How e-human resource management can increase employee productivity in F&B in Batam

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Abstract
Purpose: The purpose of this study was to determine the impact of E-Human Resource Management (E-HRM) had on Batam's F&B productivity.

Research methodology: A total of 395 respondents were included in the study. Four populations were used in this study, namely Starbucks, McDonalds, Mixue, and KFC, located in Batam City, Riau Islands, Brazil. The obtained data were processed using the PLS SEM application.

Results: The results suggest that the implementation of E-HRM has a significant positive impact on employee productivity in the F&B companies studied.

Limitations: There are many limitations when conducting this study due to difficulties in collecting data, information, and respondents at KFC, Mixue, Starbucks, and McDonalds. This causes this research to be suboptimal because the company maintains its data privacy. Therefore, this study only obtained respondent data internally. Then, with limited time, the time to distribute questionnaires to respondents was very short.

Contribution: This research provides a deep understanding of the importance of implementing E-HRM (E-Job Analysis, E-Training & Development, E-Performance Appraisal, E-Recruitment, and E-Communication) in increasing employee productivity in F&B companies in Batam City. The results show that e-HRM has a positive impact on Behavioral Intention, which contributes to increased employee productivity.

Keywords: *e-HRM, Employee Productivity, Behavioral Intention, Human Resources*

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1. Introduction

E-HRM is a method of implementing HR policies, techniques, and practices in organizations by utilizing and/or maximizing web-based technology-based channels. In addition, organizations increasingly rely on E-HRM to provide management solutions that contribute to the effectiveness of human resources. The implementation of e-HRM activities that have a positive impact can help companies in the efficiency of costs incurred and increase employee productivity.

The results of this study are also supported by the results of Wijayadne and Widjaja (2022), which state that carrying out activities using *web* applications is very helpful for companies to implement human resource management activities more efficiently and strategically; HR can conduct training and development using e-learning so that employees do not need to come directly to a place and simultaneously can focus on a job without having to take time. E-HRM can be applied anywhere, which requires improvement in the quality of human resources. The E-HRM system is well known for testing the system, and testing is performed to ensure that the system functions properly.

Many companies and organizations have implemented e-HRM. In Iran, E-HRM has been implemented by Melli Bank (Tavakoli, Nazari, Ahmadi, & Niknam, 2015). Kamuri (2015) states that several government agencies in Indonesia have also implemented E-HRM, such as the Secretariat General of the Ministry of Forestry, PT. IndonesiaPower, PT. Elegant Indonesia PT. Telkom and also PT. PINS Indonesia (telkomgroup.co.id).

The management of human resources that have not been properly computerized is a problem in PT. Indonesia's Prima Equipment is due to the company's limitations in managing data and the technology systems that support this. Based on these problems, the right solution to address employee problems and needs is to implement e-HRM (Suryana and Riyadi 2020).

Reporting from https://bpiw.pu.go.id/ it was explained that in Indonesia itself a socialization of the implementation of E-HRM had been held by the Regional Infrastructure Development Agency (BPIW) of the Ministry of Public Works and Public Housing (PUPR) in Semarang. The head of Personnel and Ortala stated that socialization was carried out as a form of RIDA support for the implementation of E-HRM. Hasna, who represented the RIDA Secretariat, stated that RIDA welcomed the development of the SIMKA PUPR into e-HRM. In E-HRM, each employee will be given the authority to update personal data, but this will be controlled by the Bureau of Personnel Organization and Administration. The existence of E-HRM is also expected to realize smooth administration and management of personnel data within the PUPR ministry.

2. Literature review
2.1 Definition of Employee Productivity
Wijayadne and Widjaja (2022) stated that employee productivity is not only related to a measurement from an economic perspective but also from other aspects; thus, employee productivity can be explained by absence/attendance, quality/quantity of work, task productivity, and innovation productivity.

2.2 Relationship between variables
2.2.1 The influence of E-Job Analysis on Behavioral Intention
E-Job Analysis is the process of evaluating and defining the duties, responsibilities, and requirements of a job using electronic methods, such as online surveys, web-based assessments, and other computer-based tools. The main goal of E-Job Analysis is to collect accurate and up-to-date information about a job to determine the skills, knowledge, and abilities a person must be successful in that role (Imran et al., 2021). One study found that E-Job Analysis was associated with higher levels of job satisfaction, motivation, and intention to remain at work among employees (Toloun & Hadidi, 2014). In other studies by See and Teetor (2014), Shirmila (2022) there is evidence to show that E-Job Analysis can have a positive impact on Behavioral Intention in the workplace.

