



## **A study on the relationship between Information and Communication Technology and Employees' Performance.**

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### ***Abstract***

This study investigates the relationship between Information and Communication Technology and Employees' Performance of Divisional Secretariats in the Trincomalee District. 100 employees in the Divisional Secretariats in the Trincomalee District were taken for this study. It aims in measuring the level of Information and Communication Technology, and Employees' Performance in the Divisional Secretariats in the Trincomalee District. The results revealed that the level of Information and Communication Technology, and Employees' Performance are at moderate level and there was a positive moderate relationship between Information and Communication Technology, and Employees' Performance in the Divisional Secretariats in the Trincomalee District.

***Key words:*** *Information and Communication Technology; Employees' Performance; Divisional Secretariats.*

### **1. Background of Study**

This research study empirically investigates the relationship between Information and Communication Technology and Employees' Performance in the Divisional Secretariats in the Trincomalee District.



The organizations and its existence are vital for the existence of living being in the world (Andrew, 2016). Every organization must continuously interact with other organizations and individuals – the consumers, suppliers, regulatory bodies, government and many more. Every organization in the environment has goals and objectives related to each other. The present organization environment is dynamic and will continue to be dynamic much more every day.

In addition, in today's economy, it is very difficult to have effective and efficient organization due to intense complexities in the changing environment. The concept of globalization and economic instability has increased both the frequency and the magnitude of organizational change worldwide.

One of the concepts most frequently researched, discussed and written about in recent years has been change in organizations and ways of its management. It is no surprise, because change is inevitable for organizations that wish to stay competitive and be profitable.

Change is any planned or unplanned transition from one scenario to another. Strategic change is long term in nature, effects the entire organization and aims at achieving effectiveness. Operational change on the other hand is short term in nature, affects sections of the organization and focus on efficiency.

In an ever-changing global economy, Johnson and Scholes (2003) notes that organizations must find ways for operating by developing new competences as the old advantage and competences gained is quickly eroded owing to environmental changes. Most organizational managers today would agree that change has become a constant phenomenon which must be attended to and managed properly if an organization is to survive. Changes in technology, the marketplace, information systems, the global economy, social values, workforce demographics, and the political environment all have a significant effect on the processes, products and services produced (Burnes, 2004).



## **2. Literature Review**

### **2.1 Importance of Organizational Change**

In order to improve the internal and external functionality, the organizations need changes and it is the demand of time (Caetano, 1999). An organization that does not adopt changes cannot survive long in market (Boston, 2000). Organizational changes provide different significant benefits e.g. it improves competitiveness, improves financial performance, enhances employees and customer satisfaction and most important is that it leads organization towards continuous improvement and sustainability (Andrew & Mohankumar, 2016). These are organizational benefits and every individual working in an organization, usually have common goals and objectives and these changes made the organization as a whole stronger (Boston, 2000).

Robertson and Seneviratne (2005) further explained that changes in technology and physical setting to the ways change can be accomplished, which they group with organization arrangements and social factors into a category they label organizational work setting. Their model of the organizational change process has three phases: (a) planned interventions create changes in the organization work setting; (b) these changes in the work setting lead individuals to change their behavior; (c) these individual behavioral changes impact organizational performance and individual development, the key organization outcomes. Others involved in this discussion would emphasize that the intervention strategy needs to be driven by vision and strategy (Beckhard and Harris 2008), and that the arrows linking the components should be double-headed, reflecting the interactive nature of the components in the change process.

Richard (2009) noted that organizational performance should be related to factors such as profitability, improved service delivery, customer satisfaction, market share growth, and improved productivity and sales. Organization performance is therefore affected by a multiplicity of individuals, group, and task, technological, structural, managerial and environmental factors. From above related factors, there are some related factors associated with the conceptual framework most important to the overall organizational



performance and change such as satisfaction, service delivery, technology, organizational structure task, and culture.

