The Implication of Green Balanced Scorecard on Sustainable Performance in the Hospitality Industry

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Abstract

The environmental oriented decision-making process under the umbrella of sustainability has gained significant attention across the globe. However, many entities yet have not implemented sustainable measures that require to be viewed through a strategic lens to evaluate their performance although such a measure influences the entities' image, competitiveness, profitability, market share, and survival at large. Therefore, the conventional Balanced scorecard that provides the holistic picture of organizational performance in a need for articulating environmental-sustainable measures.

Accordingly, the hospitality industry as a vital industry in the Sri Lankan economy intensely in need of an acculturating environmental-sustainable model with a great emphasis on energy, waste, and resource usage that directly acute environmental responsibility along with the financial benefits. Nevertheless, diversified utilization of Green Balanced Scorecard Practices in the hotel industry shows a lack in the Sri Lankan Context. Therefore, the study overviewed the implication of greening the balanced scorecard that articulates financial and nonfinancial environmental measures on achieving the environmental pillar within the Hospitality Industry.

The study design followed a quantitative approach in attempting the aims of the study, employing 188 self-administered questionnaires to observe the perception of managerial level employees in classified Hotels within Colombo District, Sri Lanka. Data were analyzed using the Structural Equation Model approach in Smart PLS. The reliability and validity of the model were approached with strong path-coefficients and the model ascertained a significant relationship between the implementation of green balanced scorecard and sustainable performance. Furthermore, the environmental dynamism that reflects the organizational ability to respond to the demand for environmental changes mediated the relationship between the green balanced scorecard and environmental performance. Thereby, the study witnessed that environmental measures aligned with sustainable performance would drive the organization towards environmental sustainability.

Keywords: Green Balanced scorecard, Sustainable Performance, Environmental Dynamism

INTRODUCTION

Although sustainability which implicates environmental, social, and economic pillars is a widely discussed topic in the contemporary era, many entities yet have not implemented sustainable measures to evaluate the performance (Kalendera & Vayvaya, 2016). Similarly, Krstić, Sekulić, & Ivanović (2014) showed environmental dimensions of the business activities have been ignored even though these dimensions severely influence the market position and economic transactions. Moreover, the mounting stakeholder pressure regarding environmental issues has raised organizational concentration on a more sustainable framework (Kalendera & Vayvay, 2016)

Länsiluoto & Järvenpää (2010) pinpointed that environmental issues require to be addressed at a strategic level since they influence on an entity's image, competitiveness, profitability, market share, and survival at large. Also, Soriano, Chalmeta, & Muñoz-Torres (2010) emphasized the managerial responsibility throughout the hierarchy from strategy setting to establishing strategic measures to measure the achievement. In essence, environmental balance requires new content and architecture; mainly in terms of managing and controlling g elements (Figge et al., 2002).

The conventional Balanced scorecard (BSC) model introduced by Kaplan & Norton (1992) encapsulated economic and social measures namely; Financial, Learning and Growth, Internal Business, and Customers.
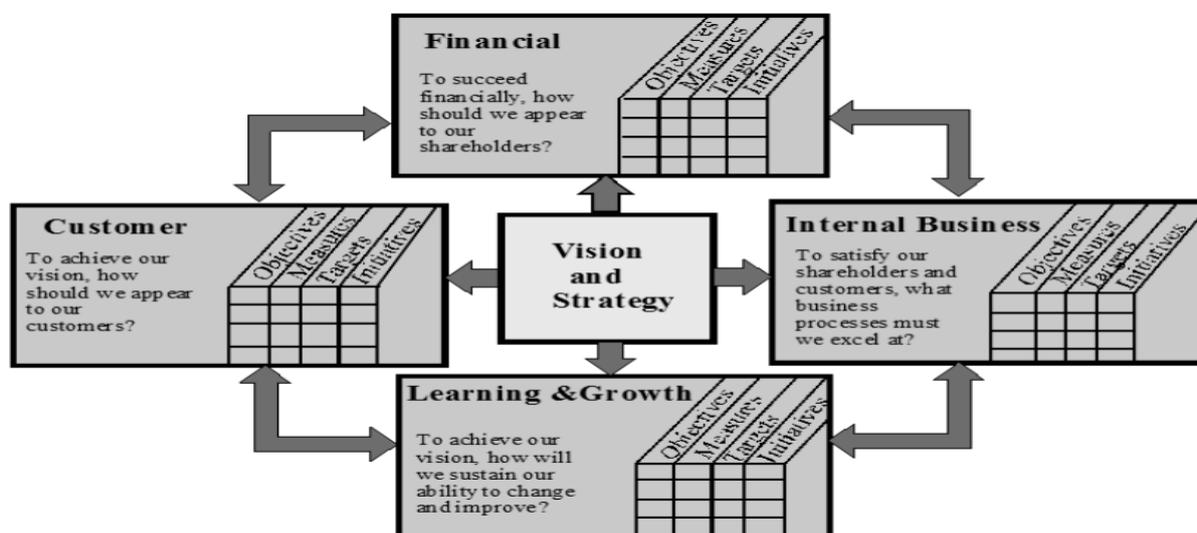

