

Determinants of Corporate Performance (CP) in Public Health Service Organizations (PHSO) in Eastern Province of Sri Lanka: A Use of Balanced Score Card (BSC)

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Abstract

Corporate performance in public health service organizations is how public health service organization looks at its patients, key disease treatment service lines, learning & growth and resources. Therefore, many authors have used BSC for organisational performance. This study tries to determine factors affecting performance of PHSOs; know the reliability and validity of items & factors and to create a mathematical equation model. Data are collected in both secondary and primary sources. Researcher collected 54 from corporate performance in public health service organisations' performance during the period of 2012 to 1996. Primary data have been collected using questionnaire. Since this is a pilot study researcher selected only 100 hospital employees out of 3 selected government hospitals in Addalaichenai Divisional Secretariat of Ampara District. Collected questionnaires have been analysed by a factor analysis and regression analysis. Results found that patient, key service line, learning & growth and resource factors have been identified as performance of public health service organizations. Cronbach alpha for items in these factors are 0.888, 0.807, 0.651 and 0.857. It shows high reliability for items. KMO is used to know the statistical validity of factors. In this study, values of KMO for patient, key service line, learning & growth and resource are 0.687, 0.502, 0.559 and 0.818. Content validity and convergent validity are higher. Discriminant validity are lower statistically. Log log model is the best fitted model than linear models.

Keywords: Corporate performance, Public Health Service Organizations, Eastern Province, Sri Lanka, Balanced Score Card (BSC)

1. Introduction

Eastern Province (EP) of Sri Lanka consists of three cardinal districts such as Ampara, Batticaloa and Trincomalee. Public health service organisations (PHSO) are all sorts of government medical institutions (GMIs) that are government hospitals (GHs). The word performance has the meaning of "doing or working or functioning" (Hornby, 2002). Performance refers to how good or how bad an organization does its activities. Corporate/ organizational activities are based on key service lines, customers, resources, and learning & growth. These four aspects that are based on the Balanced score card are used for understanding corporate performance of an organisation. In case of public health service organizations, key service lines are key disease service lines. Customers are patients in different key disease service lines. Resources are hospital physical and human resources. Learning & growth are innovation & learning of hospital staff. So, public health service organisations' performance is the performance of key disease service lines, patients, physical & human resources and innovation & learning of hospital staff. The population of Sri Lanka in 2003 was estimated at 19.25 million. The annual population growth rate was reduced to its current 1.3% level with an increase in Life Expectancy at birth. Sri Lanka is aging rapidly (Department of Census & Statistics, 2001). It is projected that by 2020, 20% of Sri Lanka's population will be 60 years of age or over, while the proportion in the young age group is decreasing. These symptoms indicate the need for performance of PHSOs in Sri Lanka. Sri Lanka's progress in health and social development can be seen in the vital health outcomes. The Infant Mortality Rate (IMR) has declined steadily since the beginning of the last century (11.2 per 1,000 live births – 2003) while the Maternal Mortality Ratio (MMR) steadily declined until 1992 but remained stagnant thereafter (47 per 100,000 live births – 2001). However, there was significant district variation in IMR and MMR. Batticaloa and Trincomalee of Eastern Province were among the top ten in maternal deaths in Island. Batticaloa, Trincomalee and Ampara of Eastern Province had 116.1, 60.3 and 31.8 maternal deaths per 100, 000 live births during the past (World Health Organization, 2006). In order to control these health and social conditions, performance of hospitals has to be increased. So, there is an acute need for acquiring the more fund allocations from government or any other source for the start up and upgrade of hospitals. When PHSOs' performance goes up their physical assets such as buildings, wards, maternity units and equipments can also be increased or upgraded from either government or non- governmental sources.