2.2.2 The influence of E-Training & Development on Behavioral Intention
E-training and development is a process of learning and developing employee skills using electronic technology such as webinars, online training, and online learning platforms. The main goal of E-Training & Development is to help employees improve their skills and knowledge relevant to their jobs so that they can continue to develop their roles in the company (Buckingham & Goodall, 2015). Other studies by Shivaraj et al.(2021) and Junne et al. (2018), Afshar and Fayyazi (2013) stated that E-Training & Development can also help improve employee performance by providing employees with access to continuously updated learning resources and expanding their skills beyond the scope of their daily work.

2.2.3 The influence of E-Performance Appraisal on Behavioral Intention
E-Performance Appraisal is an employee performance appraisal process that uses electronic technology such as online appraisal forms, online appraisal systems, and performance measurement platforms. The main aim of E-Performance Appraisal is to help organizations evaluate employee performance effectively and provide useful feedback for employees to improve their work performance (Arief, Purwana, & Saptono, 2021). Other studies by Salloum, Maqableh, Mhamdi, Al Kurdi, and Shaalan

(2018), Al-Ghezawi and Megdadi (2021), Windasari (2019), Rathee and Bhuntel (2017) state that the use of E-Performance Appraisal can have a positive impact on Behavioral Intention in the workplace by providing provide useful feedback to employees about their work performance, increase job satisfaction and motivation, and help organizations identify and address employee learning and development needs.

2.2.4   *The influence of E-Recruitment on Behavioral Intention*
E-recruitment is an employee recruitment process that uses electronic technology, such as online job vacancy sites, employee selection applications, and online registration systems. The main goal of e-recruitment is to help organizations find the best candidates for available positions quickly and effectively (Çankır, 2017). Other studies by Vizano, Setiyani, and Nawangsari (2018), Galhena and Liyanage (2014), Benders, Bal, and Vermeerbergen (2019), Hendri, Abdul, and Muhamad (2019) state that the use of E-Recruitment can have a positive impact on Behavioral Intention in workplace by helping organizations find the best candidates for available positione-recruitment job satisfaction and motivation, and helping organizations identify and address employee learning and development needs.

2.2.5   *The influence of E-Commincreaseon Behavioral Intention*
According to thhelpts of research conducted by Ul Hassan, Hassan, Shaukat, and Nawaz (2013), there is a positive influence between E-Communication and Behavioral Intention on companies. The research results show that the e-communication available in the company can increase employee trust and satisfaction, which in turn can increase employees' Behavioral Intention. In another study by Asvial and Mayangsari and Yudistriansyah (2021), Zayed *et al.* (2022), Vărzaru, Bocean, Rotea, and Budică-Iacob (2021), shows that the E-Communication available in the company can increase employee trust and satisfaction, thereby increasing their Behavioral Intention. In addition, e-communication can also increase the efficiency and effectiveness of communication in a company, thereby increasing employee productivity. Meanwhile, research conducted by Doghan (2020) stated that employees who use E-Communication too often are considered less involved in company activities, which can reduce their Behavioral Intention.

2.2.6   *The influence of Behavioral Intention on Employee Productivity*
In this case, there is a positive relationship between Behavioral Intention and Employee Productivity in the company. This research was conducted on employees of a manufacturing company using quantitative methods and SEM. Research results show that high employee behavioral intentions can increase productivity (Mutio and Samuel, 2022). Another study by Alsafadi and Altahat (2021) showed that high employee Behavioral Intention can increase employee productivity. Meanwhile, research conducted by Lam, Cho, and Qu (2007) and Lin (2017) showed that there is a negative influence between Behavioral Intention and Employee Productivity. Employees who have high Behavioral Intention but do not follow it up with appropriate actions can reduce their productivity.

2.2.7   *The influence of E-Job Analysis on Employee Productivity*
E-Job Analysis is a process of analyzing job requirements and the competencies needed to do the job using information technology. E-Job Analysis can influence Employee Productivity through Behavioral Intention, namely the desire to carry out a certain action or behavior (Ali *et al*., 2018). Other studies by Akgunduz and Sanli (2017), and Vasić, Kilibarda, and Kaurin (2019) stated that proper E-Job Analysis can increase employee trust and satisfaction with the company. Meanwhile, in research conducted by Khan, Razi, Atif Ali, and Asghar (2011), the results showed that there was a negative influence between E-Job Analysis and Behavioral Intention. Employees who do not properly understand the job analysis conducted electronically or feel uncomfortable with it can actually reduce their desire to carry out actions or behaviors desired by the company.

2.2.8   *The influence of E-Training & Development on Employee Productivity*
According to Sharma and Taneja (2018), research shows that there is a positive influence between the E-Training & Development program on Employee Productivity. Training is one way to identify the deprived needs of employees and then build the required level of competency so that they can work

well to achieve organizational goals. This research is in line with Nurshabrina and Adrianti (2020) who stated that there is a positive influence between the E-Training program on Employee Productivity.