Figure 3: The Conventional BSC

(Kaplan & Norton, The balanced scorecard: Translating strategy into action, 1996)

The Chartered Institute of Management Accountants (2006) defined each quadrant of BSC;1. financial perspective concentrates on how does the business entity appears to be to its shareholders, 2. customer perspective focuses on how does the business entity satisfies its customers, 3. The internal business perspective highlights how does the business processes should excel, and finally 4. The learning and growth perspective measures how does the business entity create value through

long term improvement and growth. Hereby, this conventional model translates a business entity's goals into performance measures where the goals can be appraised and quantified, and in turn, the model converts the strategies into actions (Rigby, 2015; Kalendera & Vayvaya, 2016).

Taking into account this mismatch of demand for economic, social, and environmental performance management and the conventional perspective of balanced scorecard Nicolau et al. (2005); Figge et al. (2002) suggested improving conventional balanced scorecard with environmental measures. Herein, it allows organizations to translate their sustainable-environmental focused vision into actions (Kalendera & Vayvay, 2016). Furthermore, since the conventional model provides feedback on the internal business processes and the external outcomes of those processes, it can be used as a continuous improvement tool to determine most sustainable-strategic performance and results (Johansson and Larson, 2015).

However, the extra cost in implementing continuous sustainable practices and the difficulties associated with quantifying sustainable practices and inability in finding a meaningful pattern to integrate sustainable performance into financial measures have dragged organizations to non-application of a sustainable performance measurement model (Butler, Henderson, & Raiborn, 2011). Even though the conventional scorecard has successfully integrated important performance aspects, yet it does not consist of environmental components as imperative business drivers (Wati & Chulmo, 2011). Also, Kalendera & Vayvaya (2016); Butler, Henderson, & Raiborn (2011) emphasized the importance of implementing strategic management tool that bridge the gap between economic and environmental performance, Therefore, this study overlooks the implications of green balanced scorecard in achieving sustainable performance in terms of economic, societal and environmental means. Further, the study observes the mediator role of firms' ability in responding to environmental changes since such an ability shaping up the entity's tolerance towards the environmental-sustainability.

Moreover, the rapid growth in the tourism industry has raised the industry concern on the environmental impact. Increased environmental consciousness, broad awareness, and long term cost savings have become vital factors for the hotel sector to entertain more environmentally friendly practices (Sloan, Legrand, & Chen, 2013). Goldstein & Primlani (2012) stressed that increased attention of the regulatory authorities, investors and society has led the hoteliers to adopt more environmentally friendly policies. Nevertheless, an application of strategic tool which assimilates environmental sustainable goals is poor in the business entities. Accordingly, (Chen, Hsu, & Tzeng, 2011; Phillips & Louvieris, 2005) assured balanced scorecard as a vital tool in

converting these sustainable strategic insights into practices in the hotel sector. Hence, the study will concentrate on the perceptions of managerial level employees in hospitality sector reference to the implementation of strategic balanced scorecard sustainable performance.

THEORETICAL FRAMEWORK

The fundamental elements of corporate social responsibility often make theoretical contributions to this field of research due to the absence of vigorous taxonomy for corporate environmental responsibility (McWilliams & Siegel, 2001). In many respect, CSR dimensions go parallel with the environmental dimensions since the level of energy consumption, level of wastage, the carbon footprint can be quantifiable in the CSR spectrum (Lundgren & Scholtens, 2019). However, CSR literature elaborates on how these issues should address strategically and altruistically rather than linking them to the performance measurement system.

