



Original Article

The Effect of Digital Leadership, Information Technology and Digital Competency on Employee Performance in the Digital Era: Mediating Role of Job Satisfaction

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Abstract: Today, human resource is the main factor for organizations to achieve success. Thus, the employees are no longer only considered as production but have become an asset for the organization. Organizations must also be sensitive to the changes that occur in the internal and external environment to compete and maintain business during the significant competition due to globalization and industrial revolution. This study seeks to examine mediating role of job satisfaction in the effect of digital leadership, information technology and digital competency on employee performance in the digital era at BPR Sejahtera Batam. This study uses a quantitative method with explanatory research. The survey data were analyzed using the Structural Equation Modeling (SEM) using AMOS. The results indicated that digital leadership and digital competence have a significant positive effect on job satisfaction. Also, digital leadership and information technology have a significant positive effect on employee performance. Besides that, job satisfaction mediates the relationship between digital leadership and employee performance. In addition, this study found that Information Technology does not significant effect on job satisfaction and Digital Competence does not significant effect on employee performance. This study concludes that job satisfaction plays an important role as mediator in the relationship between digital leadership and employee performance.

Keywords: digital leadership; information technology; digital competency; job satisfaction; employee performance.



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1. Introduction

Currently, human resources (HR) is the main factor for organizations to achieve success. So that employees are no longer only considered as a means of production but have become an asset for the organization. Organizations must also be sensitive to the changes that occur around them (both in the internal and external environment) in order to compete and maintain business amidst the brutal competition that has occurred due to globalization and the current

industrial revolution (Kaygusuz *et al.*, 2016). So that many companies today are aware of the importance of implementing a computerized system to increase employee productivity and effectiveness. according to Shiri (2012) the application of information technology (IT) and information systems (IS) needs to be part of HR to develop and use human resource management (HRM).

Computerized systems have a very important role in providing good information (Khashman and Khashman, 2016) to improve organizational and HR performance (Yudistira *et al.*, 2015) and to gain a competitive advantage (Oruh, 2013). Quick information is needed by managers to support making the right decisions to face environmental conditions full of uncertainty with intense competition, therefore IT is the right solution to these problems. (Firdaus and Yazid, 2017). Based on the results of research conducted by Yusman & Suwarsi (2019) revealed that IT also affects employee performance. The same results were also obtained from the research conducted Nurriansyah (2019) that IT has a positive and significant influence on employee performance. With the need for the use of IT in the organization, it is necessary for human resources employees who have digital competence to use and utilize IT, according to Baharrudin *et al.* (2021) without human resources with digital capabilities, it will have an impact on the organization and vice versa if employees have digital skills in using IT it will greatly benefit the company. Research conducted Marguna & Sangiasseri (2020) revealed that digital competence has a significant positive effect on employee performance.

In addition to the application of IT in organizations and the digital competence of employees who can use IT, the current industrial revolution 4.0 (industry 4.0) has changed many things, including leadership styles. A leader who is slow to adapt and still thinks traditional will be extinct (Tulasi *et al.*, 2019). A key factor in organizational success during digital transformation is leadership (Promsri, 2019). Leadership in the industrial era 4.0 is called a digital leader. The leadership style of digital leaders is fast in approach, team-centered, cooperative, cross-hierarchical, and has a strong focus on innovation (Oberer and Erkollar, 2018). Digital leadership has an impact on sustainable competitive advantage and provides a powerful impetus for innovation (Wasono and Furinto, 2018). An interesting finding is that there is a relationship between leadership behavior and job satisfaction (Mustafa and Lines, 2014). A leader has an important role for the organization to guide and influence his subordinates. To support this, a leader must be able to communicate the vision of the organization in order to be able to unite the people in the organization (BL *et al.*, 2017). Communication itself is the process of delivering and receiving messages that are carried out directly or indirectly and in verbal, written or nonverbal form (Darmawanty *et al.*, 2018). Communication has become an important part of organizational activities along with the current spread of globalization (Femi, 2014). In research at PT Putri Panda Unit II, it was found that communication within the organization has a direct positive influence on employee performance (Rukmana *et al.*, 2018).

