holistically. Due to the recruitment of workers with a certain time work agreement carried out by the project leader of PT. Pilar has never harmed the company in the sense that the proposed profit target in the form of financing budgeting is always close to the plan, so the company has never standardized the ideal model of labor recruitment with a certain time work agreement. But as mentioned above, the procurement of manpower should approach the existing theory in the science of HRM. For this reason, researchers present the ideal stages of labor procurement with a certain time work agreement based on the HRM theory as shown in Figure 6 below.

As described above, in a construction project work, labor positions with a certain time work agreement consist of foreman, handyman, and manual labor. According to information from I Nyoman Sutapa (Chairman of the Central Executive Board of ASTATINDO), the foreman position usually has three different types of skill characteristics, namely: a). The foreman as a procurement agent for 'handy workers and workers' or commonly referred to as a work foreman, b). The foreman is a 'contractor of certain jobs' or commonly referred to as a sub-contractor, and c). Foreman as wholesaler of wages.

e. Workload Analysis (Manload)

Job analysis (in Figure 7) provides useful information for qualitatively determining labor requirements. Job analysis shows the types of positions needed to complete the tasks (job specifications). However, the function of the preparation of the workforce is not clear because the quantity (number) of workers with a certain time work agreement required has not been calculated.

f. Calculation of Unit Price and Work Volume

In calculating the number of workers with a certain time work agreement in a construction project, usually PT Pilar requires project administration data as follows: volume of each type of work (bill of quantity), sub-contracted work; basic unit price (wages, materials, and equipment); work unit price; timetable; and calculate the ability of each worker.

The unit price of work consists of direct costs and indirect costs. The direct cost component consists of wages, materials and tools. The indirect cost component consists of general costs (overhead) and profits but does not include taxes that must be paid (see Figure 8 below).

In an auction bid for construction projects, the unit price and volume of work are binding items and become the basis for determining the victory of the construction service provider. From the unit price and the volume of the work, the value of the project offered by the contractor to the owner is obtained, including the profit requested by PT Pilar along with the overhead.

In calculating the basic price of the wages of skilled workers at the unit price of the work above, according to the Regulation of the Minister of Public Works no. 11/PRT/M/2013 in 2013, the steps taken by PT Pilar are as follows:

- 1) Determine the type of workforce skills from foreman (M), handyman (T), or manual labor (P).
- 2) Collect wage data in accordance with local regulations.
- 3) Take into account the labor brought in from outside the region by taking into account the cost of eating, staying, and transportation costs.

- 4) Determine the number of effective working days in a month and the number of effective hours in a day.
- 5) Calculating the cost of each hour's wages per person.
- 6) Average all hourly wage costs as average hourly wages.

Meanwhile, the time schedule (work implementation schedule) in a construction project is a time allocation plan to complete each project work item which as a whole is a set time span to carry out a project. In general, the time schedule is made in the form of:

- 1) Bar Charts and S Curves.
- 2) Network Planning.
- 3) Schedule daily, weekly, monthly, yearly or specific time.
- 4) Making a time schedule with the help of software such as MS Project.

The purpose or benefits of making a time schedule on a construction project include:

- 1) Time guidelines for procuring the required human resources.
- 2) Time guidelines for the arrival of materials in accordance with the work items to be carried out.
- 3) Time guidelines for procurement of work tools.
- 4) The time schedule also serves as a tool to control project execution time.
- 5) Time schedule as a reference for starting and ending a construction project work contract.
- 6) As a guideline for achieving work progress at any given time.
- 7) As a guideline for determining the deadline for fines for project delays or bonuses for project acceleration.
- 8) As a guide for measuring the value of an investment.

g. Counting the Number of Workers with a Certain Time Work Agreement and Their Work Schedule

Based on the unit price of the existing work and the volume of work, it can be calculated the number of each worker with a work agreement for a certain time. The trick is to multiply the coefficient on the unit price by the volume of work, as stated in the researcher's description above. After the number of foremen, handymen, and manual workers per each work unit has been found, then a work schedule is made for the foremen, builders, and manual workers for each project.

h. Recruitment/Selection and Placement of Workforce with a Specific Time Work Agreement

Selection made by PT. Pillar is a recommendation or a decision to accept or reject a candidate or group of workers for a particular job based on an assumption about the possibilities of the candidate to become the workforce. The task of this selection is to assess as many candidates as possible or a number of people (according to the number required) who best meet the requirements and types of work that have been set. In selection, a number of candidates are assessed on the extent of their suitability (the extent to which they meet pre-defined job requirements) with a job.

