



**ANALYSIS OVER HUMAN RESOURCES INFORMATION SYSTEM
IMPLEMENTATION WHICH INFLUENCED COMPETENCE AND MOTIVATION
IN IMPROVING EMPLOYEE PERFORMANCE AT ONE OF MINERAL MINING
AND COAL CONTRACTOR COMPANY**

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Abstract: This research has purpose to find out and investigated the role of HRIS implementation, motivation and competence to improve the employees performance at PT. Artamulia Tatapatama. The research method used quantitative methods with causality approach. The population and sample were amounted to 190 employees. Data were analyzed using structural equation modeling (SEM). And This research was revealed that 1) HRIS implementation had significant beneficial impact towards employee performance, 2) Motivation had significant positive effect on employee performance, 3) Competence had a remarkable reaction over employee performance, 4) HRIS implementation had significant beneficial influence towards motivation and 5) HRIS implementation had significant positive reaction to competence.

Keywords: HRIS Implementation, Motivation, Competence and Employee Performance.

INTRODUCTION

Management and development of human resources is an investment for organization or company because it takes money to support it, but in line with it, the benefits which obtained by organization or company were also huge because workers and employees who were owned would become professional and reliable in doing all the work in organization or company, therefore implemented of appropriate technology is needed to support the development of human resources in company, one of them is by implementing HRIS.

HRIS is an integration system that aims to collect, keep and analyze information about an organization's human resources department which consists of computer hardware and applications as well as the people, policies, procedures and data needed to manage the functions of human resources. Now managers are beginning to realize that the important and usefulness of sophisticated information management to monitor HR management information systems which based on information just like HRIS implementation. In United States its

illustrated that 70% of large companies use HRIS, 80% use online recruitment, 67% open job vacancy through online and 40% use web-based portals as way to communicate company policy.

PT. Artamulia Tatapatama is one of coal mining contractor companies in Indonesia which implemented HRIS in company. Based on interviews with the company's management, within the first six months of implemented HRIS PT. Artamulia Tatapatama has recorded the mistakes which occurred in company. Furthermore, by this implementation way the company has experienced an increase in production results, it was due to more efficient employees on working at field and have a good coordinated with management at Jakarta Head Office, as it shown in Table 1 below.

Table 1. Production Reports of PT. Artamulia Tatapatama

MONTH	2016			2017			2018		
	OB (bcm)	Coal (mt)	Cumm	OB (bcm)	Coal (mt)	Cumm	OB (bcm)	Coal (mt)	Cumm
January	1.384.786	132.262	10,47	1.468.061	169.096	8,68	1.892.797	195.516	9,68
February	1.286.079	143.796	8,94	950.899	107.287	8,86	1.428.901	156.947	9,1
March	1.136.656	140.976	8,06	1.212.235	146.517	8,27	1.424.603	180.032	7,91
April	1.022.947	113.661	9	1.462.745	173.910	8,41	1.505.036	169.506	8,88
May	1.337.266	151.617	8,82	1.331.331	145.770	9,13	1.559.489	165.903	9,4
June	1.316.987	158.064	8,33	1.645.337	185.060	8,89	1.564.604	203.650	7,68
July	1.087.243	131.621	8,26	1.834.955	187.998	9,76	1.630.570	183.508	8,89
August	1.560.162	226.071	6,9	1.586.730	170.542	9,3	1.527.904	126.846	12,05
September	1.652.685	211.610	7,81	2.126.059	256.517	8,29	2.146.476	254.954	8,42
October	1.819.012	238.792	7,62	1.954.387	309.231	6,32	1.606.177	217.130	7,4
November	1.100.874	147.099	7,48	1.740.283	264.997	6,57	1.279.777	130.898	9,78
December	1.578.703	255.868	6,17	1.770.541	184.474	9,6	1.361.804	186.348	7,31
TOTAL	16.283.400	2.051.436	7,94	19.083.564	2.301.398	8,29	18.928.137	2.171.237	8,72

Source: PT. Artamulia Tatapatama Production Department (2019)

With help of HRIS technology, all surveillance could be done remotely from different sites with HR Department Head Office Jakarta team so they could anticipate if there has a lack of HR support in production. From these interviews result which conducted by author over 20 employees that conveyed positive response to HRIS implementation at company, which is 38% agree, 21% strongly agree, 18% said they do not know / hesitate, 14% stated that they do not agree and 9% stated strongly disagree.