2. Statement of Problem

Research problem is stated by empirical review of literatures. Previous studies related to corporate performance (CP) were reviewed. Sambeek, Cornelissen, Bakker and Krabbendran (2010) studied about optimizing hospital processes which suits for decision- making for the design and control of processes regarding patient flows. It was a cross sectional study. Data were collected from a questionnaire. The result showed that performance improvement occurred due to organizational efficiency, time management, length of stay, bed occupancy, hospital utilization, patient admission, organizational innovation, time factors, quality of health care and waiting lists at organisational level. It is understood that length of stay, bed occupancy and hospital utilization need physical resource in hospital. Patient is hospital patients. Organisational innovation is learning and growth of hospital staff. These three aspects are part of BSC. Meekings, Povey and Neely (2009) explored how to know the performance success in performance management systems in organizations. They collected data from selected case studies. The research found that there are key elements of a success in performance management system. They are performance architecture, performance insights, performance focus and performance action. These four parts provide the necessary success to enable performance management systems to deliver real value by taking together. Performance architecture is the design and structure of performance. Performance is designed or structured by what performance parts/ components and how many performance measurement parts. Performance architecture is suitable performance measurement systems (PMSs) like BSC. It can be realised that hospital performance can be measured on the basis of BSC. Numbers of studies have been done with respect to performance. For example, Nwokah (2009) assessed the influence of customer focus and competitor focus on marketing performance of food and beverages organizations in Nigeria. Moustaghfir (2008) studied the relationship between knowledge asset management and firm performance. Schiuma and Lerro (2008) studied intellectual capital (IC) based factors of company's performance improvement. Velnampy and Nimalathasan (2008) studied that organizational performances can be evaluated using two factors such as firm size and profitability in banks. Zuurmond, Jorg, Dicks and Woudenberg (2007) studied about current processes of government and municipalities. These studies have been carried out in different contexts, in different countries and in different periods. Findings of these studies are also different. Factors identified these studies also different. Therefore this study is undertaken in the performance of public health service organization specially, in government hospitals in Eastern Province of Sri Lanka during the period of 2011 to 2014.

2.1 Research questions and objectives

Empirical review of literatures of previous studies confirms that research issue exists on determinants of performance of public health service organization i.e. government hospitals. This main research issue is cascaded into three sub research questions. They are; first is what factors influence on the performance of public health service organizations. Second is whether these items & factors are reliable and valid?. Third is it possible to create a mathematical equation model. These three research questions are converted into research objectives. They are; first is to determine factors affecting performance of PHSOs. Second is to know the reliability and validity of items & factors. Third is to create a mathematical equation model.

3. Significances of the research

This study signifies in various ways. First, corporate performance increases organizational productivity that is composed of organizational effectiveness and organizational efficiency. Organizational efficiency can be described as an organization that is productive without waste. Organisational efficiency generates and follows the cost minimization. When cost is minimized by the organization it is possible for organization to become a cost- leader (the least leader) in the industry. Organization can achieve competitive edge than other organization. So, when the performance of PHSOs rises wastes can be minimized in government hospitals. Cost minimization is possible in PHSOs by way of utilizing minimum number of health personnel for maximum health services. Overtime payment can be reduced. Or else, first time accurate diagnosis of diseases can minimize the drug cost and cost of ward admission. Efficiency should be achieved by cost minimization. Second, this research looks at diverse performance measures for public health service organizations by customizing BSC measures. Different types of organizations prioritise and measure their performances on the basis of different measures. For- profit organizations measure their performance by focusing only on financial measures for their corporate performances. A marketing oriented company looks at customer measures, manufacturing company focuses on measures with respect to internal business processes. IT Company focuses on learning and growth measures. In reality, corporate performance of any organization should be measured on different perspectives. These measures can be customized for the measurement purposes. Third, PHSOs consider patient, resource, key service line and learning & growth (IT) as their performance measures. So, government hospitals can be able to know the determinants of performance of PHSOs. Fourth, usage of BSC has been increasing time to time in different countries. A number of researches have been done globally using BSC measures in different time periods and in different countries. For example, According to Zelman et al.'s (2003) study the BSC has been adopted by a