## **2.2 Information and Communication Technology (ICT)**

There is a mutually beneficial relationship between organizational change in firms and ICT investments. Information and communication Technology is a key to facilitating new organizational approaches, from lean production to teamwork to customer relations. On the other hand, organizational change is usually needed to realize the full benefits of information and communications technology. Complex technology requires flexible work organization and, at the same time, it increases the capacity to adopt a flexible work organization. In knowledge-based economies, managers need to understand both technological and organizational issues for the implementation of new business approaches (Antonelli and Marchionnatti, 1998).

Organizational approaches central to firm competitiveness are often enabled only by ICT investments. ICT permits closer interaction among internal functions such as production, marketing, finance and strategic decision making; higher levels of vertical integration and product diversification; more decentralization and team-working; and closer interaction with customers and providers of intermediate goods and services. In Italy, one case study found that ICT permits economies of scale for batch production, enables internal restructuring by department and plant, strengthens market relations through electronic communication systems, and allows co-operative relationships and networking to be implemented through online communications systems (Antonelli and Marchionnatti, 1998).

## **3. Problem Statement**

In order to maintain the Employees' excellent Performance and to be more competitive, most organizations are looking to find ways to reduce cost, improve quality and increase productivity. It has been realized that the change management practices is a good starting



point for all improvement efforts aiming to drive out waste from the transformation process, and ultimately improve an organization's bottom line by improving products and services, and lowering cost.

Most research work in relation to change management has been done in developed or western cultural work settings (Andrew, 2015). Very few research works has been found so far in developing countries like Sri Lanka. This requires more attention by researchers and practitioners to establish the Impact of Change Management on Employees' Performance in different work settings environments and cultures.

Fatima (2002) advocated that, change methods adopted by western cultures could be used as a body of knowledge in the domestic situation. Accordingly, the research findings, and change methods adopted by western cultures could be used as a body of knowledge in the domestic situation in Sri Lanka. In this study the variables have been chosen to justify the study in an underprivileged and developing economy where organizations thriving to improve and increase their performance.

### **3.1 Research Question**

This study investigates the relationship between Information and Communication Technology and Employees' Performance in the Divisional Secretariats in the Trincomalee District. Based on the research problem the following research questions are developed;

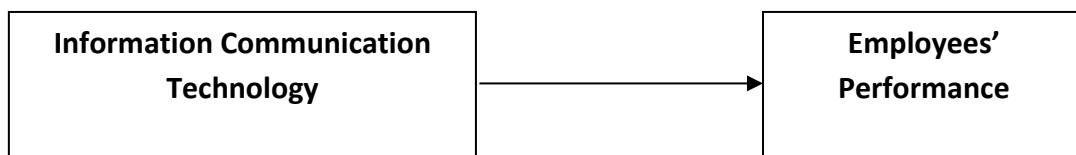
1. What is the level of Information and Communication Technology in the Divisional Secretariats in Trincomalee District?
2. What is the level of Employees' Performance in the Divisional Secretariats in Trincomalee District?
3. What is the relationship between Information and Communication Technology and Employees' Performance in the Divisional Secretariats in Trincomalee District?

#### **4. Objectives**

Based on the review of literature and the conceptual framework, the following objectives were developed to study the relationship between Information and Communication Technology and Employees' Performance in the Divisional Secretariats in the Trincomalee District.

1. To identify the level of Information and Communication Technology in the Divisional Secretariats in the Trincomalee District.
2. To identify the level of the Employees' Performance in the Divisional Secretariats in the Trincomalee District.
3. To assess the relationship Information and Communication Technology and Employees' Performance in the Divisional Secretariats in the Trincomalee District.

#### **5. Conceptual Framework**



**Figure:1 Conceptual Framework**

#### **6. Method of Collection**

A questionnaire consists of a set of questions presents to a respondent for their answers. Under this study questions were issued to employees in a random basis. The respondents were told the real purpose of study prior to issuing the questionnaire and their information was collected from their own words.