### 2.2.9 *The influence of E-Performance Appraisal on Employee Productivity*

According to Wahyudi, Herlambang, and Martini (2021) stated that implementing E-Performance Appraisal in a company will also influence the performance provided by employees through job satisfaction. If employees in a company have good compensation and job satisfaction, it can increase their work productivity. This study is not in line with the findings of Nurshabrina and Adrianti (2020), Wahyudi et al. (2021), or Michael-Ofre and Opusunju (2021).

2.2.10 *The influence of E-Recruitment on Employee Productivity*

According to Ratnasari, Suryadinata, and Ariyati (2022) emphasized that the implementation of E-Recruitment does not have a big potential for Employee Productivity, the implementation of this system is not in accordance with what was expected, thereby slightly hampering the progress of the employee recruitment and placement process. The results of this study are not in line with Ishrata, Khanb, Nadeemc, and Azizd (2020), Nurshabrina and Adrianti (2020), Martini and Hasyunah (2022) which states that the implementation of the E-Recruitment system does not have a major effect on the productivity and performance of the employees themselves. However, if the E-Recruitment system is balanced with employee development variables, this will have a significant effect on Employee Productivity and performance. This is because the productivity produced by employees is supported by development and training so that the potential of employees can be developed. If the selection process using the e-recruitment system is carried out well, this will have an impact on employee satisfaction and morale, thereby increasing Employee Productivity.

2.2.11 *The influence of E-Communication Employee Productivity*

According to Kamalia and Raharja (2022), the communication system implemented in a company is one of the factors that can influence employee productivity. Sinaga, Yusuf, and Basrowi (2022) stated that there is a direct and significant influence of communication on the efficiency of teams or work groups so that it can increase Employee Productivity. This can be interpreted as follows: the higher the quality of the communication system carried out via digital media in a company or organization, the better the employee productivity in the company or organization. The research is in line with that reviewed by Martin, Hauret, and Fuhrer (2022), Kamalia and Raharja (2022), dan Sinaga et al. (2022).
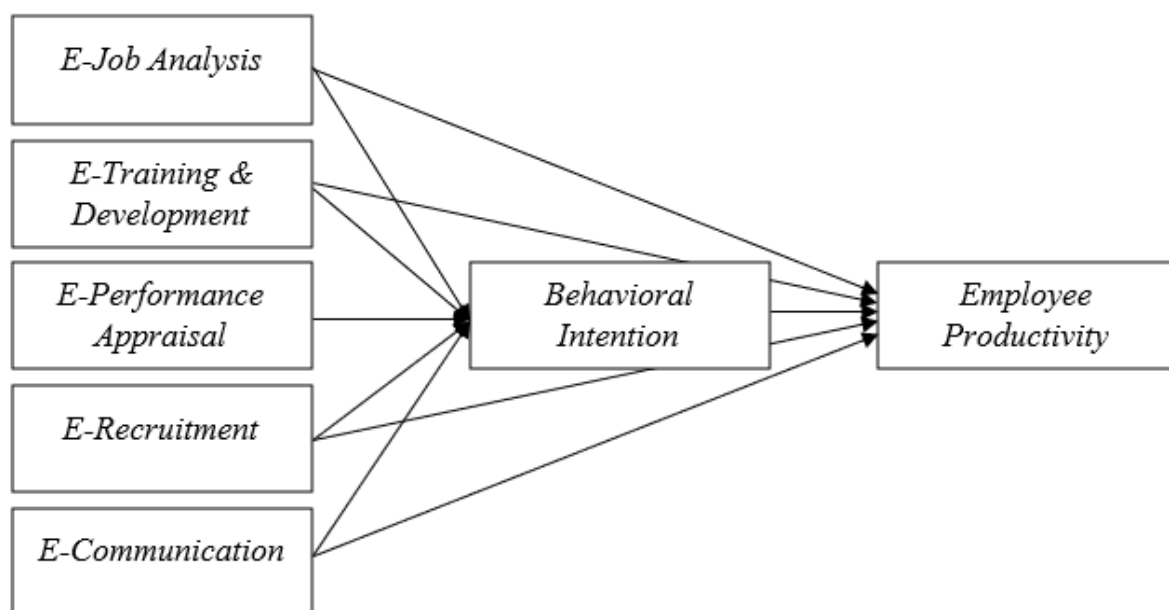
Based on the research model, the hypotheses developed in this study are as follows:
H1 : E-Job Analysis has a significant effect on Behavioral Intention in companies

H2 : E-Training & Development has a significant effect on Behavioral Intention in companies

H3 : E-Performance Appraisal has a significant effect on Behavioral Intention in companies

H4 : E-Recruitment has a significant effect on Behavioral Intention in companies

H5 : E-Communication has a significant effect on Behavioral Intention in companies

H6 : Behavioral Intention has a significant effect on Employee Productivity

H7 : E-Job Analysis has a significant effect on Employee Productivity with Behavioral Intention as a mediating variable