Placement of employees by PT. Pillar is a recommendation or decision to distribute candidates to jobs of different types and capacities based on an assumption about the possibilities of candidates to succeed in each different job. The job of this company placement is to assess the candidates and to match their qualifications with the predefined requirements of each job and place them in the job position in the field.

i. Algorithm Impact

In the implementation of construction activities, PT. Pilar utilizes their workforce resources as effectively as possible based on the capability measure of the project leader PT. Pilar. It has been mentioned above that the effectiveness of the project leader in recruiting workers with a certain time work agreement has never been tested and according to the researcher needs to be improved in the form of an ideal pattern, because the project leader from PT. Pilar does not involve the board of directors and other interested parties in the recruitment of workers with a certain time work agreement, and does not rely on HR recruitment theory. The ideal pattern that the researcher means is according to Figure 7 above.

According to the researcher, the company's internal parties who need to be involved in recruiting workers with a certain time work agreement are: President director, finance director, technical director, marketing director, general director, director of operations, director of information systems, finance manager, operations manager, personnel managers, administrative managers, engineering managers, legal and liability managers, project leaders, and technical staff.

4.2 Discussion

Procurement of labor with a certain time work agreement PT. Pilar has been completely handed over to the project leader who is usually referred to as the General Superintendent. The project leader has full authority to recruit workers with a work agreement for a certain time, including the determination of job descriptions, job specifications, job performance standards of the workers to be recruited, as well as in terms of number. Meanwhile, the recruitment of workers is still carried out by the personnel manager.

Project implementation costs (including labor costs with a certain time work agreement and recruitment fees) submitted by the project leader to the operational manager to the company's president director, are carried out through project implementation cost budgeting. This has been going on for a long time since the company was founded so the company depends on the workings of the project leader (who is a permanent employee of the company).

a. The Inhibiting Factors of the Manpower Procurement Program for a Certain Time Work Agreement at PT. The Pillars Consist of:

1. External Factors

- 1) Intense competition between construction service providers in obtaining workers with a certain time work agreement.
- 2) The employer does not include the cost of social benefits for workers in construction project contracts.
- 3) Employers do not include tax costs for workers' wages taxes in construction project contracts.
- 4) At least there are companies that are engaged in supplying outsourcing of construction workers, especially workers with work agreements for a certain time.
- 5) Application changes in construction engineering.

2. Internal Factors

- 1) Workers who resign and become permanently sick (or die).
- 2) Coordination between permanent workers and workers with a work agreement for a certain time at the beginning of the project usually does not run smoothly.
- 3) At certain times and conditions, workers with a certain time work agreement refuse the offer to be rehired to a project, for the following reasons: difficult work location, has worked in another company, problems with increasing wages, work safety insurance

problems, long working hours strict conditions, problems with leave or rest periods, problems with benefits (including holiday allowances), problems with job security, problems with the difficulty of the technology used, the age factor or feeling bored, and legal protection problems.

b. The Design of the Labor Recruitment Algorithm Made by the Author is Stated of this Thesis

c. The Expected Algorithm Impact of the Algorithm Design Made by the Author Consists of:

1. Impact for the Corporate

- 1) The execution of corporate strategy allows it to be fulfilled.
- 2) The credibility of HRM handling can be further increased.
- 3) The company's innovation and creativity for the purpose of profit and customer satisfaction can be carried out well.
- 4) Hiring systems can be high-performing.
- 5) The company's sales value per 'worker with a certain time work agreement' may increase.
- 6) Market value of 'book value' may rise

2. Benefits for the Implementation of the Work

- 1) Benefits for workers: job satisfaction or reduced complaints, easier implementation of work, ease of work implementation methods, reduced work accidents, work contracts and compensation that are deemed fairer, employee understanding of work is more fulfilled, lower disputes, higher levels of salary processing and incentives effective, as well as convenience for workers to submit proposals and or suggestions to the company.
- 2) Utilization in the use of materials: ease of project administration and finance including planning (schedule) material use, accuracy of material use in terms of quality and quantity, at least material wasted (waste), minimal material shrinkage, ease of conducting material quality tests, ease of carrying out material data collection used, the ability to decide to use raw materials or fabricated materials, the efficiency of the price of the purchased materials, and the ease of storage of material supplies.
- 3) Utilization in the use of equipment: ease of project administration and finance including planning (schedule) use of tools, accuracy of use of tools based on their function and capacity, minimal rental of heavy equipment and auxiliary equipment, routine maintenance of equipment well maintained, minimal damage to equipment , as well as at least missing equipment and or spare parts

