Factors affecting e-procurement division employee performance

Luis Marnisah\textsuperscript{a,}, Fakhry Zamzam\textsuperscript{a}, Susi Handayani\textsuperscript{a}, Tien Yustini\textsuperscript{a}, Hendry Wijaya\textsuperscript{b}, Hakima Maris\textsuperscript{c} and David Irwanto\textsuperscript{d}

\textsuperscript{a}Faculty of Economics, Universitas Indo Global Mandiri Palembang, Indonesia
\textsuperscript{b}Management Department, Sekolah Tinggi Ilmu Ekonomi Rahmaniyah Sekayu, Indonesia
\textsuperscript{c}Sekolah Tinggi Ilmu Ekonomi Aprin Palembang, Indonesia
\textsuperscript{d}Procurement Service Department, PT Semen Baturaja (Persero) Tbk, Indonesia

\textbf{ABSTRACT}

In facing business competition in the cement industry, PT Semen Baturaja (Persero) Tbk is making creative and innovative breakthroughs. Poor procurement planning, competence in the procurement of goods and services, hard skills and soft skills, ineffective coordination between divisions, low culture and work discipline, as well as ineffective education and training are the main causes of the ineffective implementation of the e-Procurement system in the company. Employee performance in the e-procurement division is a concern in this study. This study aims to determine the influence of competence, education, training, and employee placement partially and simultaneously on employee performance at PT. Semen Baturaja (Persero) Tbk. This study uses a quantitative approach with a confirmative survey method that is descriptive and uses verification. The population and sample of this study is all employees in e-procurement division, as it uses a census sampling technique, amounting to 105 respondents. The data is gathered using questionnaire, documentation, and observation method. Furthermore, the data is then processed using SPSS 24 application. The results of this study show that employee competence, education, training, and employee placement had positive effects on employee performance. The strategy to improve employee performance will be effective by first providing technical training to improve competence in the e-Procurement division, then rearranging the placement by paying more attention to the suitability of individual competencies, expertise, and abilities in carrying out the e-Procurement Standard Operating Procedure.

\textbf{Keywords:}

Employee Competence
Employee Education
Employee Training
Employee Placement
Employee Performance

1. Introduction

PT Semen Baturaja (Persero) Tbk is a state-owned enterprise (SOE) engaged in the cement industry located in southern Sumatra. The company has a tagline of “Inisiatif Tiga Gajah (Three Elephant Initiatives)” which includes cost leadership, market expansion, and business process streamlining. PT. Semen Baturaja (Persero) Tbk conducts business process streamlining to accelerate the decision-making process, such as the process of procuring goods and services. Since 2009, the procurement of goods and services has been using the e-procurement system. However, the long process of procuring goods and services results in a stigma among the management that the process of procurement is slow. The implementation of the tagline in cost leadership and business process streamlining requires PT Semen Baturaja (Persero) Tbk to revise the standard operating procedures (SOP) of the procurement of goods and services process in the company. It is expected that through the e-procurement system, the procurement process would be faster, more transparent, effective, and efficient. However, in reality, the implementation of the process of procuring goods and services is still relatively long. The implementation of Key Performance Indicator (KPI) achievement has not been maximal in the last three years, as it can be seen from Table 1 below.
Table 1 illustrates the realization of the achievement of Key Performance Indicators from buyers during the last three years. It can be seen that the realization of performance in the e-procurement division in the procurement process is on the average of 88.6%. With these results, there are 11.4% of procurement processes that have not been fulfilled or achieved. The late process of procuring goods and services becomes the concern of the management of PT. Semen Baturaja (Persero) Tbk. The not yet optimal implementation of e-Procurement system of PT. Semen Baturaja (Persero) Tbk is caused by several obstacles that hinder employee performance, such as procurement planning that is not good yet, low competence of the procurement of goods and services field, low hard skills and soft skills, ineffective coordination between division, low culture and work discipline, ineffective education and training, inadequate work facility supports, lack of equipment used for the e-procurement system, lack of system maintenance and management, lack of availability of facilities and infrastructure, longer time to repair because the application is owned by a third party, changes regarding procurement, and organization support that is not yet maximal (Triastuti, 2019; Pokatong et al., 2015; Turere, 2013; Djoharam et al., 2014). The improvement of employee performance becomes a solution so that the e-Procurement system can be implemented well (Damayanti et al., 2013). Based on the phenomenon above, the factors that influence employee performance are limited to the competency, education, training, and placement variables. Therefore, this study aims to understand the influence of competence, education, training, and placement partially and simultaneously toward employee performance in PT. Semen Baturaja (Persero) Tbk.