H8 : E-Training & Development has a significant effect on Employee Productivity with Behavioral Intention as a mediating variable

H9 : E-Performance Appraisal has a significant effect on Employee Productivity with Behavioral Intention as a mediating variable

H10 : E-Recruitment has a significant effect on Employee Productivity with Behavioral Intention as a mediating variable

H11 : E-Communication has a significant effect on Employee Productivity with Behavioral Intention as a mediating variable

3. Research methodology

3.1 Research Design

This is fundamental research, which is basic research on phenomena caused by the desire for activities that are beneficial to the development of science and does not emphasize solving a problem using three variables: the dependent variable, the mediation variable, and the independent variable in the leading position. This study uses quantitative research methods with a comparative causal research design (*Causal Comparative Research*), which is research that examines the nature of a problem in terms of the causal relationship between two or more variables (Sugiyono, 2014) Comparative causal research is a type of research with problem characteristics in the form of causation between variables E-Job Analysis, E-Training &; Development, E-Performance Appraisal, E-Recruitment, and E-Communication as independent variables, wereloyee Productivity as a dependent variable, and Behavioral Intention as a mediation variable.

3.2 Research Objects

Researchers chose F&B employees to be the same because the author wanted to know how influential E-HRM is on the productivity of F&B employees in Batam City, because most employees work in the F&B sector and have a large role in the industrial sector in the economy of Batam City (Harnjo, 2019). Four populations were used in this study: Starbucks, McDonalds, Mixue, and the KFC. The four companies are quite famous in the world, so they can be used to conduct research and have a large number of workers. To focus on samples that are representative of the population as a whole, sampling targets were used to determine samples based on certain criteria (Muchsinati & Mea, 2022). This study used statistical tests to test the hypotheses between the variables.

According to Hair, Ringle, and Sarstedt (2015), the possibility of sample determination in research using PLS-SEM is a 10-fold rule method that requires a sample size greater than 10 times the observed variable. The sample size of this study was 395 respondents because seven variables were measured from the number of questions to 32 questions. The initial number of respondents was 320, but this study exaggerated up to 395 respondents to strengthen the testing.

Population	Reason	Source
Starbucks	Starbucks offers a concept to customers by changing the experience of drinking coffee and then combining it with various types of quality coffee.	Angelina (2021)
McDonalds	Fast and practical service has made McDonald's much-loved by the public. The menu served is also adjusted in each country.	Septiana (2020)

Mixue	The price of products from Mixue is relatively cheap when compared to ice cream brands in its category.	(Wijayanti, 2022)
KFC	The key to KFC's success over 90 years lies in consistency. Consistent in maintaining the taste through 11 secret spices and consistently implementing SOPs and of course continuing to innovate.	(Syahputra, 2022)

4. Result and discussion

4.1 Descriptive Statistics

A total of 395 respondents were included in this study. Four populations were used in this study, namely Starbucks, McDonalds, Mixue, and KFC, located in Batam City, Riau Islands, Brazil. From Table 1, it can be concluded that the largest number of respondents who answered the questionnaire were 218 men (55.2 %). The largest number of respondents who filled in were 25-30 years old with a total of 199 people with a percentage of 50.4%. The highest data for respondents based on work experience was 1-3 years, totaling 167 respondents (42.3 %). The obtained data were processed using the PLS SEM application. The variables studied in this study are E-Job Analysis, E-Training & Development, E-Performance Appraisal, E-Recruitment, and E-Communication as independent variables, Employee Productivity as a dependent variable, and Behavioral Intention as a mediation variable. The demographic characteristics of the respondents were as follows:

Table 1. Demographic Characteristics of Respondents

Information	Total of Respondents	Percentage (%)
Gender		
Male	218	55,2%
Female	177	44,8%
Total	395	100%
Age		
<25 Years	164	41,5%
25-30 Years	199	50,4%
>30 Years	32	8,1%
Total	395	100%
Work Experience		
<1 Year	144	36,5%
1-3 Years	167	42,3%
>3 Years	84	21,3%
Total	**395**	**100%**

Source: Data processed (2023)

4.1.1 Average Variance Extracted (AVE)

Table 2 shows that the value of the validity test result (AVE) for the Behavioral Intention variable is 0.856, the E-communication variable is 0.867, the E-Job Analysis variable is 0.774, the E-Performance Appraisal variable is 0.912, the E-Recruitment variable is 0.830, the E-Training & Development

variable is 0.867, and the variable Employee Productivity is 0.757. Therefore, it can be concluded that all variable questions were declared valid and had a value above 0.5, which means that all questions met the convergent validity requirements.