Therefore, Singh, Murty, Gupta, & Dikshit (2007) study which relied on stakeholder theory pinpointed that environmentally sustainable practices should carefully identify and measure negative externalities caused by the companies to all stakeholders. Hart (1997) who focused exclusively on the entity's environmental-socio responsibility applied a resource-based view to constitute resources or capabilities that lead the entity towards sustained competitive advantage. Then, Elkington (2004) advocated triple bottom line reporting, whereas organizations require to provide stewardship account on environmental aspects over financial aspects. Moving to the scope of management accounting TBL provides great insight to report the environmental performance of the organization (Gray & Milne, 2004; Elkington 1997). Hence, to articulate these perspectives into accounting framework Hawken, Lovins, & Lovins (1999) suggested four types of capital; manufactured, financial, human, and natural which goes in line with the four perspectives of the balanced scorecard; internal business, financial, learning and growth and customers.

Greening BSC

The Balanced Score Card engrosses strategic non-monetary factors into account that significantly impact on the economic success of the business entity. Therefore, it is introduced as a promising starting point that incorporates environmental elements into the management system of the firm (Figge et al.,2002). Accordingly, Kalendera & Vayvaya (2016) claimed that BSC as a strategic management tool has the highest potential in integrating environmental, social, and economic aspects. Thereby, the study of Länsiluoto & Järvenpää (2010) proposed BSC as a worthwhile tool for environmental management. Since, the BSC model provides feedback on external outcomes of

internal business processes it can be implemented as a continuous improvement tool (Johansson & Larsson, 2015).

Butler, Henderson, & Raiborn (2011) Formulated a sustainable framework that requires to be attached to the BSC model. Then, the study presented three scenarios where environmental aspects require to be integrated into existing four standard dimensions; Secondly, a new perspective can be created to take environmental aspects; Thirdly, an environmental scorecard can be formulated. Then, Nicolau et al. (2005) presented a model that require to be followed the phases namely; 1. Scanning the internal and external environment; 2. Determining an entity's vision, mission, and core values; 3. Structuring entity's strategic goals through four conventional perspectives of BSC (financial, customer, internal processes, learning, and growth); 4. Directing these conventional perspectives towards sustainable development by adding environmental dimensions; 5. Managing performance sustainably focusing on economic, environmental, and societal dimensions. In contrast, Figge et.al (2002) suggested a deductive approach where it requires adding; environmental perspective as the fifth perspective to a balanced scorecard. Notably, most scholars argued the operationalization of BSC becomes easy with introducing the fifth dimension; environmental dimension to classical BSC.

However, Lambert, Carter, & Burritt (2012) claimed that even though tools are well established they require periodic modification in order to meet expected sustainable development goals. Herein, the selection of the key performance measures to design a rigorous balanced scorecard is vital in the modern era where the entities face more growing environmental challenges (Tsai, Chou, & Hsu, 2009).

Table 1: Elements of Green Balanced scorecard

Green Shareholding	Green shareholding focuses on individuals who consider ethical investments relating to society and the environment. Thereby, the degree of investment would depend on the degree of tolerance of the environment damage (Zechner & Heinkel, 2001)
	Anis et al. (2018) studied green investment as a function of firm size, foreign ownership, and industry profile. Thereby, findings encouraged business strategy that will promote green investment to prevent the destruction of the environment.

Roslen, Yee, & Ibrahim (2017) emphasized that shareholders' wealth reacts towards the green investment announcement. Simply, they react positively on green investment announcement made by the business entities.

Nishant, Teo, & Goh (2017) application of natural resource-based view and signalling theory presented that environmental performance records influence on investment. Furthermore, green IT investment and infrastructure announcement positively influence on investment. In contrast, the study found that announcement relating to sustainable products negatively influence on investment.

Green Business Processes	Conventionally, business processes focused on the economic imperatives namely; cost, time, and efficiency. As a result, business processes have become a major contributor to environmental degradation produced by greenhouse emission, wastage and resource consumption (Seidel, Recker, & Brocke, 2012). Businesses should engage in green process-focused discussions that enable a comprehensive understanding of business processes that ultimately result in a green process-centric entity
	Business process management requires to be focused on understanding, modelling, and optimizing businesses' technology to reduce the emission impact (Ghose, Hoesch-Klohe, Hinsche, & Le, 2010). Herein, the study focused on emission of six greenhouse gases which classified into three scopes; 1. Business activities that result in direct emission of greenhouse gases, 2. Emission takes place external to the organizations but the responsibility of the organization, 3. Indirect emission. Thereby, the study has developed carbon-aware process management system to design sustainable business processes.
	The Couckuyt & Looy (2020) study highlighted that business processes have mainly relied on quality controls, business management and the information systems. However, green information systems dominate the green business disciplines. Therefore, it requires a technology-based solution to cope with environmental issues.
Green learning and growth	Execution of sustainable human resource management practices is introduced as green human resource management (GHRM). GHRM that drive organizations towards environmentalism is caused by green training and development (Pallewaththa & Kumarasinha, 2018)

In order to accelerate green learning and growth, it requires to develop green dynamic capabilities and needs to encourage green transformational leadership (Chen & Chang, 2013).