2. Literature review

2.1 The Influence of Employee Competence on Employee Performance

Competence according to Wibowo (2007) is the ability to carry out or perform a job or task which is based on skills and knowledge, and is supported by the work attitude required by the job. Therefore, competence reflects skills or knowledge characterized by professionalism in certain fields, as superior in certain fields. Competence is the driving force of performance, the high or low quality of a performance, and the good or bad performance of certain activities (Ataurur & Ariyanto, 2016). Employees must further improve their competencies, so that employees can use their skills at work. Besides that, employees must also have deeper knowledge about the work they are doing (Posuma, 2013). Sudarmanto (2009) suggested that there are five operational competence variables, which consists of: (1) knowledge; (2) skills; (3) self-concept; (4) trait; and (5) motive. Triastuti (2019); Posuma (2013); Prasad et al., (2001); Zaim et al., (2013) found that competence has positive influence on employee performance. Therefore, based on the theory and previous studies, the first hypothesis is formulated, namely:

H1: Employee competence has a positive influence on employee performance.

2.2 The Influence of Employee Education on Employee Performance

Hodgkinson & Foley (2003) explained that education is a process of forming fundamental skills intellectually and emotionally towards nature and fellow humans. It is supported by Rousseau (2003) that education provides us knowledge that maybe not truly needed in childhood, but is essential during adulthood. Education is very necessary in order to improve the quality of human resources in advancing the company, because education is the basic capital for employees in carrying out work and aims to help achieve tasks in order to achieve good work results (Kapahang et al., 2014). Indicators of education which become operational variables of education according to Rahardja & Umar Dan (2005) consist of: (1) level of education; (2) suitability of department; and (3) competence. Based on the theory and previous studies, hypothesis 2 is formulated as follows:

H2: Employee education has a positive influence on employee performance.

2.3 The Influence of Employee Training on Employee Performance

According to Jusmaliani (2014) training is a process to train new people or people who will gain new placement with the basic skills needed to carry out the work. Rivai & Sagala (2011) added that training is a part of education that is related to the learning process to acquire and improve skills outside the existing education system in a relatively short time with methods that prioritize practice rather than theory. Training can help employees who have the expertise to work with new technology, help employees understand how to work effectively in teams, and prepare employees to be able to accept and work more effectively with each other, so that structured training can improve individual performance (Turere, 2013; Noe et al., 2010). According to Mangkunegara (2010) there are several indicators to measure training, namely: (1) Instructor: education and mastery of material; (2) Participants: passion about participating in training and selection; (3) Material: as per the objectives,
in accordance with the components of the participants, and goal setting; (4) Method: objective socialization and have clear
goals; (5) Objectives: improving skills. Based on the theory and previous studies, hypothesis 3 is formulated as follows:

\[ H_3: \text{Employee training has a positive influence on employee performance.} \]

**2.4 The Influence of Employee Placement on Employee Performance**

Employee placement is a process of assigning, filling positions, or reassigning employees to new assignments or positions, or different positions. This assignment or placement can be in the form of the first assignment for the recruited employee, but it can also be done in the form of promotion, transfer, demotion, or even termination of employment according to (Hariandja, 2002). Employee placement that is driven by academic achievement, work experience, physical and mental health, and age has been shown to improve employee performance (Weol, 2015). It is supported by the study conducted by Djojohara et al., (2014) who stated that both simultaneously and partially, employee placement and work environment has a significant influence on employee performance. Placement variable indicator according to Yuniarsih & Suwatno (2013) is as follows: (1) education; (2) work knowledge; (3) job skills; and (4) work experience. Based on the theory and previous studies, hypothesis 4 is formulated as follows:

\[ H_4: \text{Employee Placement has a positive influence on employee performance.} \]