Rural Bank Prosperous BATAM (BPR Sejahtera Batam/BPR SB) is an agency engaged in banking services whose main business is to provide and channel funds to the public. (Hartono and Siagian, 2020). BPR SB was founded in 2005 and has now grown and developed into a rural credit bank (BPR) with total assets above IDR 200 billion and has been awarded the title of "healthy" bank for 5 consecutive years given by Bank Indonesia (BI) (Admin, 2018). To achieve business goals and targets and maintain the sustainability of the company for the long term, BPR SB must and consciously implement good corporate governance as regulated by the Financial Services Authority (OJK). In addition, the implementation of good governance is also in line with the vision and mission of BPR SB. The HR mission of BPR Batam is to develop professional human resources and create the best environment as a place of pride to work and achieve (Batam, 2019).

In carrying out their duties, BPR SB employees are required to be able to carry out their vision, mission and cultural values (SPIRIT), including Service Excellent, Professionalism, Innovative, Integrity and Teamwork. The descriptions of these cultural values are as follows: 1) provide the best service for all parties involved in the business of BPR Sejahtera Batam; 2) work with responsibility and according to competence in order to achieve the best performance; 3) mobilize all capabilities and competencies possessed in order to get new ideas and creativity for the progress of the company; 4) Build trust by using honesty, responsibility, and in carrying out their duties must be with high dedication, uphold and obey the Banker's Code of Ethics.

With various efforts in carrying out the vision, mission and cultural values consistently, BPR SB won an award as the Best BPR from the INFOBANK AWARDS (Admin, 2018). As described above, based on the results of various studies, it is known that in an increasingly fierce competition due to globalization and the development of digital technology, companies must make their employees an important asset for the company, so it is necessary to manage them properly to be more effective, efficient and productive by using IT in order to produce competitive advantage for the company so that it is also carried out by BPR SB by using IT and increasing the digital competence of employees. In addition, the role of BPR SB leaders is also needed in improving employee performance and communicating the vision, mission and corporate culture values so that they can win various awards such as from BI and INFOBANK AWARDS. With various awards won by BPR SB, it will be interesting to investigate what factors affect employee performance so that it can bring BPR SB to achieve these various awards. Therefore, this research will take the title of the influence of IT, digital leadership, digital competence on employee performance through job satisfaction as an intervening variable in the digital era in the BPR Sejahtera Batam, this is done to examine what variables affect the performance of BPR SB employees so that they can bring BPR SB to various awards

2. Literature Review

2.1. Digital Leadership

Digital leader is a term given to 4.0 leaders or leaders in the industrial era 4.0. But not all leaders in today's companies are called digital leaders. The main factors to become a digital leader are organizational goals, people, change, output, mistakes and conflicts, communication, and innovation. Digital leadership is fast-paced, team-focused, cross-hierarchical, cooperative and has a strong focus on innovation (Oberer and Erkollar, 2018)

2.2. Information Technology

Kadir and Triwahyuni (2003) in Muzakki et al. (2016) defines Information Technology as a set of tools that help you work with information and perform tasks related to information processing. While Noe et al. (2014) in Nugroho et al., (2019) Information Technology is defined as the actual application to describe the features of human resource practices. Information technology is used to support employee performance including setting financial and non-financial targets to the company's strategic goals, informing all employees of company goals, taking corrective actions on an ongoing basis.

2.3. Digital Competence

To face increasingly fierce competition and to keep organizations alive and well in today's global business, digital competencies are needed that can take advantage of information technology (Firdaus and Yazid, 2017). Digital competence is a concept that describes technology-related skills. Over the past few years, several terms have been used to describe skills and competencies in using digital technology, such as ICT skills, information technology skills, digital competencies, 21st century skills, information literacy, digital literacy, and digital skills (Marguna & Sangiasseri, 2020). Digital competencies are competencies related to technology, products, and digital services. According to Mayes and Followers, digital competence itself emphasizes skills, approaches, behaviors and concepts. Apart from that, there are also digital uses that focus on applying digital competencies (Baharrudin et al., 2021).

2.4. Employee Performance

Performance is a multicomponent concept as well as a person's fundamental level to be able to distinguish aspects of performance, namely the involvement of behavior in the results to be achieved (Borman, & Motowidlo, 1993; Campbell et al., 1993; Roe, 1999) in Pradhan and Jena (2017). To improve employee performance, organizational knowledge management has a significant role by analyzing the skills, abilities and knowledge of employees and then making the right strategy to reduce the gaps that occur (Tuffaha, 2020). Employee performance will also have a negative impact if there is less support from management for employee actions (Diamantidis and Chatzoglou, 2019).