broad range of health care organizations, including hospital systems, hospitals, psychiatric centres, and the national health care organizations. Fifth, this research fills methodological gap by adopting a survey research. For example, Chan and Ho (2000) conducted survey executives in nine provider organizations in USA. Chow et al., 1998; Stewart and Bestor, 2000; Pink et al. 2001; Oliveira, 2001; Fitzpatrick, 2002; Shutt, 2003; Tarantino, 2003; Rondor and Lovell, 2003a, b) stated that much of the literature relates to how to apply BSC successfully in health care. But there are less common are surveys about applying BSC in health care. Sixth, there are few articles in BSC in Sri Lanka. This research is in the context of health service in GMIs in EP of Sri Lanka. Thus, this research fills the literature gap.

4. Review of Literature

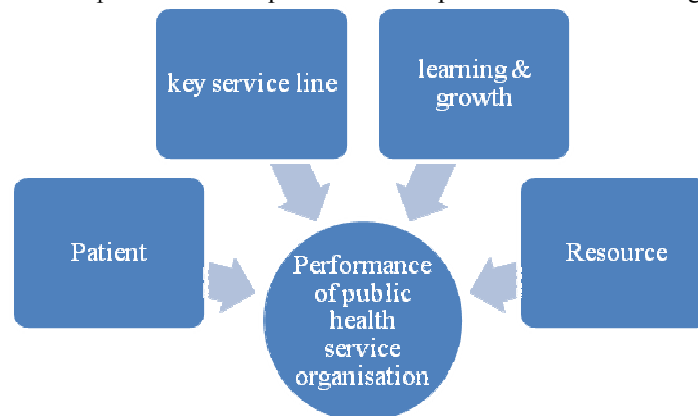
Previous studies of corporate performance are reviewed. Moustaghfir (2008) studied the relationship between knowledge asset management and firm performance. Knowledge assets are knowledge workers and technical people. Innovation & learning emerges from the knowledge assets. When knowledge assets rise in an organization learning capacity of employees rises. He found that the effective management of knowledge asset enhances the value of organizational competencies, which in turn support organizational processes, products and services. Schiuma and Lerro (2008) studied intellectual capital (IC) based factors of company's performance improvement. Intellectual capital includes organisational knowledge and intangible resources. Results showed that there is a space for IC management activities on the main knowledge assets that drive companies' processes improvement. Velnampy and Nimalathasan (2008) studied that organizational performances can be evaluated using two factors such as firm size and profitability in banks. Velnampy(2008) indicated that the performance is evaluated by the factors such as (1) completion of work with in the time. (2) Independent work (3) creativity, (4) innovation. (5) Initiative skill. (6) Discipline. (7) Turnover. (8) Absenteeism. (9) Competition, and (10) training. In another study of Velnampy(2013), return on equity (ROE) and return on assets (ROA) were used as the measures of firm performance. Zuurmond, Jorg, Dicks and Woudenberg (2007) studied about current processes of government and municipalities. These processes were done manually. Government and municipalities try to make these processes into electronic processes. Conversion of manual process into e- process is termed as e-government e- municipalinties (EGEM) agenda in Dutch governmental organizations. It was found that the main challenges for municipalities with regard to authentic registrations are not technical but organizational. Organisational challenges are basis for organizational performance development. These previous studies of corporate performance highlight the components of balanced scorecard (BSC) that are used for corporate performance.

