



Impact of digital transformation on employee engagement at Ceylon Electricity Board in the Northern Province of Sri Lanka

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Abstract

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Most of the organizations in the present complex business era have understood the dynamic environment of business and focus on how information technologies are creating digital transformation. To meet the challenges of digital transformation, business firms require greatly encouraged, motivated, and engaged employees at all the level of business processes. In this study, an effort was made to examine the digital transformation and its impact on employee engagement. A sample of 273 staff were selected from Ceylon Electricity Board in Northern Province of Sri Lanka using stratified random sampling method. In this study, an explanatory research design was employed in a cross-sectional time horizon and a survey method was used. The variables were measured using standard questionnaires. Correlation and regression analyses were performed to identify the association between the variables and ANOVA and Independent sample t-test were performed to compare means. The study revealed that the dimensions of digital transformation namely customer service, operational efficiency and business modelling positively impact employee engagement. The research provides useful understandings for administrators to realize the connection among digital transformation and employee engagement and how far each of the dimensions of digital transformation contributes to increase employee engagement. Based on the results, recommendations are made to enhance the employee engagement in the workplace.

Keywords: *Business modeling, customer service, digital transformation, employee engagement, operational efficiency*

1. Introduction

The essential role of electricity plays in modern life, bringing in economic benefits and developmental progress to various sectors such as transportation, production, communication, agricultural as well as the mining sectors. Electricity is an essential part of people's life and important to the country's economy (Aladejare, 2014). Electricity makes it possible to achieve the full potentials of any society and makes life worthwhile in the society. In the present network system, the electricity supply has been modernized in Sri Lanka by Ceylon Electricity Board (CEB) to improve the power supply quality by adapting variety of modern technologies into that system. To cope with this large customer base and to serve the customers effectively, CEB has digitalized most of the business operations by adapting new technologies. The digital transformations are established in human resource management, financial transactions, production process, material handling, metering functions, collection of revenue, breakdown handling, etc.

Information Technology plays a main role for supporting CEB's efficient operation and customer service. The extensive application of information technology at several stages in the organization has made many digital changes and helping management for reaching digital transformation. The human resource is a key factor to achieve the goal of digital transformation in all stage of collaboration, ecosystem, culture, empowerment, etc.

The human resources are playing major part in productivity of CEB. Effective HRM practices lead to positive HR outcomes (Gamage, 2015). Without proper human resources management, firms would not be able to effectively create a positive workplace culture and environment. CEB needs to have a confident, motivated, committed and engaged staffs to work with newly added technology. To enhance the reliability and supply quality of its service depends on committed and engaged employees. Ismail (2019) stated that employee engagement positively influences job performance. Further, Patro (2013) reported that high levels of employee engagement results in improved employee commitment and involvement in the job. And Gruman and Saks (2011) stated that engaged employees are emotionally attached to their organization and greatly involved in their work going additional mile beyond the employment contract.

Many organizations around the globe adapt new technologies and change their business models. Digitalization is the use of digital technologies to transform a business model and deliver new revenue and value-producing opportunities. There are studies that examined the impact of digital transformation on organization performance, individuals job performance, leadership behaviours, experience, communications, engagement, etc. (Gasparovich, Uskova & Dongauzer, 2020; Mubarak et al., 2019; Goswami & Upadhyay, 2019). Then, Tohanean (2018) shows that digitalization improves the performance of today's organizations. Further, Digital transformation has a significant positive impact on improve business performance (Mubarak et al., 2019) and to increases the efficiency of enterprises (Gasparovich, Uskova & Dongauzer, 2020). Digitalization has changed the workforce population, the skill set needed, and the way to interact and collaborate as well as to communicate within an organization not only from employee's side but also from the management side. Goswami and Upadhyay (2019) explained the high level of engaged employees is available in a digitalized environment as compared to manual working environment. However, CEB has changed several business activities and processes into digital form. The current level of employee engagement in CEB is unknown with related to digital transformation. Further, None of the studies examined the influence of digital transformation on employee engagement at CEB.

Aladejare (2014) stated that employee engagement is one of the central constructs that plays a crucial role in increasing organizational performance and ultimately profitability of the organization. Otieno, Waiganjo and Njeru (2015) found that employee engagement encourages employee development thus affecting the organizational performance. As such, it is essential for employers and managers to understand how to promote job engagement of their employees.