2.5. Job Satisfaction

Job satisfaction is described by Locke (1969) in Ayu et al. (2018) is a state of happy or positive emotion that comes from an assessment or experience from work. In addition, job satisfaction can also be explained as the perception of employees on how well a job provides something of important value. Someone who has a high level of job satisfaction according to Robbins and Judge (2008) in Hardiansyah et al., (2019) will have positive feelings towards work, and vice versa if employees are not satisfied then they will have negative feelings towards their work.

3. Materials and Methods

In this study using quantitative methods using explanatory research. Data in quantitative methods can be measured in order to use notes in the test. The clarification technique is used to provide an explanation of the placement of the variables studied and the relationship between one variable and several other variables (Muzakki, 2016). The statistical tool in this study uses the AMOS version 26 software, with the model to be built as shown in the following Figure:

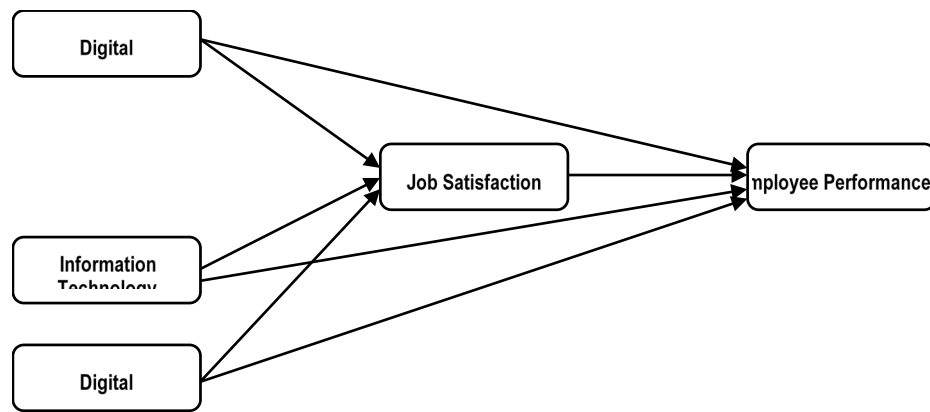


Figure 1. Research Framework

There are several hypotheses proposed in this study, the hypothesis as follows:

Hypothesis 1 (H1): Digital leadership has a significant positive effect on employee performance

Hypothesis 2 (H2): Information technology has a significant positive effect on employee performance

Hypothesis 3 (H3): Digital competency has a significant positive effect on employee performance

Hypothesis 4 (H4): Digital leadership has a significant positive effect on job satisfaction

Hypothesis 5 (H5): Information technology has a significant positive effect on job satisfaction

Hypothesis 6 (H6): Digital competency has a significant positive effect on job satisfaction

Hypothesis 7 (H7): Job Satisfaction mediates the relationship between digital leadership and employee performance

3.1. Data Collection

Quantitative techniques require primary and secondary data sources. Primary facts are facts that arise at once from a collection of facts that may be collected specifically and at the same time associated with the problem being studied. While the secondary facts come from previous studies and the consequences of observations in the field.

3.2. Population and Sample

According to Margono (2004) in Ahyar et al. (2020) the population is the whole of the object of research including humans, animals, plant objects, test scores, symptoms, events as sources of data that have certain characteristics in a study. Besides that, Husain and Purnomo (2001) in Ahyar et al. (2020) explained that the sample is part of the population taken using a sampling technique. The sample in the study must be able to describe the state of the population (Putra et al., 2013). In determining the sample, in this study using the Slovin formula which is as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Whereas n is sample, N is population, e is confidence interval (usually 0.05 or 0.01).

So, $n = 140 / (1 + (140 \times 0.052)) = 103.73$ or 104 respondents

4. Results and Discussion

The discussion of quantitative research and qualitative research, quantitative methods are scientific methods that have met scientific principles that are empirical, objective, measurable, rational, and systematic. The qualitative method is called the artistic method because the process, research is interpretation of the data found in the field, is a literature study as the object being studied (Borg & Gall 1984). Survey methods and experimental methods are grouped as quantitative research, while naturalistic methods include qualitative research (Sugiyono, 2013). Quantitative research is independent in order to build objectivity, cause and effect relationships (causal), tends to generalize, and tend to be value-free. While the qualitative method is interactive with data sources to obtain meaning. The relationship between variables is reciprocal and bound to the values brought by the researcher and data sources (Sugiyono 2013).