Table 2. Results of Validity Test Results (AVE)

Variable	AVE	Conclusion
Behavioral Intention	0,856	Valid
E-Communication	0,867	Valid
E-Job Analysis	0,774	Valid
E-Performance Appraisal	0,912	Valid
E-Recruitment	0,830	Valid
E-Training & Development	0,867	Valid
Employee Productivity	0,757	Valid

Source: Data processed (2023)

4.2 Reliability Test (Cronbach Alpha and Composite Reliability)
Here are the reliability results of *Cronbach's alpha* and *composite reliability* tested:
Reliability tests were used to show the accuracy, consistency, and accuracy of an instrument for measuring variables. In this study, the value used to measure the consistency of the latent variable was 0.6 0.7. The consistency of the measured variables can be observed in the values of Cronbach's alpha and composite reliability. If the Cronbach's alpha is above 0.7, then it can be said that the latent variable is consistent or has been met, and a Composite Reliability value above 0.6-0.7 is considered good. Based on Table 4.3, it can be seen that all Cronbach's alphas and composite reliability numbers are reliable.

The results of the reliability test showed that the Cronbach's alpha value of Behavioral Intention was 0.944, e-communication was 0.962, E-Job Analysis was 0.854, E-Performance Appraisal was 0.976, e-recruitment was 0.949, E-Training & Development was 0.962, and Employee Productivity was 0.918. This shows that values below 0.7 are considered reliable, and there are no unreliable questions.

The test results below show that the Composite Reliability value of Behavioral Intention was 0.960, e-communication was 0.970, E-Job Analysis was 0.911, E-Performance Appraisal was 0.981, recruitment was 0.961, E-Training & Development was 0.970, and Employee Productivity was 0.939. This shows that values below 0.7 are considered reliable, and there are no unreliable questions.

Table 3. Cronbach Alpha *and* Composite Reliability *Test Results*

Variable	Cronbach Alpha	Composite Reliability	Conclusion
Behavioral Intention	0,944	0.960	Reliable
E-Communication	0,962	0.970	Reliable
E-Job Analysis	0,854	0.911	Reliable
E-Performance Appraisal	0,976	0,981	Reliable
E-Recruitment	0.949	0.961	Reliable
E-Training & Development	0,962	0.970	Reliable

Employee Productivity	0,918	0.939	Reliable

Source: Data processed (2023)

4.3 Direct Influence Test Result
Table 4 below is the result of the direct effects test between E-Job Analysis, E-Training & Development, E-Performance Appraisal, E-Recruitment, E-Communication, and Behavioral Intention. The results of all these variables were expressed as significantly positive because the P-value was less than 0.05. The relationship between e-Job Analysis and Behavioral Intention resulted in t-statistics of 4.027 and a mean of 0.182. The relationship between E-Training and Development and Behavioral Intention resulted in t-statistics of 4.270 and a mean of 0.249. The relationship between E-Performance Appraisal and Behavioral Intention resulted in t-statistics of 3.162 and a mean of 0.116. The relationship between E-Recruitment and Behavioral Intention resulted in a t-statistic of 3.121 and a mean of 0.170. The relationship between E-Communication and Behavioral Intention resulted in a t-statistic of 5.326 and a mean of 0.293, so that all independent variables of the relationship to the mediating variable were declared significantly positive.

Table 4. Results of Independent Direct Effects Test to Mediation

Pathway X ⟶ M	Sample Mean (M)	T Statistic	P Value	Conclusion
E-Job Analysis →*Behavioral Intention*	0.182	4.027	0.000	**H1**: Significantly Positive
E-Training & Development →*Behavioral Intention*	0.249	4.270	0.000	**H2**: Significantly Positive
E-Performance Appraisal →*Behavioral Intention*	0.116	3.162	0.002	**H3**: Significantly Positive
E-Recruitment →*Behavioral Intention*	0.170	3.121	0.002	**H4**: Significantly Positive
E-Communication →*Behavioral Intention*	0.293	5.326	0.000	**H5**: Significantly Positive

Source: Data processed (2023)

Table 5 below is the result of the Direct Effects test between Behavioral Intention to the Employee Productivity variable. The results of the variable test were declared significantly positive because the P-value was less than 0.05. The relationship between Behavioral Intention and Employee Productivity resulted in t-statistics of 3.650 and a mean of 0.315, indicating that both variables were significantly positive.

Table 5. Results of Direct Effects Test of Mediation to Dependents

Pathway M ⟶ Y	Sample Mean (M)	T Statistic	P Value	Conclusion
Behavioral Intention	0.316	3.650	**0.000**	**H6**: Significantly Positive

$\rightarrow$ *Employee Productivity*

Source: Data processed (2023)

Hypothesis 1

The result of the T-statistic value is 4,027 with a P value of 0.000, indicating that the E-Job Analysis variable has a positive effect on Behavioral Intention in KFC, Mixue, Starbucks, and McDonalds. This is because respondents feel that the workplace gives employees a clear understanding of their role, increases job satisfaction and motivation, and helps organizations identify and address skill gaps. According to See and Teetor (2014) researched that E-Job Analysis gives employees a clear understanding of their roles and responsibilities, which can help them feel more confident and motivated in their jobs. The results of this study are in line with research reviewed by See and Teetor (2014), Imran *et al.* (2021), and Shirmila (2022).