The main objective of the current study is to examine the impact of digital transformation on employee engagement in CEB in the Northern Province, Sri Lanka. The study also attempts to examine the difference in employee engagement based on demographic factors. In the path of enriching lives of Sri Lankans through power while lighting the nation, it is the responsibility of CEB to provide an efficient and reliable power supply to all customers at a minimum cost. The quality of the service delivery of CEB to

the consumers is determined by tangibility, empathy, responsiveness, reliability, and assurance (Achchuthan, Sivathaasan, & Jayasundara, 2014). There are multiple factors which influence CEB performance. One of the critical resources is employees to determine the firm's productivity because, without better performance of its employees, any organization cannot expect high organizational accomplishment. The CEB has adopted the technology advancement into business process. It does not have the idea of how employees are being engaged with their job after digital transformation. Employee engagement is one of the critical factors for organization performance. Therefore, it is required to understand the level of employee engagement toward their job in relation to digital transformation.

Digital transformation has given much attention among different context in different countries. Goswami and Upadhyay (2019) have found positive relationship between digital transformation and employee engagement in IT firms located in NCR region, New Delhi. Gallup (2013) study which was conducted from 2011 to 2012 in 142 countries concluded that 13% of the employees are engaged in their jobs, 63% are not engaged and 24% are actively disengaged. The same study revealed that, in Sri Lanka, 14% of the employees are engaged, 62% are not engaged and 23% are actively disengaged. Hence, this finding emphasizes the need for examining the antecedents of employee engagement in the Sri Lankan context. In the study conducted by Mayuran and Kailasapathy (2020) among the managerial level employees from licensed commercial banks in Sri Lanka, the antecedents of employee engagement were examined. The study revealed that employer brand, perceived organizational politics, and self-efficacy were significantly related to employee engagement. However, digital transformation has not been studied as a predictor of employee engagement in the Sri Lankan context.

Vial (2019) stated that digital technologies provide more information, computing, communication, and connectivity. He further explained that digital transformation creates dependencies among employees whose interests may not be in line with organization's interest. Digitalization offers enormous potential for innovation and performance in organizations. Perera (2021) reported that digital technologies have an impact on marketing, promoting customer relationships and increasing the value of the firm. Digital transformation reflects a particular person's engagement or disengagement

towards their job, co-workers, supervisors, organizations goals and work-related activities in that person's surrounding environment. Digital transformation is likely to affect a person's engagement, and this makes the enthusiasm to study and know about digital transformation. Thus, there is a need for investigating digital transformation as an antecedent of employee engagement in Sri Lanka.

However, there are lot of studies taken place to evaluate the impact of digital transformation in different context such as marketing, firm performance, human conduct, business model design and process, leadership styles, decision management, employee engagement etc. Hence, researchers have examined the positive and negative impacts of digital transformation in the organizations (Khitskov et al., 2017; Parsons, Boonman & Obrist, 2000; Veleva & Tsvetanova, 2020; Kaur, 2019). As per the review of literature, there are little empirical studies that discovered the relationship between digital transformation and employee engagement and these studies have been done in the Western countries and in some Asian countries (for example, Goswami & Upadhyay, 2019; Winasis, Riyanto & Ariyanto, 2020; Singh & Atwal, 2019). Winasis et al (2020) recommended that, considering the inadequacy of studies regarding the effect of digital transformation on employee engagement in developing countries, further studies have to be done. Iddagoda and Opatha (2017) have identified a gap of nonexistence of empirical tests on the factors influencing employee engagement in Sri Lanka.

In the review of research literature in Sri Lankan context, few evidences are available. Specifically, analysis of digital transformation challenges in banks and financial institutions (Jayalath & Premaratne, 2021), digital transformation for emerging economy (Rassool & Dissanayake, 2019), forced and unplanned digital transformation in education (Rajaguru, 2021), evaluation of digital transformation in the success of public sector hospitals (Sarathchandra, 2019), digital transformation success (Ghobakhloo & Iranmanesh, 2021) are few examples. In Sri Lankan context, there are some studies available based on employee engagement (Iddagoda & Opatha 2020; Thisera & Sewwandi, 2018; Weerasooriyan & Alwis, 2017). Most of the studies were related to employee performance, financial performance, leadership styles, etc. However, none of them has examined the association between digital transformation and employee engagement. There is a study

conducted at CEB to examine the employee engagement in relation with leadership styles (Samarasinghe & Darshani, 2019). Although, no study has taken place to examine the impact of digital transformation on employee engagement at CEB in Northern Province, Sri Lanka. Therefore, there is a need to fill this gap by doing research on these phenomena. Hence, The following research question was formulated in this study.

“What is the impact of digital transformation on employee engagement at CEB, Northern Province, Sri Lanka?”