Further, Goldstein & Ford (2001) suggested that the efficacy of environmental learning can be improved if employees are psychologically ready for learning.

Rajput & Pachauri (2018) explained green learning and growth functions are embedded in the green culture of the organization.

This environmental learning and development culture would facilitate exploratory learning and skill development which would subsequently encourage green innovations in the organization (Zakaria, 2013).

Green customers

Green customers purchase decision solely depend on environmentally sound goods and services (Narula & Desore, 2016).

Laroche, Bergeron, & Barbaro-Forleo (2001) pointed consumers as the focal point of this greening process since he/ she is the one who decided to reduce environmental footprint through sustainable consumption.

Now a day's consumers more aware of environmentalism and concerned about the environmental harm caused by the products and services they consume (Straughan & Roberts, 1999).

The fact that consumers purchasing pattern change towards sustainable products and services add-on responsibilities of the business organizations (Ottman, 2006).

Interestingly, Narula & Desore (2016) highlighted that consumers go for the green to satisfy their self-esteem and self-actualization needs as they feel they are belonging to a particular environmentalist group and they continuingly adhere to green behaviour as they believe they have a moral obligation towards the society.

Environmental Dynamism

The issue of matching an entity's internal resources and capabilities with the external environment is mandatory to discuss in the field of strategic management (Andrews, K.R., 1971). Accordingly, environmental dynamism which considers environmental diversity facilitates organizations to view different perspectives of different groups (Petrus, 2019). Thus, environmental dynamism can be simply defined as a change that took place in an environment that has influenced the way of

competing, responding to consumer demand, and development of the business (Drnevich & Kriauciunas, 2011; Li & Liu , 2014). The study Teece, (2007) reflected that entity's ability to make the right decisions, sense new business opportunities, reconfigure the entity's business resources depend on the entity's dynamic capabilities.

In the contemporary era where there are rapid environmental changes; businesses require to exhibit greater environmental dynamism to respond and cope with new environmental conditions (Hitt, Keats, & DeMarie, 1998; Jiao, Alon, & Cui, 2011). Therefore, in this process of greening balanced scorecard is mandatory to match organizational resources and internal capabilities with the external environmental changes. On the other hand, the information asymmetry created by environmental dynamism that associate with the environmental unpredictability, volatility, instability; demand more information relating to environmental performance (Karna, Richter, & Riesenkampff, 2016).

Sustainable Performance

Labuschagne, Brenta, & van Erck (2005) claimed that the entity's business practices entail sustainable performance objectives namely; economic efficiency, social equity, and environmental performance. Economic performance refers to an assessment of business success in relating to assets, liabilities, and market strength (Afonso & Jalles, 2011). Orlitzky (2008) affirmed that concentration only on financial performance no longer ensures long term survival. Thereby, entities require to combine financial and non-financial performance measures including how social activities and environmental activities integrate into the strategic decision-making process. Ranganthan (1998) specified four elements of social performance such as; community relation, employment, the social impact of a product, and ethical sourcing. Similarly, Ranganathan (1998) defined vital measures of Environmental performance such as; energy consumption, waste disposal, material use, and non-productive output. Likewise, sustainable performance can be viewed from different perspectives such as managing ecosystem, environmental protection, license to operate, reducing externalities, and social acceptance (Büyükozkan & Karabulut, 2018).

Since the Porter & Van der Linde (1995) study overlooks environmental practices, it highlighted that trade-off should exist between environmental practices and sustainable performance Initially, the pursuit of environmentally friendly goals is associated with the mounting cost. However, the execution of environmentally friendly strategies and implementation of environmentally friendly business practices results in better performance in long run. (King & Lenox, 2001). DeSimone & Popoff (2003) asserted that environmental parameters as sustainable measures   Petros & Enquist (2007) claimed that sustainability is more than recycling, reducing energy consumption, and

reducing waste. So, it should present a holistic picture of all the business processes and practices (Epstein, 2008).