Previous studies of corporate performance are also reviewed using balanced scorecard (BSC). Riley (2012) noted that balanced scorecard perspectives has four perspectives like financial perspective which refers to how does the firm look to shareholders. Second one is customer perspective which refers to how customers see the firm. Third one refers to internal perspective which refers to how well it manages its operational processes. Fourth one is innovation & learning perspective which refers to how firm can continue to improve and create value. He found that it is necessary to identify indicators to measure the performance of the organisations for each of four perspectives. Alic and Rusjan (2010) studied about the contribution of the ISO 9001 internal audit to business performance. They assessed the internal contribution of audit to the achievement of business performance. This study based on 4 perspectives of BSC. Findings revealed that quality management system (QMS) contributed to achieve company's efficiency which can be based on the connection of quality goals with strategic goals of the company. Literature review identified factors for performance of public health service organization. Factors for corporate performance in public health service organizations are patient, key service line factors, learning & growth factors and resource factors.

5. Conceptual model

A conceptual model has been created by researcher using identified factors for performance of public health service organization. This model is a result of detailed and thorough literature review. Factors and measures have been taken from well- known, widely used and generally accepted models. Corporate performance is based on BSC. This conceptual model is shown in figure 1.

Figure 1: Conceptual model for performance of public health service organisation



(Source: Review of literature)

6. Operationalisation of study

Operationalisation for corporate performance in public health service organizations is shown in table 1.

Table 1: Operationalisation for corporate performance in public health service organizations

Concept	Factors	Measures	Number of measures
Corporate performance in public health service organisations	Patient	Waiting time, length of stay (LOS), bed occupancy, new drug brand, joined- up service, patient recommendation, hospital image and knowledge about BSC	08
	Key service line	Staff competency, patient complaint about staff, rework, readmission of case, infections, medical errors, occupational injuries, mortality rate, on-call attendance, emergency treatment of cases and knowledge about BSC	11
	Learning & growth	Interested in knowledge enhancement, knowledge transfer, availability of on- line computers, staff usage of intercom, enhancement of qualification, staff training, health publication and knowledge about BSC	08
	Resource	Funds, donations, buildings, staff, drug inventory and knowledge about BSC	07

(Source: Literature review)

7. Methodology

Data collection is made using secondary source and primary source. Secondary source was used for literature review. Primary data have been collected using questionnaire.

7.1 Data collection

Data are collected in both secondary and primary sources. Literature review was carried out using secondary data collection. Researcher collected 54 from corporate performance in public health service organisations' performance. Secondary source of data collection was made to collect articles. Collected articles were from full text journal articles (indexed & refereed), extended abstracts & abstracts (indexed & refereed), books (reviewed) and Internet access. Corporate performance articles were from during the period of 2012 to 1996. Data have been collected from primary source using questionnaire as an instrument. Questionnaire was prepared in English language first. Then, it is translated into Tamil. Research translated questionnaire from English version to Tamil version on his own with the assistance of the supervisor. Pilot study has been conducted to test the questionnaire in selected government hospitals in Addalaichenai Divisional Secretariat, Ampara District, Eastern Province of Sri Lanka.

7.2 Sampling units (SUs)

Primary sampling units (PSUs) are all government hospital units in all three Districts of Eastern Province. There 65 government hospitals in Eastern Province. Ampara, Batticaloa and Trincomalee districts consist of 29, 18 and

18 government hospitals respectively. Sample size has been determined using the sample size formula. Primary sampling units (PSUs) are research sites i.e. government hospitals where research is carried out. Researcher wished to know how many government hospitals have to be taken from these 65 government hospitals as primary sampling units. He estimated mean number of government hospital units more precisely so that the estimate will be within ± 2 government hospitals of mean number of true population of government hospitals. The following formula is used to calculate sample size of government hospital units.