V. Conclusion

1. In a management theory regarding the learning curve which was originally recommended by T. P. Wright in 1937 (Edwar Russel and Walling, 2014: 80) it is stated that if an ideal algorithm is implemented consistently by the company and its implementation is repeated for a long period of time, the company will year after year will be able to be more productive in production for the company's economies of scale, and can be more competitive on a business scale, because companies are more experienced in using their ideal algorithm. Thus the hope that can happen to PT. Pillar.
2. In handling workers with a certain time work agreement, certain privileges should be made to workers with a certain time work agreement (especially for foreman and handyman) who often participate in the implementation of the work of PT. Pillar; such

as: providing compensation during termination of employment, providing work safety insurance, providing medical expenses when workers are sick, providing education or training with certification, and other things that will have an impact on job satisfaction.

3. As Michael Porter (marketing management expert) once said: the only competitive advantage of a company is in price and differentiation. Innovation must change the way companies do things and be creative. Therefore, a form of recruitment algorithm for project workers should be investigated more in depth and innovatively made improvements to existing patterns, so that companies can adapt to the latest business conditions and the latest norms issued by the government.
4. Warren G. Bennis and Philip Slatter (The Temporary Society, 1968) mention that an innovative company will rely on a fast and flexible project team in the company's organizational structure called adhocracy (adhocracy or adhoc) in the creation of a management idea, for example the idea of top management. the pattern of recruitment of workers with a certain time work agreement that they continuously explore to produce the best way for the company. Recommended for PT. Pillars to form this advocacy team or Office of Strategy Management (OSM) team.
5. In the implementation of labor recruitment with a certain time work agreement based on the algorithm created by the researcher, it is necessary to have an information system within the company for the implementation of management activities. Certain parties assigned by the company to carry out recruitment activities through a connected information system between interested parties at the managerial level. Submissions of project costs and employee work schedules, for example, can be displayed on the computer screens of company directors so that the work schedule activities can function as monitoring tools such as the Key Performance Index or Performance Appraisal functions.
6. Based on the prevalence of the application of discretion as part of the management of a corporation, the empowerment provided so far by PT. The pillar for the project leader to recruit workers with a work agreement for a certain time of the project is a form of necessity. In principle, the author's recommendation for empowerment by PT. Pillars to project foremen have two basic functions, namely: 1) the core objectives of the project are understood, and b) leadership effectiveness.

References

- Adiratna, Angela. (2013). 10 Langkah Manajerial Outside the Box. Yogyakarta: Penerbit Charissa Publisier.
- Ahira, Anne. (2013). Teknik Analisis Data Penelitian Kualitatif. AnneAhira.Blog, <http://anneahira.com/teknik-analisis-data-penelitian-kualitatif.Htm>.
- Bangun, Wilson. (2012). Manajemen Sumber Daya Manusia. Jakarta: Penerbit Erlangga.
- Bellionardi, Alpius Rama Kusuma. (2013). Model Analisis Perekrutan dan seleksi Karyawan di PT. SAMI. Jurnal Ilmiah Dinamika Ekonomi dan Bisnis. Vol. 1 No. 1 April.
- Bengin, H. M. Burhan. (2014). Penelitian Kualitatif edisi kedua. Jakarta: Penerbit: Kencana Prenada Media Group.
- Case, Karl E. dan Fair, Ray C. (2007). Principles of Economics – Eight Edition. Alih Bahasa: Y. Andri Zaimur. Jakarta: Penerbit Erlangga.
- Chandra, Jesslyn. (2013). Studi Deskrtif Proses Rekrutmen, Seleksi, Dan Penempatan Karyawan pada PT. Triputra Surya Jaya. Jurnal: Agora, Volume 1, No. 3.
- Charles R. Greer, Stuart A. Youngblood, and Davis A. Gray. (1999). Human Resources Management Outsourcing: The Make or Buy Decision, Journal, The Academy of Management Executive, 13,3: ProQuest Health Management, page 85.