According to background and phenomena that occur, the authors were interested and decide to conduct research on companies which used Human Resource Information System to improve motivation, competence and employees performance at PT. Artamulia Tatapatama.

THEORETICAL REVIEW

Human Resources Information System (HRIS)

According to Budiyanto in Yogatama, et. al. (2015) HRIS is a system that combines between human resource and technology management activities into one common database through ERP. Furthermore, Jain in Yogatama, et. al. (2015) stated that HRIS is a management system specifically designed to provide information for managers for decision making healthy

HR decisions, one of which is based on the availability of good and quality HR information. Acquisition and information retrieval is very necessary to achieve company goals because the information as a source of evaluation of the development of organizations, institutions, companies and departments. (Rivai in Lasmaya, 2016).

Motivation

According to Robbins and Timothy in Thamrin and Riyanto (2020), motivation was defined as a process that explains the intensity, direction, and confidence of individuals towards achieving their goals. Furthermore, Jason A., et. al. in Thamrin and Riyanto (2020) described that motivation coming from within or outside employees to start related business, find out direction, intensity and persistence of work. Motivation is critical consideration because the effective employee performance will require an ability and motivation.

Competence

According to Wibowo in Mardiyah and Purba (2019) competence is an ability to carry out or done a job or task based on skills and knowledge also supported by work attitude that required on job. While Dessler in Aima, et. al. (2017) defines that competency as one of characteristics which could be show up including knowledge, skills and attitudes that generated those work performance and achievement. Furthermore, Spencer and Spancer in Jailani and Nawangsari (2020) explained that competence is characteristic which underlies on behavior, motives, personal characteristics, self-concept, values, knowledge or expertise from person in workplace.

Employee Performance

According to Rivai and Jauvani in Aima, et. al. (2017) employee performance is an achievement that reached by someone in accomplished their duties or work according to standards and criteria which set on job. While Wibowo in Mardiyah and Purba (2019) explained that employee performance is a process of how work takes place to achieve work results. Furthermore, Mangkunegara in Mardiyah and Purba (2019) said that to measure employee performance, companies needs to consider about work quality, work quantity, timeliness, effectiveness and independence of an employee at work.

Prior Research

Research which conducted by Jonni and Husain (2016) shows that HRIS implementation will improve employee performance. By good HRIS implementation at company it could provide employees and HRD to carry out their duties therefore the data collected and written employee and company needs will be more detailed and will support an improve employee performance and HRD support in decisions making.

Research whom conducted by Aima, et. al. (2017) at Thamrin and Riyanto (2020) explained that work motivation had beneficial and remarkable reaction over employee performance. By high motivation which shown by employees it will drives on employee to disclosed their best performance to company.

Research whom conducted by Jailani and Nawangsari (2020)Mardiyah and Purba (2019) shows that competency has positive and direct influence against employee performance. Employees who have this competence would be easier to do work so it would help company to achieve targets and improve employee performance.

Research whom conducted by Yogatama, et. al. (2015) shows that HRIS implementation at company would have pragmatic and strong impact to work motivation. If an employee is able to utilize HRIS very well, so it would make it easier for them to work therefore it will give more highly motivated.

Research that conducted from Lasmaya (2016) shows that HRIS implementation has direct impact over competence. By HRIS implementation according to the needs of employees and it would make easier for company to developing employee who has that competencies, therefore it would improve the performance of these employees.

Theoretical Framework

According to background, phenomena and theoretical research which stated above Those theoretical framework could be drawn as its follows:



Figure 1. Theoretical Framework

Hypothesis

Hypothesis from this research could be drawn as its follows:

H1: HRIS implementation has an impact against employee performance.