$$n = \frac{\sigma^2 * z^2}{D^2} \dots \dots \dots \text{formula (1)}$$

D^2 (Source: Malhorta, 2006). Where; σ^2 = variance of the population number of hospitals. z^2 = z value associated with 95 % of the confidence level. Associated z value is 1.96. Of the 65 government hospitals, 39 government hospitals have to be taken as sample size for the study in Eastern Province. 17, 11 and 11 government hospitals have to be taken in Ampara district, Batticaloa district and Trincomalee district of Eastern Province respectively. Pilot study should be undertaken with a limited sample size. Since this is a pilot study researcher selected only 3 government hospitals in Addalaichenai Divisional Secretariat of Ampara District. Secondary sampling units are government hospital staff/ health employees who are working in these 3 government hospitals. There are 31420 health personnel in all three districts of Eastern Province. Ampara district, Batticaloa district and Trincomalee district consist of 19194, 7535 and 4691 hospital staff respectively. Researcher wanted to estimate mean number of health personnel more precisely so that the estimate will be within ± 275 health personnel of mean number of true population of hospital health personnel. The following formula is used to calculate sample size of hospital health personnel.

$$n = \frac{\sigma^2 * z^2}{D^2} \dots \dots \dots \text{formula (2)}$$

D^2 Where: σ^2 = variance of the population number of health personnel. z^2 = z value associated with 95 % of the confidence level. Associated z value is 1.96. Of the 31420 health personnel, 3000 hospital health personnel have to be taken as sample size of SSUs of government hospital employees for the study. 1832, 720 and 448 hospital employees have to be taken as sample size in Ampara district, Batticaloa district and Trincomalee district of Eastern Province respectively. Pilot study should be undertaken with a limited sample size. Since this is a pilot study researcher selected only 100 hospital employees out of 3 selected government hospitals in Addalaichenai Divisional Secretariat of Ampara District.

7.3 Data source, period and analysis

Primary source of data collection have been made to collect questionnaires from hospital employees. A questionnaire has been prepared using identified measures above. Questionnaire consists of two sections such as personal & demographic variables of employees and corporate performance in PHSOs. Instrument-questionnaire is scaled in 5 point likert- scale. Corporate performance in public health service organizations are scaled in agreement scale ranging from 5 to 1. Collected questionnaires have been cross checked and used as input for processing in SPSS. Data have been collected during the period of first quarter of 2013. Collected questionnaires have been analysed by a factor analysis and regression analysis.

8. Results and discussion of findings

8.1 Reliability and validity

Cronbach alpha is most widely used method for checking the reliability of scale. It may be mentioned that its value varies from 0 to 1 but, satisfactory value is required to be more than 0.6 for the scale to be reliable (Malhorta, 2002; Cronbach, 1951). In this study, researcher use Cronbach alpha scale as a measure of reliability. Patient factor is comprised of waiting time of the patient, length of stay, bed occupancy, quality drug brand, joined up services, patient recommendation, hospital image and patient factor as a part of BSC. Cronbach alpha for these 8 items is 0.888.

Key service line factor is composed of staff competency, reduced rework, patient complaint, case readmission, infections, medical errors, occupational injuries, mortality rate, on-call attendance, emergency treatment and key service line as a part of BSC. Cronbach alpha for these 11 items is 0.807.

Learning and growth factor is composed of interest in KSA, use of system by staff, increased qualification, staff training, knowledge transfer, health publication and learning & growth as a part of BSC. Cronbach alpha for these 7 items is 0.651.

Number of computer systems of key service line is removed from this factor due to the value of communality less than 0.6. Resource factor is composed of funds, donations, buildings, furniture, staff, drug inventory and resource as a part of BSC. Cronbach alpha for these 7 items is 0.857.

8.2 Communalities and testing the sufficiency of sample size

Researcher tested collected data for appropriateness for factor analysis. Appropriateness of factor analysis is dependent upon the sample size. In this connection, MacCallum, Windaman, Zhang and Hong (1999) have shown that the minimum sample size depends upon other aspects of the design of the study. According to them, as communalities become lower the importance of sample size increases. They have advocated that if all