##### **6.1 Types of Data**

###### **a) Primary Data**



Primary Data is referred as fresh data. Primary data is collected by / on behalf of the person who are going to make use of data directly. There are many ways to derive primary data. Primary data are collected especially for the purpose of whatever survey is being conducted. Raw data are primary data, which have not been processed at all. The primary data is obtained from structured questionnaires completed by the employees who are working in Divisional Secretariats in Trincomalee.

The Main Primary sources are,

1. Inquiries and Conversations with administrative officers on related institutions.
2. Issuing Questionnaires.
3. Interview with employees who are working there.

**b) Secondary Data**

It is the already used for other purpose by persons / other officers. The data consists of the information that already exist somewhere have been collected for other purposes.

The Main Secondary source data are;

1. Magazines
2. Administrative Reports of Divisional Secretariats
3. Newspapers
4. Central Bank Reports etc
5. Resource profile of Divisional Secretariats
6. Through Web Site/ Internet

The primary data is obtained from structured questionnaires. The questionnaire consists of set of questions presented to a respondent for their answers. Under this study questionnaires were issued to Divisional secretariats' employees in a random basis. The data collected from the 100 respondents in the Divisional Secretaries in the Trincomalee District.

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## 7. Data Presentation and analysis

### 7.1 Demographic Characteristics of Participants

**Table 1: Demographic Characteristics of Participants**

Demographic	Category	Frequencies
Gender	Male	55
	Female	45
Total		<b>100</b>
Age	25-35	20
	36-50	49
	51-55	31
Total		<b>100</b>
Designation	Management Assistant	17
	Grama Niladhari	21
	Samurthi officer	20
	DO & Other Staff Officer	42
Total		<b>100</b>
Educational Level	O/L	14
	A/L	25
	Diploma	26
	Degree	28



	Post graduate/Master	07
<b>Total</b>		<b>100</b>
Experience in the Field	Less than 5 years	39
	5-10 years	40
	More than 10 years	21
<b>Total</b>		<b>100</b>

### **7.1.1 Gender**

Among the sample, 55% of respondents were Male and 45% of respondents were Female.

### **7.1.2 Age distribution of the respondents**

The age distribution pattern of Divisional Secretariats' employees in the Trincomalee district is presented by the sample of 100. Among the sample 20% of the Divisional Secretariats' employees were found to be laid under the age distribution between 36-50 years, 49% were found under the distribution between 25-35 years, 31% were found under the distribution above 50 years.

### **7.1.3 Designation of the respondents**

Among the sample, 17% of the respondents were Management Assistants, 21% of the respondents were Grama Niladharies, 20% of the respondents were Samurthi Officers and 42% of the respondents were Development Officers and other Staff Officers.

### **7.1.4 Working Experience of the respondents**

Working experience was categorized into 3 groups. 39% of the respondents fell under 'less than 5 years'. 40% of the respondents fell between 5 and 10 years. 21% of the respondents fell under 'more than 10 years'.

### 7.1.5 Educational Qualification

Among the sample, 14% of the sample represents the people who have studied up to G.C.E. O/L, 25% of the sample represents the people who have studied up to G.C.E. A/L, 26% of sample has completed the Diploma, 28% of sample has completed the Undergraduate studies, and 7% of sample was Post graduate/Masters qualified graduates.

### 7.2 Research Information

The Mean value and Standard Deviation of the samples of the respondents for variables of the sample taken to decide the extent to which Information Communication Technology, contributing to Employees' Performance.

**Table 2: Mean value and Standard Deviation of the variables.**

Variables	Mean	SD
Information Communication Technology	3.02	0.63
Employees' Performance	3.32	0.52

(Source: Survey Data)

#### 7.2.1 Information Communication Technology

Among the sample of the respondents analyzed, 23% of the respondents were in favour of higher level of Information Communication Technology (ICT), and 51% were in favour of moderate level of ICT, while 26% of the respondents indicated lower level of ICT. The Average Mean value and Standard Deviation (SD) for ICT were 3.02 and 0.63 respectively (Table 2). The Mean value falls within the range of moderate scale of  $2.5 < X_i < 3.5$ . Thereby, Information Communication Technology of the employees is at moderate level.