Hypothesis 2

The result of the T-statistic value is 4,270 with a P value of 0.000, indicating that the E-Training & Development variable has a positive effect on Behavioral Intention in KFC, Mixue, Starbucks, and McDonalds. This is because it can help employees improve their skills and knowledge relevant to their jobs, so that they can continue to grow in their roles in the company. According to Shivaraj (2021), organizations can provide employees with opportunities to continue learning and developing within the company, which can increase employee confidence, job satisfaction, and loyalty to the company. Overall, the use of E-Training & Development can have a positive impact on Behavioral Intention in the workplace by giving employees the opportunity to continuously improve their skills and knowledge, increase job satisfaction and motivation, and help organizations identify and address employee learning and development needs. The results of this study are in line with those of Shivaraj (2021) and Junne *et al.* (2018), Afshar and Fayyazi (2013) and Buckingham and Goodall (2015).

Hypothesis 3

The result of the T-statistic value is 3.162 with a P value of 0.002, indicating that the E-Performance Appraisal variable has a significant effect on Behavioral Intention in KFC, Mixue, Starbucks, and McDonalds. This is due to E-Performance Appraisal. According to Salloum *et al.* (2018), a positive relationship exists between performance appraisal and employee performance. This may be because the E-Performance Appraisal provides employees with useful feedback about their job performance, which can help them feel more confident and motivated in their work. Overall, the use of E-Performance Appraisal can have a positive impact on Behavioral Intention in the workplace by providing employees with useful feedback on their job performance, increasing job satisfaction and motivation, and helping organizations identify and address employee learning and development needs. The results of this study are consistent with the findings of Arief *et al.* (2021), Salloum *et al.* (2018), Al-Ghezawi and Megdadi (2021), Wndasari (2019), and Rathee and Bhuntel (2017).

Hypothesis 4

The result of the T-statistic value is 3.121 with a P value of 0.002, indicating that the E-Recruitment variable has a positive effect on Behavioral Intention in KFC, Mixue, Starbucks, and McDonalds. This is because E-Recruitment can also help organizations identify employee learning and development needs and provide appropriate programs to meet these needs. According to Hendri *et al.* (2019), e-learning can help improve performance and intention to continue working in the workplace. This can lead to increased efficiency and productivity in the workplace, which can ultimately lead to higher levels of behavioral intention among employees. Overall, the use of E-Recruitment can have a positive impact on Behavioral Intention in the workplace by helping organizations find the best candidates for available positions, increasing job satisfaction and motivation, and helping organizations identify and address employee learning and development needs. The results of this study are consistent with those of Çankır (2017) and Vizanot *et al.* (2018) ,,, YandeAnaged L;yand and Bender4), Bender and *et al.* (2019), Hendri *et al.* (2019).

Hypothesis 5
The result of the T-statistic value is 5,326 with a P value of 0.000, indicating that the E-Communication variable has a positive effect on Behavioral Intention in KFC, Mixue, Starbucks, and McDonalds. This is because the E-Communication available at the company can increase employee trust and satisfaction, thereby increasing their Behavioral Intention. According to Hassan et al. (2013), e-communication available in a company can increase employee trust and satisfaction, which in turn can increase employees' Behavioral Intention. The results of this study were consistent with those reported by Eportedetassan et al. *et3al.* Asvial and andand*etalet*021), Zay et al.(2022), and Vărzaru *et al.* (2021), but not the study byine with what 2020) studied. The conclusion from the above studies is that the effect of E-Communication on Behavioral Intention in companies is not always the same. There are studies that find positive influences, but there are also studies that find negative ones. This shows that other factors influence the influence of E-Communication on Behavioral Intention in the company, such as the level of trust and employee satisfaction, as well as the efficiency and effectiveness of communication in the company.

Hypothesis 6
The result of the T-statistic value is 3,650 with a P value of 0.000, indicating that the Behavioral Intention variable has a positive effect on Employee Productivity in KFC, Mixue, Starbucks, and McDonalds. According to Mutio and Samuel (2022), high employee behavioral intentions can increase productivity. The results of this study are consistent with those of Alsafadi and Altahat (2021). However, the effect of Behavioral Intention on Employee Productivity is still debated among academics. The results of this study are not consistent with those reported by Lam *et al.* (2007), Lin (2017). The conclusion from the studies above is that the effect of Behavioral Intention on Employee Productivity in a company is not always the same. There are studies that find positive influences, but there are also studies that find negative influences (Gazi, Islam, Shaturaev, & Dhar, 2022). This shows that there are other factors that influence the influence of Behavioral Intention on Employee Productivity in the company, such as employee motivation and commitment to the company, as well as their trust and satisfaction.