H2: Motivation has an influences to employee performance.

H3: Competence has an affects over employee performance.

H4: HRIS implementation has an effect to motivation.

H5: HRIS implementation has an reaction against employee competence.

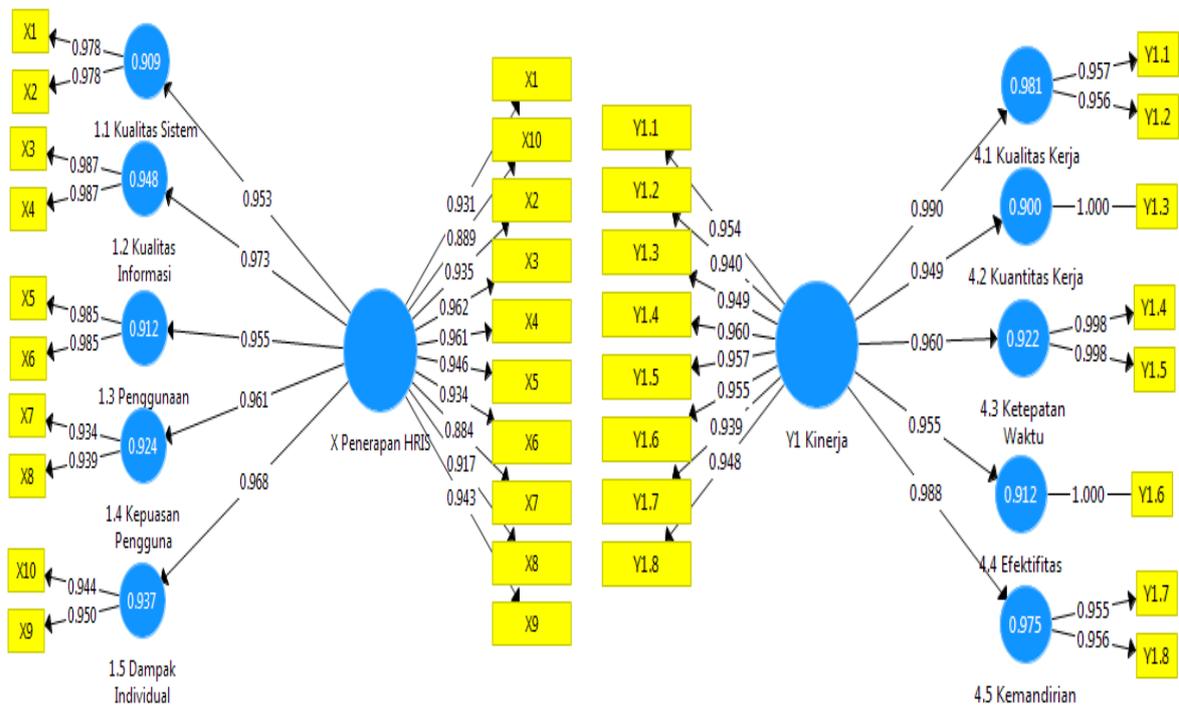
METHODOLOGY

The research design used causality analysis to investigate those causality relationship between research variables according to hypothesis prepared through survey methods and interviews with respondents and sized through Likert scale. Exogenous variables in this research are HRIS implementation while endogenous variables are employee performance, motivation and competence. Target population was amounted to 190 employees of PT. Artamulia Tatapatama. The sampling method used Nonprobability Convenience based on availability of elements and ease of getting them. While research sample amounted to 190 respondents and obtained from multiplication from total number of indicators has multiplied by five (38 indicators x 5). This research uses Structural Equation Modeling (SEM) while data analysis using Partial Least Square (PLS) analysis tool to carry out those sized model test likewise with structural model test.

RESULTS AND DISCUSSION

Outer Model Test

The examine which carry out by outer model by Confirmatory Factor Analysis (CFA) technique. The construct confirmatory factor analysis used to discovering validity of each indicator and examine the reliability from construct. According to Ghozali (2014: 48)an indicator was considered to be validate if it has a loading factor which greater than 0.70, meanwhile a construct said to be reliable if cronbach’s alpha > 0.6 and composite reliability> 0.7.