#### 7.2.2 Employees' Performance

Among the sample of the respondents analyzed, 29% of the respondents were in favour of higher level of Employees' Performance, 67% were in favour of moderate level of

Employees' Performance and 4% were in favour of low level of Employees' Performance. The Average Mean value and Standard Deviation (SD) for Employees' Performance were 3.32 and 0.52 respectively (Table 2). The Mean value falls within the range of moderate scale of  $2.5 < X_i < 3.5$ . Thereby, the Performance of the employee is at moderate level.

### 7.2.3 Relationship between Information and Communication Technology (ICT) and Employees' Performance.

By observing the data a significant positive relationship exists between Information and Communication Technology and Employees' Performance. The table 5.10 shows a correlation matrix, which describes such relationship between the variables.

**Table 3: Correlation Analysis- ICT and Organizational performance**

		Employees' Performance	Information Communication Technology
Employees' Performance	Pearson Correlation	1	.431**
	Sig. (2-tailed)		.000
	N	100	100
Information Communication Technology	Pearson Correlation	.431**	1
	Sig. (2-tailed)	.000	
	N	100	100

\*\* . Correlation is significant at the 0.01 level (2-tailed).

(Source: survey data)

The table 3 shows that Employees' Performance (EP) have a positive significant relationship with ICT ( $r = 0.431$ ,  $p < 0.000$ ). In addition, it is revealed that the strength of the relationship between these two variables is at moderate level as  $r$  is between 0.3 and 0.5.

By considering the correlation analysis and its values, as the  $p$ -value is less than 0.05, we reject null hypothesis. Therefore, it can be concluded that Information Communication Technology has significant positive correlation with Employees' Performance in the Divisional Secretariats in the Trincomalee District.

### **7.3 Information and Communication Technology**

The results of this study revealed that, Information and Communication Technology of the respondents obtained a Mean value of 3.02 and a Standard Deviation of 0.63 (Table 5.7). Among the sample 23% (Figure 5.9) of the respondents have shown high level concern on this aspect by extending higher level of Information and Communication Technology towards Performance of Employees, while 51% (Figure 5.9) of the respondents have shown moderate level interest on this aspect. By observing the data for the Correlation Analysis it revealed that a significant positive relationship exists between Information and Communication Technology and Performance of Employees. It explained that more than 74% of the respondents represented for moderate level and above of Information and Communication Technology towards Performance of Employees.

The Coefficient value of the Correlation Analysis (0.431) reveals that a moderate positive relationship exists between Information and Communication Technology and Performance of Employees.

## **8. Conclusion and Recommendation**



## **8.1 Introduction**

Divisional Secretariats are the important public service centre. Divisional Secretariats in general are considered as the engine of a Countries public service activities.

## **8.2 Conclusion**

The study was set around to examine the influence of Information and Communication Technology and Performance of Employees.

This empirical study was intended to identify the level of the independent variables and to investigate the relationship between independent variables with the dependent variable. The descriptive statistics shows that the mean values obtained for Information and Communication Technology, and Employees' Performance were at moderate level.

The objective to assess the relationship between the independent variables and the dependent variable was based on the conceptual framework the relationship between the Information and Communication Technology and Employees' Performance.

The Correlation Analysis also shows that the relationship between Information and Communication Technology and Employees' Performance were significant.

Moderate Correlation was found between Information and Communication Technology and Employees' Performance.

## **8.3 Recommendations**

The following recommendations are made to increase the Divisional Secretariat's Employees' Performance through Change Management.

- Performance standards should be established and communicated to the top – bottom employees. This will help employees to achieve the standard and take better organizational decisions.



- Motivating the employees to help to achieve the high level of firm's Employees' Performance.

The study also recommends that investment be made in ICT due to its impact on organization's performance. However staff should be properly trained in new and existing technologies in order for better performance to be achieved.

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