Table 24: Impact of Greening Balance Score Card on Sustainable Performance

Green Shareholding	Kölbel, Heeb, Paetzold, & Busch (2020) suggested that green investment would contribute towards achieving societal performance goals.
	Heinkel et al. (2001) claimed that investors' environmental preference subsequently influences on market prices of the shares. Similarly, Baker et al. (2018) study indicated green investment instrument with green benefits influence on asset prices, and subsequently, it would influence on financial performance.
	Heinkel, Kraus, & Zechner (2001) showed environmental investment influence on the cost of capital of the firm, then, financial performance.
	Anis et al. (2018) study that aimed to investigate green investment impact on financial performance analyzing the annual reports of Indonesian listed companies throughout 2009-2014 showed green investment influence on firm characteristics.
	However, in public listed company's investor preferences make no difference in economic performance (Kölbel, Heeb, Paetzold, & Busch, 2020; Blanchard et al., 1993).
Green Business Processes	Ghose, Hoesch-Klohe, Hinsche, & Le (2010) study revealed that managing business processes to optimize environmental performance while reducing the impact of emission result in production cost savings.
	Vrchota, Pech, & Rolínek (2020) found that implementation of green technologies in production processes would deliver sustainable performance outcomes such as emission reduction, energy savings, resource optimization, productivity, cost reduction, workplace safety and social welfare. In essence, implementation of green processes results in environmental, economic and societal performance.
	The green processes that take the form of reverse logistics, product life cycle management, and lean manufacturing would result in production cost savings which would later bring more cost advantages to the company (

	Liu & De Giovanni, 2019 ; Dev, Shankar, & Choudhary, 2017; Buer, Strandhagen, & Chan, 2018)
Green learning and growth	Ahmed Fathi (2019) found that the green learning and growth perspective optimize the sustainability performance where the company cares about employees and maintain their health and training well to raise the productivity of its employees.
	The green learning and growth opportunities highly motivate the employees who are psychosomatically prepared for learning, and such motivation would improve the performance (Goldstein & Ford, 2001). However, if the employees are not psychologically prepared it would hinder the organizational performance.
	Obaid & Alias (2015) pointed out that green HRM practices that focus on green learning and growth reduce adverse environmental issues and enhance positive environmental performance.
Green Customers	The business entities green marketing strategies oriented towards the customers enhance the green marketing strategies and consequently, business entities economic performance (Wu & Lin, 2014).
	The study Eneizan, Wahab, Zainon, & Obaid (2016) concluded green-focused customer strategy that consists of green products, green price, green distribution, green promotion, green people, green physical environment drive business towards the positive financial and non-financial result. However, the study further highlighted that this era of green customer performance is under empirically tested.

Contextual Green Concern

Profoundly, in the context of the Nigerian hotel sector Jayawardena (2008) highlighted the importance of green recruitment, training and retaining employees within the hotel network. Moreover, Gogus, Karakadilar, & Apak (2013) the study that considered the application of the sustainable-measurement model in the hotel industry, claimed that such an approach would support the hotelier sector in achieving a competitive advantage that drives the sector toward success. In addition, Tacconi, França, Silva, & Marques (n.d.) revealed that the hospitality industry is confronted with the new eco-tendencies and it has demanded to implement Environmental Performance Indicator – EPIs to differentiate one service provider's performance from the others.

Following Sakshi, Shashi , Cerchione, & Bansal (2020) performed an empirical analysis that considered the hotel industry's environment policies ascertained a positive relationship between environmental policy and sustainable performance. Nevertheless, there's a dearth of studies in the considering industry which have focused on the application of green performance measurement tool.

Literature Gap

The analysis of extant literature confirms the absence of rigorous management framework to measure sustainable performance, and it suggested green balanced scorecard as the prominent tool to encapsulate sustainable performance elements to the business's strategic framework. Furthermore, the application of green performance measures reflected contradictory results in terms of economic, environmental and societal performance. Accordingly, the study has designed the following model to determine how the application of green balanced scorecard would influences on sustainable performance in the context of the hospitality industry.