**3. Research method**

This study uses quantitative approach with confirmative survey method that is descriptive and use verification. Verification research is carried out to test the hypothesis, while descriptive research is to describe the variables studied. The method of descriptive and verification survey is done through collecting data in the field as well as direct information from the sample. From this explanation, this is an associative research, in which there are variables that are related and able to influence other variables (Sekaran, 2003). The population of this study is all 105 employees of PT Semen Baturaja (Persero) Tbk who are involved in the process of procuring goods and services, and all of the population becomes the research samples (using census method). Arikunto (2010) stated that if the population is less than 100 people, then the total sample size is taken. Thus, the sample taken in this study is using census method, with the number samples of 105 respondents. This study uses primary and secondary data, as the data is collected through various method, namely:

1. Questionnaire, which is done by creating and distributing questionnaires in the form of a list of questions, to obtain primary data directly from research respondents. The questionnaire is measured using 5 points Likert scale, which is filled directly by the respondent.
2. Documentation, which is done by reviewing documents related to the procurement of goods and services in obtaining secondary data. This technique is used to obtain facts that occur in the field, and then it will be described together with the results of the data analysis obtained.
3. Observation, which is to observe the process of procurement of goods and services in the procurement division. This is done to determine whether the steps taken are in accordance with the standard operating procedures.

The data obtained is then analyzed using SPPSS version 24, to obtain descriptive statistical analysis in the research instrument test, the frequency of respondents in this study, and to describe the variable. Inferential statistical analysis is used to test the hypothesis in understanding the relationship between variable and regression analysis.

**4. Results**

**4.1 Instrument Testing**

The results of the data processing using SPSS in Pearson Correlation output show that all indicators of research variables have t-count greater than 0.196. Therefore, the results of the validity test show that all indicators are valid and can be used as a research instrument. The reliability test results show that the coefficient value of Cronbach’s Alpha from the researched variable is greater than 0.60. Therefore, it can be concluded that the research instrument is reliable.

**4.2 Hypothesis**

From the results of the data processing using SPSS tools, the influence of competence, organizational climate, education, training, and placement has a partial influence on employee performance variable as shown in Table 2 below:

**Table 2**
The Influence of Independent Variable on Dependent Variable

| Model     | Unstandardized Coefficient | Standardized Coefficient | T   | Sig |
|-----------|----------------------------|--------------------------|-----|-----|
|           | B | Std Error | Beta | -1.594 | 0.144 |
| Constant  | -0.733 | 0.140 | 0.065 | 2.403 | 0.018 |
| Competence| 0.029 | 0.012 | 0.070 | 2.514 | 0.014 |
| Education | 0.028 | 0.011 | 0.081 | 22.277 | 0.000 |
| Training  | 0.650 | 0.029 | 0.424 | 13.637 | 0.000 |
| Placement | 0.249 | 0.018 | 0.424 | 13.637 | 0.000 |
From the SPSS output shown in Table 2, the results of this study can be explained below:

(1) Analysis of The Influence of Employee Competence on Employee Performance in PT Semen Baturaja (Persero) Tbk
The theoretical framework that employee competence has an influence on employee performance in PT Semen Baturaja (Persero) Tbk, in this study is confirmed theoretically and empirically. There is a positive and significant influence of employee competence on employee performance with the t count of 2.403, which is greater than 1.966 (t table) and significance of 0.018, which is greater than 0.005. The regression coefficient of Competence variable is 0.029 (positive slope). This means that if employee competence has increased by 1 unit, the employee performance will increase by 0.029. It can also be said that the better the employee competence, the better the employee performance would be. Respondents’ perception shows that the description of employee competence variable is ‘always build good relationships with fellow workers’. The results of this study are in line with the study conducted by Herawati, & Mahfudnurnajamuddin (2018); Ekawati (2017), which shows that employee competence has a positive and significant influence on employee performance.