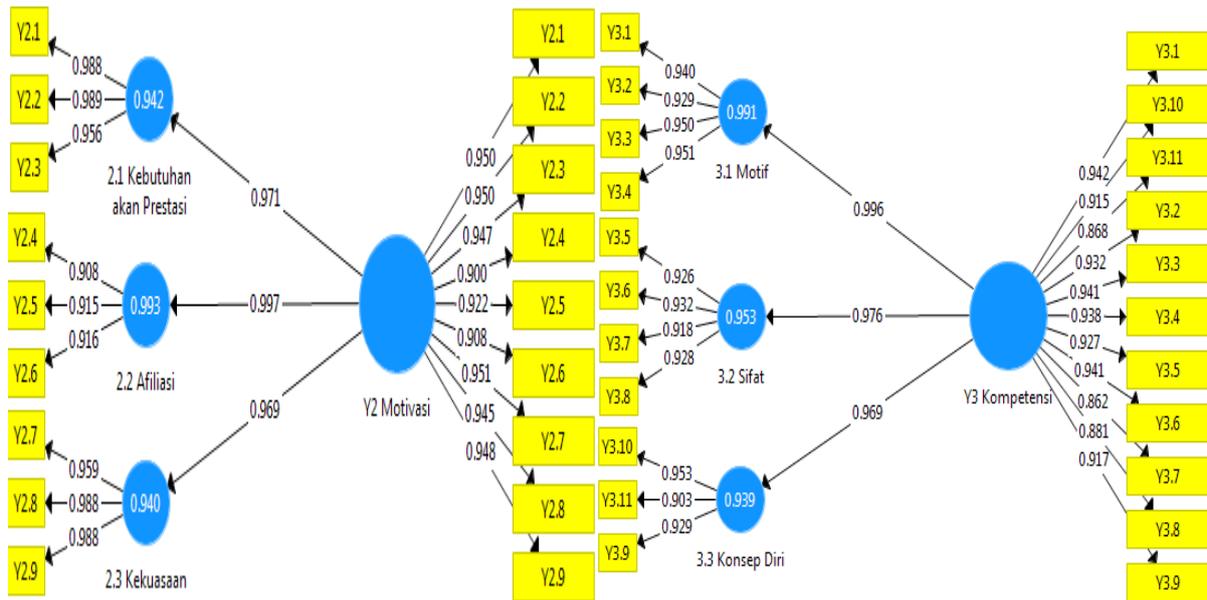


Figure 2. Outer Loading Value of HRIS Implementation, Employee Performance, Motivation and Competence

According to convergent validity results shown in Figure 2, it could be describe that indicators for all variables in this research has loading factor > 0.7, therefore all indicators were declared valid and not excluded from the model.

Table 2. Cronbach's Alpha Value and Composite Reliability

Variable	Composite Reliability	Terms	Cronbach's Alpha	Terms	Information
HRIS Implementation (X)	0.985	> 0,7	0.983	> 0,6	Reliable
Employee Performance (Y ₁)	0.987	> 0,7	0.985	> 0,6	Reliable
Motivation (Y ₂)	0.984	> 0,7	0.982	> 0,6	Reliable
Competency (Y ₃)	0.983	> 0,7	0.981	> 0,6	Reliable

Based on reliability test results, it could be seen that all research variables has Cronbach's alpha value > 0.6 and composite reliability > 0.7, so it could be said that all variables were reliable.

Inner Model Test

This model is a specification of the relationship between latent variables which also called inner relations. From examination results using bootstrapping path coefficient results that could describe as strength of the link between constructs. These structural equations which obtained from research could be describe as its follows:

$$Y_1 = 0.433 X + 0.445 Y_2 + 0.160 Y_3 + e, R^2 = 0.880;$$

$$Y_2 = 0.787 X + e, R^2 = 0.619;$$

$$Y_3 = 0.568 X + e, R^2 = 0.323;$$

For bootstrapping test results it could be seen in Table 3 below.