Green BSC

Green Shareholding

Green Business Processes

Green innovations

(Green learning and growth)

Green Customers

Sustainable Performance

Environmental Performance

Social Performance

Financial Performance

Organizational Responsive Dynamism
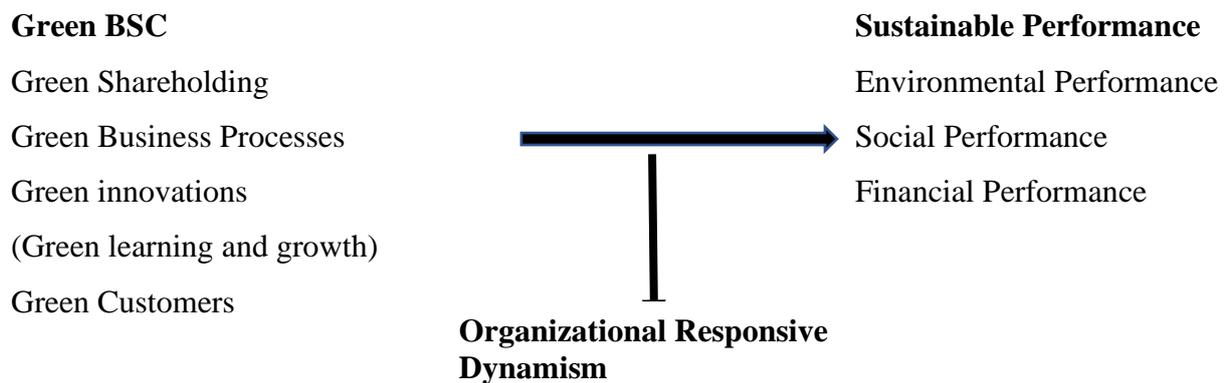
Figure 2: Conceptual Model

METHODOLOGY

Research Design

The research designed to measure the perceptions of managerial employees in the hospitality and tourism industry adopted quantitative philosophy while distributing self-administered questionnaires among managerial level employees in the Hospitality and Tourism sector following a convenient sampling technique. The original questionnaire comprised section one with demographic analysis and then section two containing statements regard to the core variables relevant to the implication of Green Balanced scorecard on Sustainable Performance through a

Mediating Role of Responsive Environmental Dynamism. The population of this study consisted managerial level employees contribute in Hospitality sector of the industry with special reference to Colombo district in Western Province of Sri Lanka. Then study collected responses from 188 managerial level employees that were screed and finalized as reliable data materials among 200 sample that expected data scaled within the study. Moreover, the study developed a structural equation model using SMART PLS software.

ANALYSIS

To perform the data analysis SmartPLS V-3.2.9 and Statistical Package for Social Sciences (SPSS v-23) are used. The study utilize the tools specifically since, Smart - PLS, was preferred given its robust component-based approach, avoids estimation and identification issues in the study, also handling comparatively smaller samples that has less restrictive assumptions on normality of data distribution. Most importantly the study focusing theory building on the results prediction and PLS has shown promising applicability in it. "It is equally suitable for theory building, theory extension and predictive applications" (Henseler, Ringle & Sarstedt, 2015). Also, with the fact that, the thumb of rule for PLS path modeling demands only a sample of 60 cases where the above study have a sample of well above the minimum requirement the analysis predict its applicability well in the model analysis.

Descriptive Analysis

Descriptive statistical insights are summarized in table 1 to depict the composition and the structure of the data obtained. Accordingly, descriptive statistical data classified into four sub-clusters namely; gender, age, years of work experiences, and level of education.

Table 3: Descriptive Statistical Analysis

Items	Frequency	Percentage
Gender – Valid		
Female	69	36.70%
Male	119	63.30%
Total	188	100.00%
Age – Valid		
20-30 years	58	30.85%
31-40 years	112	59.57%
41-50 years	12	6.38%
51 and above	6	3.19%

Total	188	100.00%
Working experience – Valid		
1-5 years	71	37.77%
6-10 years	94	50.00%
11-15 years	19	10.11%
More than 15 years	4	2.13%
Total	188	100.00%
Education – Valid		
Undergraduate	43	22.87%
Graduate	104	55.32%
Postgraduate	12	6.38%
Others	29	15.43%
Total	188	100.00%

Source: Author's data analysis output

Overall detail describes the sample was rich with more male respondents (64%) than the female sample (69%). Most of the respondents were belonging to the age category in between 31 – 40 while very few respondents laid above 51 in this sample. The education levels of the sample seem to depend more on the graduate level and less priority for postgraduate levels. In the aspect of earners for the tourism industry. Significant record is that; sample employment experience capabilities are at an excellent scale where most of the respondents belong to 6- 10 years' experience level in the Hospitality sector that creates more productive data analysis since the most respondents scatter between experiences practical exposure in the industry concerning green balanced scorecard utilization in a sustainable perspective.