2. Literature Review

2.1. Digital Transformation

Digital transformation is the integration of digital technologies into the business to transform existing traditional and non-traditional business processes or services or creating new once, to meet changing business and customer expectations, thus completely shifting the way businesses are accomplished and functioned and how value is delivered to customers. This reimagining of business processes or models in the digital age is digital transformation. According to Liu, Chen and Chou (2011) digital transformation is referred as the integration of digital technologies into the existing business processes or creating a new one. The basis digital transformation concept is to integrate the digital technologies into business. Organizational transformation is something that is inevitable and business administrators must be ready for it with an organizational change management approach or strategy. An organization’s strategy is formulated and implemented by leveraging digital resources to create differential value (Bharadwaj, Sawy, Pavlou & Venkatraman, 2013). The use of digital technologies to facilitate key business enhancements (Fitzgerald, Hackling & Dawson, 2013). Digital transformation is the degree to which an organization participates in any activity of information technology (Mithas, Tafti & Mitchell, 2013).

Digital transformation is customer-driven and involves organisational shift along with the application of digital technologies. Reddy and Reinartz (2017) defined digital transformation as the use of computers and internet technology for a more well-organized and effective economic value formation

process. Ismail, Khater and Zaki (2017) argue that numerous analyses of success stories discovered that the improved competitive placement of successful companies do principally depend on strategies which their managers deploy and only secondarily on the information technologies they adopt. According to McKeown and Philip (2003), a while ago that business transformation is a predominant idea which combines various competitive strategies that firms must adopt if they intend to have substantial increases in business performance.

As a requirement for effective digital transformation, administrators need to structure the transformation initiatives. Gimpel and Hosseini (2018) created a holistic yet solid framework with six action fields such as customer, value proposition, operations, data, organization, and transformation management. Bumann and Peter (2019) have done a comparative analysis of over one hundred defined action fields and identified six action fields that provide framework for businesses to succeed in digital transformations. The actions include strategy, the organisation, corporate culture, technology, customers and employees. Davydenko, Kolomytseva and Kolesnikova (2020) stated that the key drivers of digitalization are the company's innovative potential such as digital personalization, goods servitization, processes and structural changes.

Organizations focus mainly on people and business process driven by digital technology which may affect the transformation of their business model (Kutnjak, Pihiri & Furjan, 2019). The digital transformation gets more focus to create values for the organization and to add value to its products and services. The way to achieve excellence in driving digital change is still unidentified. Though there are various models of digital transformation, the present study uses Digital Maturity Model (DMM). Deloitte's consulting agency in partnership with the TM forum has developed the DMM (Deloitte, 2018). As the research suggests, the DMM consists of five assessment areas: customer service, strategy, business modelling, operational efficiency and organization and culture. In a survey conducted by MIT Centre for Digital Business and Capgemini Consulting (Westerman et al., 2011), three key dimensions of a business can be digitally transformed: (1) customer service, (2) operational efficiency and (3) business models. These three dimensions of

DMM were taken into consideration in the current study and the dimensions are described below.

- **Operational Efficiency:** Developing technology and its broad use in business process has forced management to see towards extremely motivated and engaged employees so that operational efficiency can be achieved. Various analyses concentrate on the impact of information technology on operational efficiencies and value creation and found positive relation (Hong & Lee, 2017; Taiminen, Saraniemi, & Parkinson, 2018). These studies state operational efficiency is a better dimension to measure the technology advancement.
- **Customer Service:** According to Westerman and Bonnet (2015), digital transformation promotes customer interactions. This leads to an extensive development of customer service expectation (Peppard & Ward, 2016). This is a key part of digitalization process to initiate with getting to understand the customer well. Kotarba (2018) concluded that customer service experience is a core dimension of evaluating digital transformation channel advancement and their usability.
- **Business model:** Vukanovic (2016) specifies that a business model has three components: content, customer experience and platform. These three components act collectively to produce a value proposition for the customer. According to Abolhassan (2017), a business model includes new sales models, new products models and new business models.

Technological transformation requires a set of capabilities of employees such as experience, knowledge, characteristics related to their emotional state, attitudes, motivations, etc. It is important to expand competencies so that people face challenges and generate innovative ideas for finding solutions to problems at work (Mohamad et al., 2016).