Table 3. Path Coefficient and P-Values (Direct and Indirect Influences)

Relationship Between Constructions	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Information
Pengaruh Langsung						
HRIS Implementation -> Employee Performance	0.433	0.430	0.047	9.232	0.000	Has an beneficial and remarkable impact
Motivation -> Employee Performance	0.445	0.446	0.050	8.867	0.000	Has an beneficial and remarkable impact
Competency -> Employee Performance	0.160	0.163	0.047	3.444	0.001	Has an beneficial and remarkable impact
HRIS Implementation -> Motivation	0.787	0.785	0.029	26.917	0.000	Has an beneficial and remarkable impact
HRIS Implementation -> Competency	0.568	0.565	0.068	8.383	0.000	Has an beneficial and remarkable impact
Pengaruh Tidak Langsung						
HRIS Implementation -> Motivation -> Employee Performance	0.350	0.350	0.042	8.281	0.000	Has an beneficial and remarkable impact
HRIS Implementation -> Competency -> Employee Performance	0.091	0.094	0.034	2.700	0.007	Has an beneficial and remarkable impact

According to Table 3 above, it could be stated that:

- 1) HRIS implementation has crucial impact towards employee performance with coefficient of 0.433, T-Statistic value of 9,232 and P-Values of 0,000 (significance less than 0.05). The coefficient value is positive, which equal to 0.433 meaning that HRIS implementation has positive influence over employee performance variables.
- 2) Work motivation has strong reaction against employee performance with coefficient of 0.445, T-Statistic value of 8.867 and P-Values of 0.000 (significance less than 0.05). The coefficient value is positive, which equal to 0.445 meaning that work motivation variable has positive influence over employee performance variables.
- 3) Competence has remarkable affect to employee performance with coefficient of 0.160, T-Statistic value of 3.444 and P-Values of 0.001 (significance less than 0.05). The coefficient value is positive, which equal to 0.160 meaning that competency variable has beneficial reaction towards employee performance variables.
- 4) HRIS implementation has strong impact towards motivation with coefficient of 0.787, T-Statistic value of 26,917 and P-Values of 0,000 (significance less than 0.05). The coefficient value is positive, which equal to 0.787 meaning that HRIS implementation has positive affect on motivation variable.
- 5) HRIS implementation has crucial influence over competence with coefficient of 0.568, T-Statistic value of 8.383 and P-Values of 0.000 (significance less than 0.05). The coefficient value is positive, which equal to 0.568 meaning that HRIS implementation variable has positive impact on competency variable.

- 6) There has an indirect impact of HRIS implementation to employee performance which mediated by motivation with coefficient of 0.350, T-Statistic value of 8.281 and P-Values of 0.000 (significance less than 0.05). The coefficient value is positive, which means there has an increase in motivation and it will increase the influence HRIS implementation variable to employee performance variables and if the decrease in motivation it would do conversely.
- 7) There has an indirect reaction over HRIS implementation variable to employee performance which mediated by competence with coefficient of 0.091, T-Statistic value of 2,700 and P-Values of 0.007 (significance less than 0.05). The coefficient value is positive, which means if there has an increase in competence will increase those influence over HRIS implementation on employee performance variables aswell and it would do conversely.

Determination Coefficient Test (R^2) and Goodness of Fit Index (GoF)

The coefficient of determination test has purpose to sizing how far the model's ability to explain those variance of dependent variable. From the results of these determination coefficient test it could be describe that the link between constructs based on the R-square value of competency variable is 0.323, this shows that 32.3% of competency variable could be influenced by HRIS implementation. The R-square value of motivational variable is 0.619, this shows that 61.9% of motivational variable could be influenced by HRIS implementation variable. R-square value of employee performance variable is 0.880, this shows that 88.0% motivation variable could be influenced by HRIS implementation variables.