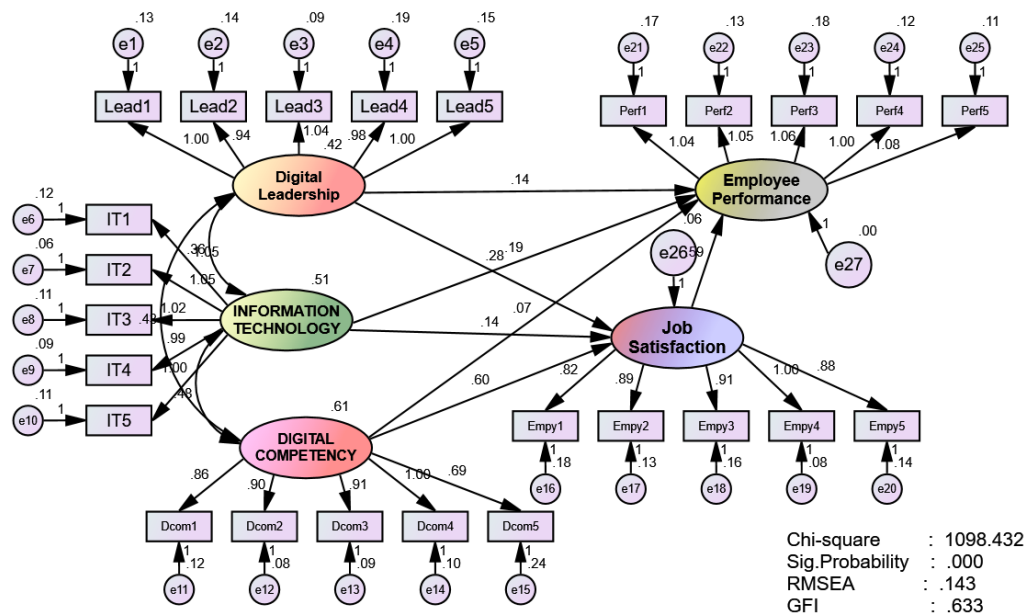


Figure 2. Full Structural Equation Modeling using Analysis of Moments Structure

Figure 2 shows the result of data processing using SEM modeling which is processed using AMOS software which shows the effect value between variables can be seen in the following Table:

Table 1. Result of hypothesis testing (Regression Weights)

			Estimate	SE	CR	P
Satisfaction	<---	Digital Leadership	.276	.093	2.982	.003
Satisfaction	<---	Information Technology	.138	.080	1.729	.084
Satisfaction	<---	Digital Competence	.601	.097	6.172	***
Employee Performance	<---	Satisfaction	.590	.091	6.466	***
Employee Performance	<---	Digital Leadership	.136	.061	2.253	.024
Employee Performance	<---	Digital Competence	.068	.081	.837	.403
Employee Performance	<---	Information Technology	.188	.050	3.776	***

Table 1 displays the hypothesis testing (Regression Weights). The influence of the Digital Leadership (LEAD) variable on the Job Satisfaction (SATI) variable has a standardized estimate (regression weight) of 0.236 with Cr (Critical ratio = identical to the t-count value) of 2.982 at probability = 0.003. The CR value of 2.982 2.00 and Probability = 0.003 0.05 indicates that the influence of the Digital Leadership variable on the Job Satisfaction variable is positively significant. The influence of the Information Technology (IT) variable on the Job Satisfaction (SATI) variable has a standardized estimate (regression weight) of 0.131 with Cr (Critical ratio = identical to the t-count value) of 1.729 at probability = 0.084. The CR value of 1.729 2.00 and Probability = 0.084 0.05 indicates that Information Technology (IT) on the Job Satisfaction (SATI) variable is positively insignificant.

The influence of the Digital Competence (DCOM) variable on the Job Satisfaction (SATI) variable has a standardized estimate (regression weight) of 0.619 with Cr (Critical ratio = identical to the t-count value) of 6.172 at probability = ***. The CR value of 6.172 2.00 and Probability = *** 0.05 indicates that the Effect of Digital Competence (DCOM) on the Job Satisfaction (SATI) variable is positively significant. The effect of the Job Satisfaction (SATI) variable on the Employee Performance (EMPY) variable has a standardized estimate (regression weight) of 0.643 with Cr (Critical ratio = identical to the t-count value) of 6.466 at probability = ***. The CR value of 6.466 2.00 and Probability = *** 0.05 indicates that the effect of the Job Satisfaction (SATI) variable on the Employee Performance (EMPY) variable is significantly positive. The influence of the Digital Leadership variable (LEAD) on the Employee Performance (EMPY) variable has a standardized estimate (regression weight) of 0.127 with Cr (Critical ratio = identical to the t-count value) of 2.253 at probability = 0.024. The CR value of 2.253 2.00 and Probability = 0.024 0.05 indicates that the influence of the Digital Leadership variable (LEAD) on the Employee Performance (EMPY) variable is significantly positive.