2.2. Employee Engagement

It is important for an employer to make the environment favorable to employees in order to improve their performance and also to increase organizational efficiency. Employee engagement is considered as the bond employees have with their organization. When employees really care about the organization, they are more likely to go the extra mile. Perrin's (2003) Global Workforce Study uses the definition "employees' willingness and

ability to help their company succeed, largely by providing discretionary effort on a sustainable basis.” Engagement has been defined as: “an energetic state of involvement with personally fulfilling activities that enhance one’s sense of professional efficacy” (Maslach & Leiter, 2008, p. 498), “the individual’s involvement and satisfaction with as well as enthusiasm for work” (Harter, Schmidt, & Hayes, 2002, p. 269), and as a “distinct and unique construct that consists of cognitive, emotional, and behavioral components that are associated with role performance” (Saks, 2006, p. 602).

Employee engagement is the emotional attachment of employees towards their place of work, job role and position in the company, colleagues and culture. The attachment impacts wellbeing of employees and leads to high productivity. Madan and Srivastava (2015) reported that employee engagement leads to commitment and drives to go ahead the call of duty relating to the organization’s purpose. Ghuman (2016) distinguished employee engagement as the willingness and energy provided to the organizational goal accomplishment with more endeavour on a continuous basis.

Employee engagement is a particular phenomenon, combination of behaviour and attitude. Therefore, employee engagement is identified by three dimensions: cognitive, emotional and physical/ behavioural involvement (Iddagoda, Opatha & Gunawardana, 2016). According to Dunham (1984), physical/ behavioural engagement involves the behaviours apparent at work. Certain behaviours are timeliness, attendance, retention, etc. Robbins and Judge (2013) state that emotional element is the feeling-segment of engagement. It is concerned with the degree to which employees trust the organisation. According to Robbins and Judge (2013), cognitive element of engagement is the faith of an attitude. It is related to the need for employees to be aware of and aligned with the organization’s strategy.

2.3. Empirical Evidence of digital transformation and employee engagement

Studies have been conducted to examine how digital technologies transformation and bring various transformation into business world (for example, Siemens (2014), Resnick (2002), & Hanna (2016)). Adoption of emerging technologies like social media, mobile technologies, cloud technologies, big-data analytics etc. have made transformation in the way the

businesses operate in the market. Lauby (2018) worked on digital transformation and explored about employee engagement through digital transformation. The author opined that advancement of digital age, introduction of artificial intelligence, business automation and application of Internet of things into business are redefining the workplace. The author also cautions that in virtual environment, jobs are disappearing, employees' traditional attitudes are shifting, times are changing very fast and pressures are mounting and hence future generation employees should transform themselves to meet the challenges of technology enabled business". As the digital transformation of the organization is taking place, it is necessary to have an engaged work force due to its several advantages (Buhler, 2006). Developing technology and its vast use in business operation has pushed administration to look in the direction of highly motivated and engaged employees so that operational efficiency can be attained. Most of the literature concentrates on advantages and disadvantages of digital transformation but very little research literature showing correlation among digital transformation and employee engagement are available. Winasis et al. (2020) pointed out that, considering the inadequate studies on the impact of digital transformation on employee engagement in developing countries, further studies should be conducted on these phenomenon.

Goswami and Upadhyay (2019) reported that the digital transformation has an impact on employee engagement based on the survey of 186 staff from different IT companies situated in NCR region (Delhi). The results stress that various aspects of digital transformation are the great predictors of employee's engagement. Winasis et al. (2020) concluded that digital transformation has significant positive impact on employee engagement by surveying 41 staff from a private bank situated in Jakarta (the capital of Indonesia). The bank had a total of 110 employees and had implemented a digital transformation process for one year. The positive impact of digital transformation on employee engagement has been reported by few other researchers (for example, Purba (2021)).

The dimensions of digital transformation namely operational efficiency, business modelling and customer service positively impact employee engagement (Goswami & Upadhyay, 2019). There is a widespread agreement in the service sector that frontline employees play a critical role in

determining positive customer experience (Slatten & Mehmetoglu, 2011). Johnson, Park and Bartlett (2018) reported that customer service positively affect employee engagement.

As per the detailed review related to digital transformation and employee engagement, not much studies have taken place in Sri Lanka. Though there are some studies available based on employee engagement (Iddagoda & Opatha, 2020; Thisera & Sewwandi, 2018; Weerasooriyan & Alwis, 2017), they are not directly related with digital transformation. Most of the studies were related to employee performance, financial performance, leadership styles, etc. Samarasinghe and Darshani (2019) conducted a study at Ceylon electricity board to examine the employee engagement in relation to leadership styles. But no study had taken place to measure the impact of digital transformation on employee engagement at CEB in Sri Lanka.

3. Methodology

3.1. Conceptual Framework

In the present study, the variables are conceptualized as shown in Figure 1.