communalities are above 0.6 relatively small samples (less than 100) may be perfectly appropriate. In this regard, communalities for waiting time of the patient (0.964), length of stay (0.965), bed occupancy (0.837), quality drug brand (0.735), joined up services (0.937), patient recommendation (0.846), hospital image (0.846) and patient factor as a part of BSC (0.720) are more than 0.6. Communalities for staff competency (.864), reduced rework (.917), patient complaint (.691), case readmission (.803), infections (.709), medical errors (.871), occupational injuries (.821), mortality rate (.872), on-call attendance (.866), emergency treatment (.717) and key service line as a part of BSC (.765) are greater than 0.6. Communalities for interest in KSA (.860), use of system by staff (.863), increased qualification (.844), staff training (.838), knowledge transfer (.845), health publication (.784) and learning & growth as a part of BSC (.794) are greater than 0.6. Communalities for 7 items of resource factor is composed of funds (0.820), donations (0.887), buildings (0.796), furniture (0.815), staff (0.881), drug inventory (0.886) and resource as a part of BSC (0.818) are greater than 0.6. Measure of Keyzer-Meyer-Oklin (KMO) is another method for to show the appropriateness of data for factor analysis. KMO statistics varies between 0 and 1. Keyzer (1974) recommended that values greater than 0.5 are acceptable; between 0.5 to 0.7 are moderate; between 0.7 to 0.8 are good; between 0.8 to 0.9 are superior (Field, 2000). Bartlett's test of sphericity is the final statistical test applied in this study for verifying its appropriateness (Bartlett, 1950). In this study, values of KMO for 8 items of patient factor, 11 items of key service line, 7 items of learning & growth and 7 items of resource are 0.687, 0.502, 0.559 and 0.818. These values indicate sample taken to process factor analysis is statistically significant. In addition to KMO, Chi-square value for patient factor, key service line, learning & growth and resource is 134.4, 124, 386 and 627 with significance value of 0.000. These values confirm test is statistically significant when significance value is less than significance level. Significance value is 0.000 at 5% level of significance. These values indicate that data are statistically significant for factor analysis. Values of KMO and Bartlett test of Sphericity are shown in table 2.

Table 2: KMO & Bartlett's Test of Sphericity

Patient factor			Key service line factor			Learning and growth			Resource		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.687		Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.502		Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.559		Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.818	
Bartlett's Test of Sphericity	Approx. Chi-Square	1.344E3	Bartlett's Test of Sphericity	Approx. Chi-Square	1.240E3	Bartlett's Test of Sphericity	Approx. Chi-Square	386.005	Bartlett's Test of Sphericity	Approx. Chi-Square	627.346
	Df	28		Df	55		Df	21		Df	21
	Sig.	.000		Sig.	.000		Sig.	.000		Sig.	.000

(Source: Survey data)

8.3 Factor Analysis

After examining the reliability of the scale and test appropriateness of data as above, researcher carry out factor analysis to know factors affecting corporate performance of Public Health Service Organisations in Eastern Province of Sri Lanka and to select an appropriate regression model for Public Health Service Organisations in Eastern Province of Sri Lanka. For achieving these objectives, researcher employs principal component analysis (PCA) that is followed by the varimax rotation. Varimax rotation is mostly used in factor analysis (Hema and Anura, 1993). From table, it can be seen that patient factor can have two components. These components are extracted from the analysis with an eigen value greater than 1 (Tabachnick and Field, 1996). In this study, these two components of patient factor explain 86% of the total variation. Three components of key service line factor explain 81%. Three components of learning & growth factor explain 83%. Two components of resource factor explain 84%. Results are shown in table 3.

Table 3: Total variation

Patient factor				Key service line factor			
Component	Total	% of Variance	Cumulative %	Component	Total	% of Variance	Cumulative %
1	4.867	60.831	60.831	1	5.062	46.020	46.020
2	1.984	24.799	85.630	2	2.402	21.833	67.853
				3	1.432	13.015	80.868
Learning and growth factor				Resource factor			
Component	Total	% of Variance	Cumulative %	Component	Total	% of Variance	Cumulative %
1	2.834	40.487	40.487	1	4.414	63.051	63.051
2	1.966	28.081	68.568	2	1.491	21.298	84.349
3	1.028	14.682	83.250				

(Source: Survey data)

8.4 Model selection

Gujarati, Porter and Gunasker (2012) stated that Variation Inflation Factor (VIF) should be less than 10 and Durbin Watson (DW) should be between ($d_L \leq d \leq d_U$) i.e. 1.020 to 1.920 for a model selection. In this study, Log log model has less than 10 for VIF and 1.69 for DW. Thereby, researcher selects this model as the best fitted model for his study. Results are shown in table 6.