(2) Analysis of The Influence of Employee Education on Employee Performance in PT Semen Baturaja (Persero) Tbk
The theoretical framework that employee education has an influence on employee performance in PT Semen Baturaja (Persero) Tbk, in this study is confirmed theoretically and empirically. There is a positive and significant influence of employee education on employee performance with the t count of 2.514, which is greater than 1.966 (t table) and significance of 0.014, which is greater than 0.005. The regression coefficient of Competence variable is 0.028 (positive slope). This means that if employee education has increased by 1 unit, the employee performance will increase by 0.028. It can also be said that the better the employee education, the better the employee performance would be. Respondents’ perception shows that the description of employee education variable is nearly good with the coefficient of 3.94. The dominant indicator of employee education variable is ‘education increases skills and work knowledge’ with a coefficient of 4.07. The results of this study support previous studies conducted by Turere, (2013); Kapahang et al., (2014) which shows that employee education has a positive and significant influence on performance.

(3) Analysis of The Influence of Employee Training on Employee Performance in PT Semen Baturaja (Persero) Tbk
The theoretical framework that employee training has an influence on employee performance in PT Semen Baturaja (Persero) Tbk, in this study is confirmed theoretically and empirically. There is a positive and significant influence of employee training on employee performance with the t count of 22.277, which is greater than 1.966 (t table) and significance of 0.000, which is greater than 0.005. The regression coefficient of Competence variable is 0.650 (positive slope). This means that if employee training has increased by 1 unit, the employee performance will increase by 0.650. It can also be said that the better the employee training, the better the employee performance would be. Respondents’ perception shows that the description of employee training variable is good with the coefficient of 4.06. The dominant indicator of employee training variable is that ‘training is aimed at increasing competence’ with a score of 4.42. The results of this study support previous studies conducted by Weol (2015); Harris (2014) which shows that employee training has a positive and significant influence on performance.

(4) Analysis of The Influence of Employee Placement on Employee Performance in PT Semen Baturaja (Persero) Tbk
The theoretical framework that employee placement has an influence on employee performance in PT Semen Baturaja (Persero) Tbk, in this study is confirmed theoretically and empirically. There is a positive and significant influence of employee placement on employee performance with the t count of 13.637, which is greater than 1.966 (t table) and significance of 0.000, which is greater than 0.005. The regression coefficient of Competence variable is 0.249 (positive slope). This means that if employee placement has increased by 1 unit, the employee performance will increase by 0.249. It can also be said that the better the employee placement, the better the employee performance would be. Respondents’ perception shows that the description of employee placement variable is ‘has meet the standard operating procedure’ with the value of 4.45. The results of this study support previous studies conducted by Sunaryo, (2017); Yunita et al. (2016) which shows that employee placement has a positive and significant influence on performance.

(5) Analysis of the Simultaneous Influence of Employee Competence, Employee Education, Employee Training, and Employee Placement on Employee Performance in PT Semen Baturaja (Persero) Tbk
The theoretical framework that the four independent variables have an influence on employee performance in PT Semen Baturaja (Persero) Tbk in this study is confirmed theoretically and empirically. There is a positive and significant relationship of the four independent variables on employee performance with F count of 253.217, which is greater than F table of 2.683, and significance of 0.000, which is greater than 0.005 as shown in Table 3 below.

| Model            | Sum Of Square | DF | Mean Square | F      | Sig   |
|------------------|---------------|----|-------------|--------|-------|
| Regression       | 27.239        | 6  | 4.555       | 253.217| 0.000 |
| Residual         | 1.673         | 93 | 0.018       |        |       |
| Total            | 29.002        | 99 |             |        |       |

Table 3
Simultaneous Influence of Independent Variable on Dependent Variable
The four independent variables have positive slope. This shows positive linear relationship between employee competence, employee education, employee training, and employee work placement on employee performance. The simultaneous influence of employee competence, employee education, employee training, and employee work placement on employee performance is 0.942, or 94.2%, as shown in Table 4 below.