Hypothesis 7
The result of the T-statistic value is 2.427 with a P-value of 0.015, and the E-Job Analysis variable on Employee Productivity with Behavioral Intention as a mediating variable has a positive effect on KFC, Mixue, Starbucks, and McDonalds companies. According to Akgunduz and Sanli (2017) found that the right E-Job Analysis can increase employee trust and satisfaction with the company. This can increase employees' behavioral intentions, thereby increasing their productivity. The results showed that proper E-Job Analysis can increase employees' trust and satisfaction with the company to increase their Behavioral Intention and productivity. The results of this study are consistent with those reported by Vasić *et al.* (2019). However, this is not in line with Khan *et al.* (2011), who showed that there is a negative influence between E-Job Analysis and Behavioral Intention. From the previous explanation, it can be concluded that E-Job Analysis can affect Employee Productivity through Behavioral Intention. However, the results showed that the influence may vary depending on other factors, such as company conditions, employee characteristics, and proper implementation of E-Job Analysis. Therefore, companies must pay attention to these factors to effectively utilize E-Job Analysis to increase employee productivity.

Hypothesis 8
The result of the T-statistic value is 2,570 with a P value of 0.010, indicating that the E-Training & Development variable on Employee Productivity with Behavioral Intention as a mediating variable has a significant effect on KFC, Mixue, Starbucks, and McDonalds. According to Sharma and Taneja (2018) examined that there is a positive influence between the E-Training &; Development program on Employee Productivity. Training is one way to identify the deprived needs of employees and then build the level of competence needed so that they can work well to achieve organizational goals. This research is in line with Nurshabrina and Adrianti (2020) who stated that there is a positive influence between the E-Training program on Employee Productivity.

Hypothesis 9

The result of the T-statistic value is 1.781 with a P value of 0.075, indicating that the E-Performance Appraisal variable on Employee Productivity with Behavioral Intention as a mediating variable has no significant effect on KFC, Mixue, Starbucks, or McDonalds companies. According to Nurshabrina and Adrianti (2020) examined that E-Performance Appraisal has a positive influence on Employee Productivity. According to Wahyudi et al. (2021), the application of an E-Performance Appraisal in a company will also affect the performance provided by employees through job satisfaction. If employees in a company have good job compatibility and satisfaction, this can increase their work productivity. This study is not consistent with the findings of Nurshabrina and Adrianti (2020) and Wahyud et al. (2021), Michael-Ofre and Opusunju (2021).

Hypothesis 10

The result of the T-statistic value is 2.088 with a P-value of 0.037, indicating that the E-Recruitment variable on Employee Productivity with Behavioral Intention as a mediating variable has a significant effect on KFC, Mixue, Starbucks, and McDonalds companies. According to Ratnasari et al. (2022) refreshes that the implementation of E-Recruitment does not have great potential for Employee Productivity, the implementation of this system is not in accordance with what is expected so that it slightly hampers the running of the recruitment and placement process of employees. The results of this study are not consistent with those reported by Ishrata et al. (2020), Nurshabrina and Adrianti (2020), Martini and Hasyunah (2022), who stated that the implementation of the E-Recruitment system does not have a major effect on the productivity and performance of the employees themselves. However, if the E-Recruitment system is balanced with employee development variables, then this will significantly affect Employee Productivity and performance. This is because the productivity produced by employees is supported by development and training so that the potential of employees can be developed. The selection process with a well-done e-recruitment system will have an impact on employee satisfaction and enthusiasm, thereby increasing Employee Productivity.

Hypothesis 11

The result of the T-statistic value is 2.529 with a P-value of 0.012, indicating that the e-communication variable on Employee Productivity with Behavioral Intention as a mediating variable has a positive effect on KFC, Mixue, Starbucks, and McDonalds companies. According to Kamalia and Raharja (2022), the communication system applied to a company is one of the factors that affect Employee Productivity. Based on the research of Sinaga et al. (2022) where in his research states that there is a direct and significant influence on the effectiveness of communication on the efficiency of teams or work groups so that they can grow Employee Productivity. This can be interpreted as follows: the higher the quality of the communication system carried out through digital media in the company or organization, the better the productivity of employees in the company or organization. This study is in line with the review by Martin et al. (2and Jamalia a,nd, Rja (2022), and Sinaga et al. (2022).