- Desler, Garry. (2010). *Manajemen Sumber Daya Manusia*, Edisi Kesepuluh. Jilid 1. Alih Bahasa: Paramita Rahayu. Jakarta: Penerbit Permata Puri Media.
- Dewanto, Joko dan Harefa, Faeri Warisman. (2007). Analisis dan Perancangan Sistem Penunjang Keputusan Perekrutan dan Penilaian Kinerja Karyawan pada PT. KIEC Cilegon. *Jurnal Fasilkom*, Vol. 5 No. 1.
- Fedi, Sebastian (2013). Pengertian Input, Proses, Output, dan Outcome dalam Kegiatan Pendidikan. Sebastian Blog, <http://tyanfediblogspot.com/2013/10/pengertian-input-proses-outputdan.html>.
- Ghouse, Nikhat J. (2012). *Mentored into Management*, Penerbit Associate Librarian for Anthropology and Virtual, Kansas University, US, <http://www.arl.org/storage/documents/publications/lcdp-2012-poster-ghouse-nikhat.pdf>.
- Hariandja, Marihot Tua Efendi dan Lardiwati, Yovita. (2007). *Manajemen Sumber Daya Manusia: Pengadaan, Pengembangan, Pengkompensasian dan Peningkatan Produktivitas Pegawai*. Jakarta: Penerbit: Grasindo.
- Hasibuan, Malayu S. P. (2006). *Organisasi dan Motivasi Dasar Peningkatan Produktivitas*. Jakarta: Penerbit: Bumi Aksara
- Hasibuan, Malayu S. P. (2007). *Manajemen Sumber Daya Manusia*. Edisi Revisi. Jakarta: Penerbit: Bumi Aksara.
- Husen, Abrar. (2011). *Manajemen Proyek*. Edisi Revisi. Yogyakarta: Penerbit CV. Andi Offset.
- Indrawan, Rully dan Yaniawati, Poppy. (2014). *Metodologi Penelitian*. Bandung: Penerbit Pt. Refika Aditama.
- Istiami, Amik Tri. (2014). *Cara Lebih Mudah Membaca Peraturan Pengadaan Barang dan Jasa Pemerintah (Perpres 54, 35 dan 70)*. Yogyakarta: Penerbit CV. Primaprint.
- Kamarwan, Sidharta dkk. (1998). *Ilmu Manajemen Konstruksi Untuk Perguruan Tinggi*. Jakarta: Penerbit: Universitas Tarumanegara.
- Kurniawan, Emmanuel. (2013). *Hak-Hak Karyawan Tetap dan Kontrak*. Cetakan 1. Jakarta: Penerbit Dunia Cerdas.
- Liker, Jeffrey K. dan Meier, David. (2006). *The Toyota Way – Fieldbook*. Alih Bahasa: Gina Gania. Jakarta: Penerbit Erlangga.
- Malik, Alfian. (2009). *Pengantar Bisnis Jasa Pelaksana Jasa Konstruksi*. Yogyakarta: Penerbit CV. Andi Offset.
- Manulang, M. (2002). *Manajemen Personalialia*. Jakarta: Penerbit: Ghalia Indonesia.
- Miles, Mathew B. dan Huberman, A. Michael. (2014). *Analisis Data Kualitatif*. Penerjemah: Tjetjep Rohendi Rohidi. Jakarta: Penerbit Universitas Indonesia.
- Muhammad, Suwarsono. (2013). *Manajemen Strategik – Konsep dan Alat Analisis*. Edisi Kelima. Yogyakarta: Penerbit Sekolah Tinggi Ilmu Manajemen YKPN, Y.Quesada, Gioconda; Marvin E. Gonza'lez, James Mueller dan Rene Mueller. (2010). Impact of e-procurement on HR procurement and implementation of project work performance, *Benchmarking: An International Journal* Vol. 17 No. 4, 2010 pp. 516-538.
- Rachmat, Antonius C. (2010). *Algoritma Dan Pemrograman Dengan Bahasa C – Konsep, Teori Dan Implementasi*. Yogyakarta: Penerbit: Andi Yogyakarta.
- Rivai, H. Veithal dan Sagala, Ella. (2009). *Manajemen Sumber Daya Manusia untuk Perusahaan – Edisi Kedua*. Depok: Penerbit Rajawali Pers (PT. Raja Grafindo Persada).
- Robbins, Stephen P. dan Coulter, Mary. (2010). *Manajemen* Edisi Kesepuluh. Jilid 1. Alih Bahasa: Bob Sabran dan Devri Barnadi Putera. Jakarta: Penerbit Erlangga.
- Russel, Edward dan Walling. (2010). *50 Terobosan Manajemen yang Perlu Anda Ketahui*. Jakarta: Penerbit Erlangga.