Table 4
Determinant of the Influence of Independent Variable on Dependent Variable

| Model | R     | R^2 Square | Adjusted R^2 Square | Std Error of The Estimate |
|-------|-------|------------|---------------------|--------------------------|
| 1     | 0.971 | 0.942      | 0.939               | 0.134120                 |

Thus, the variable of employee competence, employee education, employee training, and employee work placement simultaneously influences employee performance of 0.942 or 94.2%, with the greatest influence from the variable of employee training (0.650) and employee work placement (0.249).

5. Discussion

Employee competence is one of the key determinants for a person in producing excellent performance and giving a signal that the organization is well managed and will fundamentally produce effective management behavior. One of the employee competences that can be implemented is their ability to adapt to their work environment, so that employees can always build good relationship with fellow workers. To continue to develop employee competence, it is necessary to determine the level of competence in order to know the level of performance expected for the good or average category (Posuma, 2013). Determination of the required competences will surely be used as a basis for performance evaluation. The importance of competence in improving employee performance has a very strong relationship, as this performance increase depends on the competences possessed by individuals. Human resource competencies such as knowledge and abilities are the main assets for employees to achieve the desired goals and expectations according to the company’s vision and mission (Prasad et al., 2001; Zaim et al., 2013). Education and training play an active role in improving individual performance. It is because both training and education are able to increase knowledge, expertise, and skills of employees, so that they can keep up with development as well as changes in system and technology in carrying out their assigned duties. Employees who frequently attend education and training will have positive influence in carrying out their duties and responsibilities; thereby employees will always try to achieve good work results. Education and training is also one of the rewards for employees as a form of company recognition of certain individuals, thus the programs should be carefully prepared based on scientific methods and guided by the skills needed by current and future institutions/ agencies.

One of the most important tasks of a manager is to place someone who is suitable for the right job. Employee work placement is related with the adjustment of abilities and talents of a person with the work that will be done (Weol, 2015; Djoharam et al., 2014). Experience in working in the same field is a very important indicator in placing someone according to their abilities. Employees who already have a lot of experience will be more likely to do a good job, provided that the employees’ education, knowledge, and skills are continuously sharpened. In its implementation, the e-procurement system requires individuals who are more experienced and have updated skills. Therefore, to achieve the expected individual performance, companies need to pay attention to the competence, education, and training level, and also place the employees according to their expertise.

6. Conclusion

This study has provided several results, including: (1) Employee competence has a positive and significant influence on employee performance; (2) Employee education has a positive and significant influence on employee performance; (3) Employee training has a positive and significant influence on employee performance; and (4) Employee placement has a positive and significant influence on employee performance. From these results, it can be concluded that building good relationship with fellow workers will lead to the increase of effective employee performance through cooperation and maintaining work cohesiveness along with achieving good work results. Educations that can improve work skills and knowledge, as well as training aimed at increasing competence are programs that can be implemented by companies in order to obtain a systematic method for improving employee performance. Work placements that comply with the Standard Operating Procedure has an influence on employee performance through cooperation and maintaining work cohesiveness in achieving good work results.

References

Arikunto, S. (2010). Prosedur Metode Penelitian. Jakarta: Bumi Aksara
Ataunur, I., & Ariyanto, E. (2016). Pengaruh Kompetensi dan Pelatihan Terhadap Kinerja Karyawan PT. Adaro Energy Tbk. Telaah Bisnis, 16(2). 135-150
Damayanti, A. I., Domai, T., & Wachid, A. (2013). Penerapan E-Procurement Dalam Proses Pengadaan Barang/Jasa Di Kabupaten Malang (Studi Pada Bidang Asset Dinas Pendapatan, Pengelolaan Keuangan dan Asset Kabupaten Malang). Jurnal Administrasi Publik, 1(2), 139-146.
Djoharam, H., Lengkong, V. P., & Tielung, M. V. (2014). Analisis Program Pelatihan, Penempatan Pegawai Dan Lingkungan Kerja Pengaruhnya Terhadap Kinerja Pegawai. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, 2(1), 385-394.