Table 4: Mean Values and Pearson Correlations (R)

Variables	Mean	GSH	GBP	GLG	GCU	ED	FP	SP	EP
GSH	3.893		0.436**	0.401**	0.422**	0.285**	-0.209**	0.412**	0.338**
GBP	4.32	0.436**		0.442**	0.456**	0.301**	-0.112**	0.344**	0.456**
GLG	4.112	0.401**	0.442**		0.423**	0.358**	-0.116**	0.324**	0.410**
GCU	3.778	0.422**	0.456**	0.423**		0.289**	-0.196**	0.405**	0.418**
ED	3.556	0.285**	0.301**	0.358**	0.289**		-0.134**	0.421**	0.453**
FP	2.114	-0.209**	-0.112**	-0.116**	-0.196**	-0.134**		-0.389**	-0.115**
SP	3.241	0.412**	0.344**	0.324**	0.405**	0.421**	-0.389**		0.432**

EP	4.018	0.338**	0.456**	0.410**	0.418**	0.453**	-0.115**	0.432**

N=188

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

GSH: Green Shareholding, GBP: Green Business Processes, GLG: Green learning and growth, GCU: Green Customers, ED: Environmental Dynamism, FP: Financial Performance, SP: Societal Performance, EP: Environmental Performance

Table 4 of the study defined mean values and Pearson correlation values for the data set. It indicates a negative relationship between the greening balanced scorecard and financial performance. However, the greening balanced scorecard has revealed a significant positive relationship between social performance and environmental performance. Furthermore, Pearson correlation values underneath 0.90 confirm the absence of multicollinearity issue (Henseler, Ringle & Sarstedt, 2015).

Validity and Reliability of the Model

In examining the suitability of the developed models in the study, validity measurement confirmation of the above analysis will access the interpretation of the results from the structural equation model study. In determining the objective in this study, before running the structural equation model in testing hypothesized relationships through structural model analysis in smart PLS, the analysis was performed with relevant to the developed measurement model in accessing the model's validity and reliability affecting its constructed scales in the model.

The main eight defined constructs relevant to scales of its own has to be tested in confirming and predicting the relevancy of this established model in the tourism context. Further, the reliability and validity analysis is carried which concerns with the extent that a set of developed items reflect the theoretical latent constructs they were designed to measure according to (Hair), under the analysis of internal consistency, indicator reliability, convergent validity, and discriminant validity for the measurement model in the study.

Accordingly, the reliability and validity of the above measurement model depicts its results in the forms of the above dimensions in the below section (Table 05) with its findings for each and evaluating the significant relevancy of the purified model.

Construct Reliability (CR) was evaluated to assess the internal consistency of each construct of the model. It depicts the satisfactory internal consistency when the composite reliability (CR) of each constant exceeds the threshold value 0.7. The (table 05) shows the CR of each construct with high CR for the study, these measures all suggest that the constructs of the model have strong internal consistency, with values above the recommended value of 0.7. It shows the items used to represent the constructs have satisfactory internal consistency within the model

When accessing indicators reliability, a researcher will evaluate the extent to which a variable or a set of variables is consistent with what it intends to measure. (Henseler, Ringle & Sarstedt, 2015). It is examined through item loadings. The model depicts its satisfactory indicator reliability when each item's loading is at least 0.5 and significant at least at the level of 0.05. Analysis all items in the measurement model exhibit loading exceeding 0.7 where all items are significant at the level of 0.001 with loadings for each item for their respective constructs indicating that the model has a satisfactory indicator reliability

Then further, in this study, the measurement model's convergent validity is assessed by examining its average variance extracted (AVE) value. Convergent validity is adequate when constructs have an average variance extracted (AVE) value of at least 0.5 or more. Table 5 shows that all constructs have AVE ranging from 0.582 to 0.612, which exceeded the recommended threshold value of 0.5. This result shows that the study's measurement model has demonstrated adequate convergent validity. It involves the degree to which individual items reflect a construct converging in comparison to items measuring different constructs. (Ahlemann 2010).