The influence of the Digital Competency (DCOM) variable on the Employee Performance (EMPY) variable has a standardized estimate (regression weight) of 0.076 with Cr (Critical ratio = identical to the t-count value) of 0.837 at

probability = 0.403. The CR value of 0.837 2.00 and Probability = 0.403 0.05 indicates that the influence of the Digital Competence variable (DCOM) on the Employee Performance (EMPY) variable is positive and not significant. The influence of the Information Technology (IT) variable on the Employee Performance (EMPY) variable has a standardized estimate (regression weight) of 0.194 with Cr (Critical ratio = identical to the t-count value) of 3.776 at probability = ***. The CR value of 3.776 2.00 and Probability = *** 0.05 indicates that the influence of the Information Technology (IT) variable on the Employee Performance (EMPY) variable is significantly positive.

Table 2. Standardized Regression Weights and Squared Multiple Correlations

			Estimate	SRMR
Satisfaction	<---	Digital Leadership	.236	0.894
Satisfaction	<---	Information Technology	.131	
Satisfaction	<---	Digital Competence	.619	
Employee Performance	<---	Satisfaction	.643	0.998
Employee Performance	<---	Digital Leadership	.127	
Employee Performance	<---	Digital Competence	.076	
Employee Performance	<---	Information Technology	.194	

Table 2 captures the result of standardized regression weights and squared multiple correlations. Analysis of the measurement model with determination is to see the contribution of the variables. Square Multiple Correlation for Job Satisfaction = 0.894, for Employee Performance = 0.998 According to Ferdinand (2002), the value of Square Multiple Correlation for the Job Satisfaction variable $R^2 = 0.894$, the magnitude of the influence of the Square Multiple Correlation value for the Job Satisfaction variable is $100\% = 0.894 \times 100\% = 89.40\%$. Thus, it can be stated that changes in Job Satisfaction are influenced by Digital Leadership (LEAD = X1), Information Technology (IT = X2), Digital Competence (DCOM = X3) by 89.40 %, the rest by $100\% - 89.40\% = 11.60\%$ influenced by other variables not included in this study. The value of Employee Performance $R^2 = 0.998$, then the magnitude of the effect = $0.998 \times 100\% = 99.8\%$.

Table 3. Analysis Goodness of Fit

Goodness of Fit Index	Cut-Off Value	Model Results	Information
Chi-square (c^2)	Expected to Be Small	1,098,432	Good
Relative Chi-square (c^2/df)	3.00	4.145	Good
Probability	> 0.05	0	Good
RMSEA	0.08	0.143	Not Good
GFI	0.90	0.633	Marginal
AGFI	0.90	0.55	Marginal
CFI	0.95	0.851	Marginal
TLI	0.95	0.831	Marginal

Table 3 captures the results of the cut-of-value and goodness of fit model. Only one criterion is met and there are four marginal and three that are less good than the eight criteria used. The criteria that are met are Chi-squared (c^2), Relative Chi-squared (c^2/df) and Probability is good, and the RMSEA is not good, GFI, AGFI, CFI and marginal TLI. Because there is one criterion that is met and four marginals of the eight required criteria, the above model can be stated as a good model (Solimun 2004). Furthermore, based on quantitative methods with SEM and qualitative methods based on theory, empirical, observations of respondents are discussed.

5. Conclusions

This study concludes that digital leadership (LEAD) has a significant positive effect on the job satisfaction (SATI). The effect of the information technology (IT) on the job satisfaction (SATI) is not positively significant. The effect of the digital competence (DCOM) on the job satisfaction (SATI) is significantly positive. The influence of the job satisfaction (SATI) on the employee performance (EMPY) is significantly positive. The influence of the digital leadership (LEAD) on the employee performance (EMPY) is significantly positive. The effect of the digital competency (DCOM) on the employee performance (EMPY) is positive and not significant. The effect of the information technology (IT) on the employee performance (EMPY) is significantly positive. Changes in job satisfaction are influenced by digital leadership, information technology, digital competence 89.40%, the remaining 11.60% influenced by other variables not included

in this study and changes in employee performance are influenced by digital leadership, information technology, digital competence and job satisfaction 99.8%, the remaining 0.20% influenced by other variables not included in this study.

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