4.4 Results of Indirect Effects Analysis

Table 6 below shows the test results of the Specific Indirect Effects between Independent to Dependent Through Mediation. The results of the test of all these variables were considered significant because the P value was less than 0.05. Except for the E-Performance Appraisal to Behavioral Intention through Employee Productivity stated above 0.05. The relationship between E-Job Analysis to Behavioral Intention through Employee Productivity resulted in a t-statistic of 2,427 and mean of 0.058. The relationship between E-Training & Development to Behavioral Intention through Employee Productivity resulted in t-statistics of 2,570 and a mean of 0,079. The relationship between E-Job Analysis to Behavioral Intention through Employee Productivity resulted in a t-statistic of 2,427 and mean of 0.058. The relationship between E-Performance Appraisal to Behavioral Intention through Employee Productivity resulted in a t-statistic of 1.781 and a mean of 0.039. The relationship between E-Recruitment to Behavioral Intention through Employee Productivity resulted in a t-statistic of 2.088 and a mean of 0.055. The relationship between E-Communication to Behavioral Intention through Employee Productivity resulted in t-statistics of 2.529 and a mean of 0.094; thus, all independent variables of relationship to the dependent variable through mediating variables were declared

significantly positive, except E-Performance Appraisal to Behavioral Intention through Employee Productivity, which was declared insignificant.

Table 6. Results of Specific Indirect Effects Test Independent to Dependent Through Mediation

Pathway X ⟶ M ⟶ Y	Sample Mean (M)	T Statistic	P Value	Conclusion
E-Job Analysis →Behavioral Intention→ *Employee Productivity*	0.058	2.427	0.015	H7: Significantly Positive
E-Training & Development →Behavioral Intention→ Employee Productivity	0.079	2.570	0.010	H8: Significantly Positive
E-Performance Appraisal →Behavioral Intention→ Employee Productivity	0.039	1.781	0.075	H9: Insignificant
E-Recruitment→Behavioral Intention→ Employee Productivity	0.055	2.088	0.037	H10: Significantly Positive
E-Communication→Behavioral Intention→ Employee Productivity	0.094	2.529	0.012	H11: Significantly Positive

Source: Data processed (2023)

4.5 Goodness of Fit Model
4.5.1 R Square Test Results
The *R Square value* is used to assess the influence of a particular independent latent variable on the dependent latent variable. According to Perdian (2017), the results of *R Square* of 0.67 are categorized as good, 0.33 are categorized as moderate, and 0.19 are categorized as weak.

In Table 7, the R Square of the behavioral intention variable was 0.479, and Employee Productivity was 0.462. Both variables are declared "Moderate" because the R Square value is more than 0.33. The table above shows the value of R Square on the independent variable of mediation; Behavioral Intention is 0.479, which means that the independent variable can explain as much as 47.9% of the mediation variable. The remaining 52.1% can be explained by other variables that were not included in the study. The value of R Square in the mediation variable with the independent variable Employee Productivity was 46.2%. The remaining 53.8% can be explained by other variables that were not included in the study.

Table 7. R Square Test Results

Variable	R *Square*	Conclusion
Behavioral Intention	0.479	(47.9%) Moderate
Employee Productivity	0.462	(46.2%) Moderate

Source: Data processed (2023)

5. Conclusion

5.1. Conclusion

This study aims to determine how E-HRM (E-Job Analysis, E-Training & Development, E-Performance Appraisal, E-Recruitment, and E-Communication) can increase employee productivity with Behavioral Intention as a mediating variable in F&B s in Batam City. The research results indicated that the variables E-Job Analysis, E-Training & Development, E-Performance Appraisal, E-Recruitment, and E-Communication have a significant effect on Behavioral Intention at KFC, Mixue, Starbucks and McDonalds. The results of the sixth hypothesis (H6) state that the Behavioral Intention variable has a significant effect on employee productivity at KFC, Mixue, Starbucks, and McDonalds. The results indicated that the variables E-Job Analysis, E-Training & Development, E-Recruitment, and E-Communication on Employee Productivity with Behavioral Intention as a mediating variable had a significant effect on KFC, Mixue, Starbucks, and McDonalds.

5.2. Limitations

There are many limitations when conducting this study due to difficulties in collecting data, information, and respondents at KFC, Mixue, Starbucks, and McDonalds. This causes this research to be suboptimal because the company maintains its data privacy. Therefore, this study only obtained respondent data internally. Then, with limited time, the time to distribute questionnaires to respondents was very short.

5.3. Suggestion

Increasing employee productivity with Behavioral Intention as a mediating variable in F&B s in Batam City, the researcher provides the following recommendations:

1. Companies can provide opportunities for employees to develop their abilities and jobs, which can increase self-confidence, job satisfaction, and employee loyalty to the company.
2. Companies are able to create communication that uses information technology such as portal sites to increase employee trust and satisfaction, as well as the efficiency and effectiveness of communication in the company
3. The company can compete with other companies to gain a competitive advantage in managing its resources according to the company's capabilities, as supported by resource-based view (RBV) theory (Dewayanto, 2021).

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