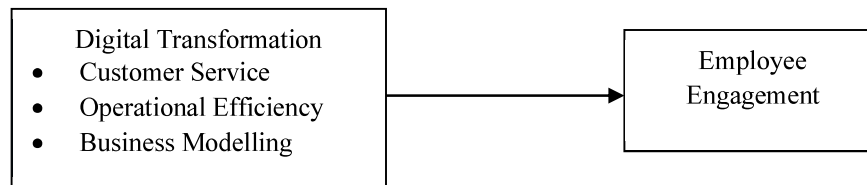


Figure 1 Conceptual Framework

3.2 Working definitions of the study variables

The present study includes three dimensions of digital transformation as independent variables that predict employee engagement. The working definitions of the variables are given below.

- Customer service is related to customer engagement, customer experience, insights and behaviours as perceived by the managers and employees.
- Operational efficiency is related to change management practices, automated resource management, integrated service management and automation.

- Business model involves application of technology, data and analytics, network, delivery governance and new business models.
- Employee engagement is the level of enthusiasm and dedication of employees toward their job.

3.3 Hypotheses Development

The following hypotheses were established based on the literature review.

H₁: Customer Service Experience has a significant positive impact on employee engagement at CEB, Northern Province in Sri Lanka.

H₂: Operational Efficiency has a significant positive impact on employee engagement at CEB, Northern Province in Sri Lanka.

H₃: Business modelling has a significant positive impact on employee engagement at CEB, Northern Province in Sri Lanka.

3.4 Research Design

The objective of this study is to describe the impact of digital transformation on employee engagement of both managerial and non-managerial employees in Ceylon Electricity Board in the Northern Province. In this research, three digital transformation components which are believed to be vital in the employee engagement have been identified as possible contributing factors. In this study, we made an attempt to create the relationship among the dimensions of digital transformation namely customer experience, operational efficiency and business model, and employee engagement. Therefore, this is an explanatory study that seeks to discover the connection among variables. It is a quantitative research and deductive approach was used. The data were collected from managerial and non-managerial employees of CEB and thus the unit of analysis of this study is individual.

3.5 Population and Sampling

The population of the present study includes managerial and non-managerial employees working at CEB offices in the Northern Province of Sri Lanka. The population size is 672 at the time of data collection. 40%

employees from all categories were selected based on stratified random sampling method and the sample size is 273 employees. Out of the total sample, 225 usable surveys were returned and the response rate was 82%. The sampling framework is shown in Table 1.

Table 1. Sampling framework

Division of CEB	Population	Sample
DGM Office	84	34
Area Office Jaffna	189	77
Area Office Vavuniya	127	52
Area Office Kilinochchi	89	36
Area Office Jaffna East	72	29
CE (Construction) Office	38	15
CE (DM) Office	57	23
CE (Planning) Office	6	3
Distribution Control Centre	10	4
Total	672	273

3.6 Data Collection

In this study, questionnaire method was used to collect data and the questionnaire was accompanied by a covering letter that described the purpose of the study. General instructions on how to fill the questionnaire and the significance of answering all questions were also stated. The questionnaire consists of three sections, section one comprises the demographic characteristics of the employee and other two sections are related to digital transformation and employee engagement. Goswami and Upadhyay (2019)'s questionnaire was adopted to measure Digital transformation. Employee engagement was measured using Job Engagement Scale (JES) developed by Rich et al. (2010)

3.7 Analysis tools

The data analysis was performed using SPSS 20.0 software. Descriptive statistics were utilized to get frequency distribution, mean and standard deviation. Correlation and regression analyses were used to determine the linkage among study variables. In addition, Independent sample t-test and ANOVA were used to compare means based on demographic factors.

4. Results

4.1 Sample profile

The profile of research participants was examined based on demographic factors, and the results are reported in Table 2. The questionnaire was distributed to employees who are working at CEB, Northern Province, Sri Lanka. Table 2 shows that 78.7% of the research participants are males and 21.3% of the participants are females. In case of marital status of the employees, 60.9% of the employee are married and the 39.1% of the employees are unmarried.