Goodness of Fit Index (GoF) test used to validate those combined performance from outer model and inner model that obtained through these following calculations:

$$\text{GoF} = \sqrt{\text{AVE} \times R^2} = \sqrt{0.871 \times 0.607} = 0.727$$

GoF estimation results show that the value of 0.727, this shows that the overall combined performance is good because the value of Goodness of Fit Index (GoF) is more than 0.36.

Correlation Among Dimensions Analysis

Dimension correlation analysis used to find out those link between HR implementation, motivation and competence dimensions against performance. Based on correlation test between dimensions, there has outcomes that could be interpreted as in belows:

- 1) The greatest correlation value between HRIS implementation variable towards employee performance variable is on "utilize" dimension in HRIS implementation variable with the dimension of work quality on employee performance variable with 0.850 and falls into very strong relationship category.
- 2) The greatest correlation value between the dimensions which exist on motivation variable towards employee performance is between the dimensions of " affiliation needs " on motivation variable with dimension of work quality on employee performance variable with 0.872 and falls into the category of very strong relationship.
- 3) The greatest correlation value between the dimensions on competency variable and employee performance variable is the motivational dimension in the competency variable

and dimension of work quality on employee performance variable which is 0.669 and belongs to category of strong relationship level.

Table 4. Test Results of Correlation Among Dimensions

Variable	Dimension	Employee Performance (Y ₁)				
		4.1 Work Quality	4.2 Work Quantity	4.3 Punctuality	4.4 Effectivity	4.5 Independency
HRIS Implementation (X)	1.1 System Quality	0.844	0.798	0.786	0.793	0.835
	1.2 Information Quality	0.833	0.813	0.793	0.799	0.828
	1.3 Utilize	0.850	0.829	0.804	0.808	0.848
	1.4 User Satisfaction	0.829	0.804	0.786	0.785	0.822
	1.5 Personal Impact	0.847	0.813	0.790	0.814	0.843
Motivation (Y ₂)	2.1 Achievement Needs	0.861	0.815	0.827	0.812	0.861
	2.2 Affiliate Needs	0.872	0.829	0.839	0.830	0.870
	2.3 Power Needs	0.842	0.800	0.809	0.817	0.840
Competency (Y ₃)	3.1 Motive	0.669	0.650	0.634	0.662	0.663
	3.2 Character	0.640	0.620	0.615	0.640	0.639
	3.3 Self Concept	0.652	0.635	0.605	0.644	0.645

Discussion

The test outcome shows that HRIS implementation has an impact to employee performance. HRIS implementation has a strong role in improving or influencing employee performance. That is in line with statements from (Jonni and Husein, 2016) which state that HRIS implementation helps tracking employee attendance at work, knowing these regularities which apply and the quality of employee work. With implementation a good of HRIS at company could provide an employees and HRD to carry out their duties therefore data collected and reports of employee and company needs will be more detailed so it will given support to improve employee performance and support HRD in decisions making.

The test result shows that motivation has an influences towards employee performance. The results were in line with the training conducted by Aima, et. al. (2017) Thamrin and Riyanto (2020) explained that work motivation had positive and significant impact towards employee performance. This could happen because of high motivation that employees have in terms of motivation related to affiliation which consists of the need work together and create a good work environment. With the high motivation shown by employees will make employees to show the best performance for the company.

The test results show that competence has an affects to employee performance. The results of were in line with training that conducted by Jailani and Nawangsari (2020), Mardiyah and Purba (2019) it showing that competence has a positive direct influence over employee performance. Employees who have enthusiasm and willingness to achieve work targets will be easier to do work so it helps company to achieve targets and improve the employee performance.

The test results show that HRIS implementation has an impact towards motivation. These results were in line with research from Yogatama, et. al. (2015) shows that HRIS implementation at company has beneficial and strong reaction over work motivation. Implementation of Human Resource Information System (HRIS) in company has strong

positive impact whereas the impact would affect not only the company itself but also for users of system and system itself. If an employee is able to utilize HRIS well, it will make it easier for them to work so they would be more motivated to do their jobs.