Table 6: Selection of model

Models	Type of the model	R ² %	F statistics [MS _X /MS _{error}]	P	Values of VIF	DW	Selected model
CORPORATEPERFORMANCE1 = 1.434 + 673 * PATIENTFACTOR1 + .567 * KEYSERVICELINE1 + .531 * LEARNINGANDGROWTH1 + .675 * RESOURCE1	Linear	100%	[544.390/000]	0.000	10.506, 4.196, 3.670 & 9.847	0.483	
CORPORATEPERFORMANCE1 = - 0.887 + 1.02 KEYSERVICELINE1 + 0.103 LEARNINGANDGROWTH + 1.42 RESOURCE1	Linear model	98.2%	1703.84	0.000	1.659, 3.105 & 4.193	0.314161	
CORPORATEPERFORMANCE _{LOG} = - 0.00294 + 0.411 KEYSERVICELINE _{LOG} + 0.122 LEARNINGANDGROWTH _{LOG} + 0.305 RESOURCE _{LOG}	Log Log model	90.0%	286.74	0.000	1.101, 1.232 & 1.142	1.69130	√

(Source: Survey data)

9. Conclusions

First objective is to determine factors affecting performance of PHSOs. Patient, key service line, learning & growth and resource factors have been identified as performance of public health service organizations. Second objective is to know the reliability and validity of items & factors. In this study, researcher use Cronbach alpha scale as a measure of reliability. Patient factor that is comprised of waiting time of the patient, length of stay, bed occupancy, quality drug brand, joined up services, patient recommendation, hospital image and patient factor as a part of BSC represents 0.888 as Cronbach alpha for these 8 items. Key service line factor that is composed of staff competency, reduced rework, patient complaint, case readmission, infections, medical errors, occupational injuries, mortality rate, on-call attendance, emergency treatment and key service line as a part of BSC has 0.807 as Cronbach alpha for these 11 items. Learning and growth factor that is composed of interest in KSA, use of system by staff, increased qualification, staff training, knowledge transfer, health publication and learning & growth as a part of BSC represents 0.651 as Cronbach alpha for these 7 items. Number of computer systems of key service line is removed from this factor due to the value of communality less than 0.6. Resource factor that is

composed of funds, donations, buildings, furniture, staff, drug inventory and resource as a part of BSC has 0.857 as Cronbach alpha for these 7 items. is 0.857. KMO is used to know the statistical validity of factors. In this study, values of KMO for 8 items of patient factor, 11 items of key service line, 7 items of learning & growth and 7 items of resource are 0.687, 0.502, 0.559 and 0.818. Content validity and convergent validity are higher. Discriminant validity are lower statistically. Third objective is to know the best fitted model. Log log model is the best fitted model than linear models. This model ignores the patient factor. At the same time, it considers key service line, learning & growth and resource factors that explain 90% of the variation on corporate performance of public health service organizations.

10. Limitations and avenues for future research

This research is based a pilot study that depended on small number of sample size. This study could be expanded to a larger sample size that covers Eastern Province.

11. Value addition

This study fills the literature gap. In Sri Lanka, previous studies related to corporate performance in both health service organizations and in non- health service organizations are poor. Limited number of researches are found in Public Health Service Organisations in foreign and Sri Lanka. This literature gap motivated researcher to research PHSOs in Sri Lanka. A conceptual model has been created using identified factors for public health service organization.

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