Table 2. Sample Profile

	Frequency	Percentage
Gender		
Female	48	21.3
Male	177	78.7
Total	225	100.0
Marital Status		
Married	137	60.9
Unmarried	88	39.1
Total	225	100.0
Age groups		
Below 25 years	29	12.9
25-34 years	98	43.6
35-44 years	77	34.2
45-54 years	15	6.7
55 years and above	6	2.7
Total	225	100.0
Experience		
less than six months	8	3.6
6-12 months	7	3.1
01-03 years	44	19.6
4-6 years	51	22.7
above 6 years	115	51.1
Total	225	100.0
Educational Qualification		
Up to Ordinary Level	34	15.1
Advanced Level	127	56.4
Diploma	32	14.2
Degree	32	14.2
Total	225	100.0

Age distribution of the employees represents that 43.6% of the employees belong to the age group of 25-34 years and a very less percentage of employees (2.7%) belong to the age group of 55 years and above. Among the participants, 3.6% have below 6 months of working experiences; 3.1% of have 12 months of working experiences, 19.6% of the employees have 1 to 3 years of working experiences; while majority of the participants (51.5%) have more than 6 years working experience. When consider the education qualifications, most of the employees have passed G.C.E.A/L examination which represent 56.4% of the respondents whereas 14.2% of them have a diploma and 14.2% have a degree.

4.2 Reliability

To measure the reliability of the digital transformation and employee engagement measures, Cronbach's alpha was calculated in the SPSS software. Nunnally (1978) proposed that the Cronbach's alpha should be 0.7 or higher to ensure good reliability. A reliability estimate in between 0.6 and 0.7 also can be acceptable (Hair et al., 2010; and Malhotra and Peterson, 2006). The results of the reliability analysis are shown in Table 3. Reliability of measuring instruments are in the range from 0.665 to 0.894. These values are in the acceptable range. Therefore, the measuring instruments have satisfied the reliability requirement.

Table 3. Reliability of constructs

Variables	Cronbach's Alpha	Number of Items
Customer Experience	0.665	4
Operational Efficiency	0.706	4
Business Modelling	0.692	2
Digital Transformation	0.814	3
Employee Engagement	0.894	3

4.3 Descriptive Statistics

Descriptive statistics are used to perform univariate analysis. Table 4 represents the descriptive statistics of independent variables namely customer service, operational efficiency and business modelling, and the dependent variable namely employee engagement. The mean values for these variables

fall in-between 3.691 and 4.425 (in 1-5 scale). The results show that the mean value of employee engagement is 4.425. This reveals that the mean of digital transformation dimensions and employee engagement are at high level at CEB, Northern Province.

Table 4. Descriptive statistics

	Mean	Std. Deviation	Skewness		Kurtosis	
			Statistic	Std. Error	Statistic	Std. Error
Customer Service	3.752	0.667	-0.639	0.162	0.812	0.323
Operational Efficiency	3.691	0.702	-0.611	0.162	0.762	0.323
Business Modelling	3.891	0.747	-0.674	0.162	0.405	0.323
Employee Engagement	4.425	0.592	-2.011	0.163	1.873	0.324

Skewness and kurtosis values of a data distribution are considered to determine normality of a dataset. The normality of a data distribution is considered acceptable if the values of skewness or kurtosis fall between -2.0 to +2.0 (Hair, Black, Babin & Anderson, 2010). In the present study, as reported in Table 4, the skewness of all variables is in the range from -0.611 to -2.011 and the Kurtosis is from 0.405 to 1.873. It denotes that the data recorded for the digital transformation variables and employee engagement were approximately normally distributed.

4.4 Mean Comparison

Employee engagement was analysed based on demographic factors to compare means and to identify if the mean value of engagement differs based on the factors. Independent sample t-test was used to compare means based on gender and marital status whereas one way ANOVA test was used to compare means based age group, experience and educational qualification.

Table 5. Independent sample t-test for mean comparison of employee engagement

		Mean	Std Deviation	t-value	Sig. (2-tailed)
Gender	Male	4.237	0.643	2.509	0.013
	Female	4.476	0.568		
Marital status	Single	4.414	0.591	-0.350	0.726
	Married	4.442	0.596		

According to the Table 5, there is a significant mean difference in engagement among males and females as the independent sample t-test

produced significant results ($t= 2.509$, $p< 0.05$). Accordingly, the mean value of employee engagement of females (4.476) is higher compared with the mean value of males (4.237). At the same time, employee engagement does not significantly differ based on marital status as the independent sample t-test is not significant ($p=0.726$).