The test results show that HRIS implementation has an effect towards competence. The results were in line with research by Lasmaya (2016) showing that HRIS implementation has direct influence towards competence. With the proper use of HRIS technology, human resource management will become easier where the use of technology will create several advantages such as ease of verification, trust in the use of technology, ease of data management, increased work speed, and ease of understanding performance, thus it could increase the competency of employees. Besides that, the implementation of HRIS according to the needs of employees and company. It would provide company in developing competence of its employees, thereby it could increase employee's performance as well.

CONCLUSION AND SUGGESTION

Conclusion

According to research outcome and discussion of several conclusions that could be raised: 1) HRIS implementation has positive and strong impact over employee performance. 2) Motivation has remarkable positive impact towards employee performance. 3) Competence has positive and strong influence against employee performance. 4) HRIS implementation has positive and strong reaction towards motivation. 5) HRIS implementation has positive and strong impact on competence.

Suggestion

Based on the analysis results of the discussion and some of conclusions above, those suggestions could be given as in belows:

- 1) To improve employee performance through HRIS implementation by providing training regarding information systems and information technology development.
- 2) Motivation variables which has greatest influence and connection over employee performance, therefore indicators and dimensions on motivation variables, especially dimensions of needs will be able to improve work quality which in turn will have positive impact towards employee performance. Team work, a good work environment and job challenges need to be maintained to support the improvement of performance of its employees.
- 3) The need for attention and training to the results of the quality of HRIS implementation so as to improve work competence which could support in an effort to improve employee performance.
- 4) To increase motivation through the HRIS implementation, employees need to utilize HRIS to respond to work tasks more quickly, its necessary to provide information in HRIS which more accurate, more efficient so as to increase work motivation.
- 5) To improve competence through HRIS implementation, leaders need to build an improvements in employee recruitment system based on competencies which design from knowledge or education and expertise which in line with requirement. Also, periodically training needs to be done in anticipating technological change.

REFERENCES

- Alma, Havidz, Rizki Adam, & Hapzi Ali. (2017). Model of Employee Performance: Competence Analysis and Motivation (Case Study at PT. Bank Bukopin, Tbk Center). *Journal of Research in Business and Management*, Vol. 4, Issue 11, pp: 49-59.
- Ghozali, Imam. (2014). *Partial Least Squares (SmartPLS 3.0)*. Universitas Diponegoro. Semarang.
- Jailani dan Lenny C. Nawangsari. (2020). The Effect of Compensation, Competence, and Leadership on Ministry of Industrion's Public Employees Performance. *Dinasti International Journal of Management Science*, Vol. 1, Issue 4.
- Jonni, Muhammad dan Syepri Maulana Husain. (2016). Perancangan Aplikasi Human Resource Information System (HRIS) Berbasis Website pada PT. Super Tata Raya Steel. *Jurnal Teknik UMT*, 5(2).
- Lasmaya, S. Mia. (2016). Pengaruh Sistem Informasi SDM, Kompetensi dan Disiplin Kerja Terhadap Kinerja Karyawan. *Jurnal Ekonomi, Bisnis & Entrepreneurship*, Vol.10, No. 1, 25-43.
- Mardiyah, Anis dan Charles Bohlen Purba. (2019). The Effects of Competency, Training and Education, and Career Development on Employees' Performance at Hermina Hospital Kemayoran. *International Journal of Innovative Science and Research Technology*, Vol. 4, Issue 6.
- Thamin, Muhammad dan Setyo Riyanto. (2020). The Effect of Work Motivation, Work Environment, and Work Life Balance on Employee Performance at PT. AngkasaPura I (Persero) Sultan Aji Muhammad Sulaiman Sepinggan Airport – Balikpapan. *IOSR Journal of Dental and Medical Sciences*, Vol. 19, Issue 6, pp: 40-47.
- Yogatama, Ahmad Nizar., Armanu Thoyib dan Eka Afnan Troena. (2015). Pengaruh Faktor Organisasi terhadap Sistem Informasi Sumber Daya Manusia serta Motivasi Karyawan (Studi pada Perusahaan Daerah Air Minum Kota Malang). *Jurnal Aplikasi Manajemen*, Vol 13 No 1.