Ekawati, M. (2017). Pengaruh kompetensi pedagogik, kompetensi kepribadian, kompetensi profesional dan kompetensi sosial terhadap kinerja Guru SMA 1 Muntok (Doctoral dissertation, Universitas Bangka Belitung).

Hariandja, M. T. E. (2002). *Manajemen Sumber Daya Manusia*, Jakarta: PT. *Gramedia Wijadarsana Indonesia*.

Harris, Y. (2014). Pengaruh Pendidikan Dan Pelatihan Terhadap Kinerja Karyawan Pada PT. Interyasa Cabang Pekanbaru. *Jurnal Relevansi, Akurasi Dan Tepat Waktu (RAT)*, 3(3), 535-542.

Herawati, H., & Mahfudnurnajuddin, M. (2018). Pengaruh Kompetensi, Disiplin Dan Iklim Organisasi Terhadap Kinerja Pegawai Pada Balai Besar Pelaksanaan Jalan Nasional Vi Kementrian Pekerjaan Umum Makassar. *Paradoks: Jurnal Ilmu Ekonomi*, 1(1), 46-55.

Jusmaliani. (2014). *Pengelolaan Sumber Daya Insani*. Jakarta: Penerbit PT Bumi Aksara.

Kapahang, J. O., Kojo, C., & Uhing, Y. (2014). Pendidikan, Pengalaman Kerja Dan Kompetensi Pengaruhnya Terhadap Kinerja Karyawan Pada PT. PLN (Persero) Wilayah Sulutenggo Area Manado. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, 3(2), 660-670.

Posuna, C. O. (2013). Kompetensi, kewenangan, dan kepemimpinan pengaruhnya terhadap kinerja pegawai pada Rumah Sakit Ratumbuyasing Manado. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, 3(2), 660-670.

Rahardja, T., & Umar Dan, S. L. (2005). *La Sulo, Pengantar Pendidikan*. Jakarta: PT. *Rineka Cipta*.

Sunaryo, S. (2017). Pengaruh Pendidikan Dan Penempatan Kerja Terhadap Kinerja Karyawan Di PTPN III Medan. *Jurnal Ilmiah Manajemen dan Bisnis*, 17(1), 88-100.

Triastuti, D. A. (2019). Pengaruh Lingkungan Kerja, Kompetensi dan Iklim Organisasi Terhadap Kinerja Pegawai. *Journal of Management Review*, 2(2), 203-208.

Turere, V. N. (2013). Pengaruh pendidikan dan pelatihan terhadap kinerja karyawan pada Balai Pelatihan Teknis Pertanian Kalasey. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, 1(3), 10-19.

Weol, D. H. (2015). Pengaruh lingkungan kerja, pelatihan dan penempatan terhadap kinerja pegawai di Dinas Pendidikan Nasional provinsi Sulawesi Utara. *EFISIENSI*, 15(5), 598-609.

Wibowo. (2007). *Manajemen Kinerja. Edisi ketiga*. PT. Raja Grafindo Prasada. Jakarta.

Yuniarisih, T. & Suwato. (2013). *Manajemen Sumber Daya Manusia*. Bandung: Alfabeta.

Yunita, K. E., Yuliantihni, N. N., SE, M., & Bagia, I. W. (2016). Pengaruh Pengalaman Kerja dan Penempatan Karyawan Terhadap Kinerja Karyawan. *Jurnal Manajemen Indonesia*, 4(1).

Zaim, H., Yaşar, M. F., & Ünal, Ö. F. (2013). Analyzing the effects of individual competencies on performance: A field study in services industries in Turkey. *Journal of Global Strategic Management*, 7(2), 67-77.

© 2021 by the authors; licensee Growing Science, Canada. This is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) license (http://creativecommons.org/licenses/by/4.0/).