Table 6. One way ANOVA test for mean comparison of employee engagement

	Sum of Squares	df	Mean Square	F	Sig.
Age group					
Between Groups	1.487	4	0.372	1.062	0.376
Within Groups	76.670	219	0.350		
Total	78.157	223			
Educational qualification					
Between Groups	0.508	3	0.169	0.480	0.696
Within Groups	77.648	220	0.353		
Total	78.157	223			
Experience					
Between Groups	5.627	4	1.407	4.247	0.002
Within Groups	72.530	219	0.331		
Total	78.157	223			

As reported in Table 6, one way ANOVA test was conducted to compare mean value of employee engagement based on age groups, educational qualification and experience. The ANOVA test revealed that there is no significant mean difference in employee engagement between age groups ($F= 1.062$, $p > 0.05$). ANOVA test results also revealed that there is no significant mean difference in employee engagement based on educational qualifications ($F=0.480$, $p > 0.05$). At the same time, the mean of employee engagement differs based on experience level and the difference is significant ($F=4.247$, $p<0.05$).

4.5 Correlations

Pearson Product Movement Correlation was calculated to find the relationship between the variables and the results are depicted in Table 7. According to the results reported in the Table 7, the correlation values range from 0.412 to 0.530 between independent variables (customer service,

operational efficiency, business modelling and digital transformation) and dependent variable (employee engagement). The results showed that there is a moderate level positive relationships between the independent and dependent variable. These relationships were statistically significant as the correlations were at 0.01 levels (1 –tailed). The associated significant values (p) are less than 0.05. The results explained that digital transformation and its dimensions namely customer service, operational efficiency and business modelling are positively correlated to employee engagement in CEB in Northern Province.

Table 7. Correlations with employee engagement

Variables	Employee engagement
Customer service	0.468*
Operational efficiency	0.480*
Business modelling	0.412*
Digital transformation	0.530*

Note: * denotes the significance at the 0.01 level (1-tailed).

4.6 Regression Analysis

The regression analysis was carried out to test the impact of customer service, operational efficiency and business modelling on employee engagement. Table 8 shows the summary of the findings. The outcome of the analysis shows that the independent variables statistically significantly predict the dependent variable ($F = 29.810$, $p < 0.001$) and the regression model is a good fit for the data.

Table 8. Results of multiple regressions analysis

Predictors of the Model	Adj. $R^2 = 0.289$		F value = 29.810	Sig F = 0.000 ^b	
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	2.431	0.216		11.562	0.000
Customer service	0.243	0.063	0.274	3.868	0.000
Operational efficiency	0.200	0.075	0.237	2.666	0.000
Business modelling	0.172	0.064	0.213	1.867	0.002

a. Dependent Variable: Employee Engagement

b. Predictors: (Constant), Customer service, Operational efficiency and Business modelling,

According to the model, all variable t values are in between 1.867 to 3.868 and the p values are less than 0.05. This implies that there is a positive

impact of variables namely customer service, operational efficiency and business modeling on employee engagement. From the analysis, the hypothesis H₁: “Customer service has a positive impact on employee engagement at CEB, Northern Province in Sri Lanka” is supported. The hypothesis H₂: “Operational efficiency has a positive impact on employee engagement at CEB, Northern Province in Sri Lanka” is supported. Also, the hypothesis H₃: “Business modelling has a positive impact on employee engagement at CEB, Northern Province in Sri Lanka” is supported.

Moreover, the R² value of 0.289 depicts that the model explains 28.9% of the variation in employee engagement can be explained by customer service, operational efficiency and business modelling. The remaining 71.1% of variance in employee engagement will be explained by other variables which are not included in this study.

5. Discussion

The main objective of this research was to examine the impact of digital transformation on employee engagement. According to the research findings, dimensions of digital transformations such as customer service, operational efficiency and business modelling positively affect employee engagement at CEB, Northern Province. From the finding, it can be said that digital transformation has positive impact on employee engagement. The results are in line with the findings reported by Goswami and Upadhyay (2019) and Winasis et al (2020). These studies considered digital transformation as a total variable in predicting employee engagement. There is no evidence of the impact of each dimension of digital transformation on employee engagement in the existing literature. Hence, we couldn't compare the present study's findings of the impact of each dimension of digital transformation on employee engagement with the previous research findings. In overall, the findings denote that employee may be more engaged in a digitalized work environment.

The specific objective of this research was to examine the impact of customer service, operational efficiency and business modelling on employee engagement. Regression analysis was done to examine the association between independent variables (customer service, operational efficiency and

business modelling) and dependent variable (employee engagement). As per the results obtained in this study, it is concluded that the digital transformation factors positively contribute considerable amount to employee engagement. This result is well supported with the statement of Winasis (2020).

Another specific objective was to examine the differences in employee engagement based on demographic factors. The outcome of the analysis indicated that female employees are more engaged with their organization compared with males. In case of marital status, it is found that there is no significant difference in employee engagement among married and unmarried respondents. Also, study revealed that there is no significant differences in employee engagement based on age groups as well as educational qualifications. In case of experience, there is significant difference in employee engagement among employees with different experience levels.