- Sagita, Leni dan Trimansyah, Bambang. (2005). Penentuan Peringkat Resiko Dalam Perekrutan Tenaga Kerja Yang Mempengaruhi Biaya Proyek. *Jurnal Teknik Sipil* Vol 12, No. 3.
- Saleh, Darwin Zahedy. (2014). *Mozaik Permasalahan Infrastruktur Indonesia*. Depok: Penerbit CV. Ruas.
- Schwalbe, Kathy. (2007). *Information Technology Project Management*. 4'th Edition, Canada: Thomson Course Technology.
- Sinungan, Muchdarsyah. (2003). *Produktivitas Apa dan Bagaimana*. Jakarta: Penerbit Bumi Aksara.
- Sitanggang, S.N., Ikhsan, A., and Nasirwan. (Analysis of the Influence of Managerial Ownership, Audit Quality and Audit Committee on Income Management (Study on Manufacturing Companies in the Consumer Goods Sector Listed on the Indonesia Stock Exchange 2014-2018). *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)* Vol 3 (3): 2521-2533.
- Soemardi, Biemo W. dan Kusumawardani, Rani G. (2010). Studi Praktek Biaya Tidak Langsung Pada Proyek Konstruksi. *Jurnal pada Konferensi Nasional Teknik Sipil* 4. Sanur, Bali.
- Sofyandi, Herman. (2008). *Manajemen Sumber Daya Manusia*. Jakarta: Penerbit: Graha Ilmu.
- Stoner, Freeman, Gilbert. (2006). *Manajemen, Alih Bahasa: Alexander Sindoro*. Jakarta: Penerbit: PT. Prehallindo.
- Suarga (2012). *Algoritma dan Pemrograman*. Yogyakarta: Penerbit: Andi Yogyakarta.
- Suherman, Ade. (2011). Peranan Fungsi Pengadaan (Procurement) Sumber Daya Manusia Dalam Meningkatkan Laba. <http://adesuherman.blogspot.com/2012/06/peranan-fungsi-pengadaan-procurement.html>.
- Sulastri. Lilis. (2013), *Kajian Manajemen Berbasis Nilai Dalam Konteks Perguruan Tinggi (Studi Kasus pada Perguruan Tinggi Binus University)*. Tesis Doktor dalam Ilmu Manajemen pada Universitas Pasundan, Bandung.
- Tunggal, Hadi Setia (2008), *Peraturan Pelaksanaan Undang-Undang No. 13 Tahun 2003 tentang Ketanagakerjaan*. Jakarta: Penerbit Harvarindo.
- Wan, Kim Byung. (2014). *Samsung Code – 27 Prinsip Pengembangan Pribadi dan Organisasi ala Samsung*. Cetakan 1. Alih Bahasa: Ria Febriyani. Jakarta: Penerbit: PT. Mizan Publika.
- Wayne, Mondy R. (2008). *Manajemen Sumber Daya Manusia*. Jilid 1 Edisi 10. Alih Bahasa: Bayu Airlangga MM. Jakarta: Penerbit Erlangga.
- Wayne, Mondy R. dan Noe Rober M. (2005), *Human Resource Management*. USA: Penerbit: Pearson Education, New Jersey.
- Wibisono, Dermawan. (2011). *Manajemen Kinerja Korporasi dan Organisasi: Paduan Penyusunan Indikator*. Jakarta: Penerbit Erlangga.
- Wibowo. (2005). Systems Modelling To Evaluate The Effect Of Labour Intensive Construction, Data from Mawdesley MJ, *Proceeding International Conference On Advancement In Design Construction, Construction Management and Maintanace of Building Structures*, Bali Indonesia, 28 March 2002.
- Yannizar, Wazirman, and Septiana, G. (2020). Analysis of Good Corporate Governance, Free Cash Flow, Leverage towards Earning Management, and Shareholder Wealth in Service Sector Companies Listed on the Indonesia Stock Exchange. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)* Vol 3 (3): 2567j-2567v.