6. Conclusion

The main objective of this research was to examine the impact of digital transformation on employee engagement. According to the research findings, dimensions of digital transformations such as customer service, operational efficiency and business modelling positively affect employee engagement at CEB, Northern Province. From the finding, it can be said that digital transformation has positive impact on employee engagement. The results are in line with the findings reported by Goswami and Upadhyay (2019) and Winasis et al. (2020). These studies considered digital transformation as a total variable in predicting employee engagement. There is no evidence of the impact of each dimension of digital transformation on employee engagement in the existing literature. Hence, we couldn't compare the present study's findings of the impact of each dimension of digital transformation on employee engagement with the previous research findings. In overall, the findings denote that employee may be more engaged in a digitalized work environment.

The specific objective of this research was to examine the impact of customer service, operational efficiency and business modelling on employee engagement. Regression analysis was done to examine the association between independent variables (customer service, operational efficiency and

business modelling) and dependent variable (employee engagement). As per the results obtained in this study, it is concluded that the digital transformation factors positively contribute considerable amount to employee engagement. This result is well supported with the argument of Winasis (2020). The consequences of change are going to directly affect the psychological condition of employees.

Another specific objective was to examine the differences in employee engagement based on demographic factors. The outcome of the analysis indicated that female employees are more engaged with their organization compared with males. In case of marital status, it is found that there is no significant difference in employee engagement among married and unmarried respondents. Also, study revealed that there is no significant differences in employee engagement based on age groups as well as educational qualifications. In case of experience, there is significant difference in employee engagement among employees with different experience levels.

The present study concludes that the dimensions of digital transformation namely customer service, operational efficiency and business modelling positively affect employee engagement at CEB, Northern Province. According to Parry (2014), digital technologies play an important role in the lives of both employees as well as the organization. As employee engagement acts as a catalyst for innovation and new ideas, the antecedents of engagement should be focused by managers. Hence, digital technologies should be carefully introduced to get the best out of employees in terms of employee retention, higher productivity, lower costs, efficient utilization of resources and better service to the customers.

The digital culture plays as an important role and avoids duplication of work. It would make employees to work effectively without stress and to increase the productivity. The employees' unique ideas could be integrated in the future digital transformation to advance the engagement in the innovations. Allowing feedbacks from all category people under different departments about the digital transformation would give the insight of the employees' perceptions. The researcher recommended that employees need to adopt in a working environment which will lead them to exhibit behaviour that

organizations are looking for. Therefore, the organization should focus on the digital transformation dimensions which influence engagement through each business function.

The findings of the study are useful to understand the association between digital transformation and employee engagement. This study would help the managers in improving employee engagement and thereby to reach organizational goals. Also, the research would provide guidance to change the digital transformation in a proper manner to gain more employee engagement to the individuals. Engaged employees of the firm last long for years and support for the efficient operation of the organization. As a result, this research study would bring new insight and new knowledge regarding digital transformation and employee engagement. This is very valuable in this knowledge-based society since knowledge creates power.

Since the employee engagement is a function of digital transformation, it is expected that this research provides valuable information which will be of great value to CEB as well as Sri Lankan economy as a developing country. This is because this research offers refreshing insights as to enrich the employee engagement through building suitable set of digital transformation. To provide the better services to all consumers in the province with a safe, reliable and quality supply of electricity at statutory voltage at the lowest cost, guaranteeing that the proceeds return is optimal and that the system is established as planned and supplies to consumers are delivered expeditiously and to gain ISO 9000 Quality Management Certification. Therefore, it is vital to visible to the customers regarding the productivity of CEB. It is clear that this study would provide a clear idea of the connection among the study variables. Consequently, it is sure that the future researchers will take this as a base for further investigation.

In the present study, we analysed employee's engagement through digital transformation in a very restricted scope with a number of limitations. As per the review, it is understood that there are limited studies available about digital transformation in relation to employee engagement. With the increasing technological complexity, the concept of employee's engagement has emerged as the essential element for the long-term goal achievement and

survival of the business organizations. The technological implication is bound to be widely utilized in future. Consequently, in the interest of organization as well as employees, digital transformation and its impact on employee's engagement are required to be accurately assessed in the social context. As the current study was limited to CEB in the Northern Province of Sri Lanka, future studies should be extended to other regions as well as other sectors. In addition, the potential mediators such as leadership, organizational culture, motivation, etc. need to be examined to identify the intervention of those variables in the digital transformation-engagement relationship.

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