Table 5: Measurement model

Variables	Items	Factor loadings	Cronbach's alpha	Composite reliability	AVE
Green Balanced scorecard					
GSH	GSH 1	0.820	0.902	0.894	0.583
	GSH 2	0.905			
	GSH 3	0.792			
	GSH 4	0.834			
GBP	GBP 1	0.875	0.892	0.831	0.601
	GBP 2	0.853			
	GBP 3	0.882			
	GBP 4	0.887			
GLG	GLG 1	0.801	0.919	0.872	0.601
	GLG 2	0.768			
	GLG 3	0.778			
	GLG 4	0.831			
GCU	GCU1	0.88	0.841	0.885	0.582
	GCU2	0.768			
	GCU3	0.772			

	GCU4	0.878			
ERD	ERD 1	0.774	0.894	0.835	0.594
	ERD 2	0.754			
	ERD 3	0.804			
	ERD 4	0.884			
FP	FP 1	0.781	0.811	0.845	0.593
	FP 2	0.776			
	FP 3	0.728			
	FP 4	0.777			
SP	SP 1	0.763	0.921	0.856	0.608
	SP 2	0.746			
	SP 3	0.702			
	SP 4	0.746			
EP	EP 1	0.784	0.884	0.804	0.612
	EP 2	0.755			
	EP 3	0.729			
	EP 4	0.711			

Table 05 measurement model presents the internal consistency of the data set. Cronbach's alpha and composite reliability were observed more perceptible than 0.7 (Henseler, Ringle & Sarstedt, 2015). Factor loadings and composite variables above 0.7 ensure the internal consistency of the data set. Convergent legitimacy is measured by the average variance extracted (AVE) model. Accordingly, the AVE value of 0.5 affirms the convergent legitimacy. The results presented in table 03 sustained the fundamental parameters.

As the last acceptance, Discriminant validity was assessed for each construct of the model to ensure that the scales were each measuring unique construct. In this study, the measurement model's discriminant validity is assessed by using cross-loading. As discussing that, a measurement model has discriminant validity when the indicators' loadings are higher against their respective construct compared to other constructs .Accordingly, to examine the indicators loading concerning all constructs correlation, the output is created by smart PLS algorithm function which is shown by the table 4,in which the output of cross-loadings between constructs and indicators are depicted. Also, it depicts all measurement items loaded higher against their respective intended latent variable compared to the other latent variables. Also, it highlights the loading of each block is higher than any other block in the same rows and columns. The loading separates each latent

variable as theory implies in the conceptual model. So, it proves that it accompanies the model's discriminant validity. So, this concludes measurement model has established its discriminant validity in a significant way.

Table 6: Discriminant validity Fornell-Larcker criterion

Variables	GSH	GBP	GLG	GCU	ERD	FP	SP	EP
GSH	**0.745**							
GBP	0.543	**0.741**						
GLG	0.456	0.487	**0.774**					
GCU	0.561	0.523	0.498	**0.752**				
ERD	0.423	0.502	0.432	0.463	**0.721**			
FP	0.221	0.234	0.247	0.256	0.287	**0.711**		
SP	0.294	0.214	0.247	0.236	0.287	0.298	**0.798**	
EP	0.382	0.451	0.456	0.521	0.456	0.321	0.541	**0.764**

The results appeared to be in table 06 presents the square base of AVE.

Table 7: Results of loadings and cross loadings

		GSH	GBP	GLG	GCU	ERD	FP	SP	EP
GSH	GSH 1	**0.820**	0.213	0.104	0.261	0.108	0.200	0.156	0.179
	GSH 2	**0.905**	0.329	0.081	0.214	0.084	0.205	0.349	0.062
	GSH 3	**0.792**	0.181	0.156	0.104	0.167	0.252	0.208	0.117
	GSH 4	**0.834**	0.215	0.288	0.080	0.258	0.089	0.176	0.135
GBP	GBP 1	0.498	**0.875**	0.202	0.166	0.326	0.174	0.242	0.201
	GBP 2	0.356	**0.853**	0.104	0.229	0.098	0.213	0.250	0.207
	GBP 3	0.421	**0.882**	0.080	0.137	0.076	0.177	0.169	0.201
	GBP 4	0.398	**0.887**	0.177	0.101	0.115	0.167	0.256	0.161
GLG	GLG 1	0.321	0.214	**0.801**	0.078	0.225	0.181	0.300	0.219
	GLG 2	0.112	0.104	**0.768**	0.181	0.106	0.148	0.293	0.120
	GLG 3	0.159	0.080	**0.778**	0.294	0.054	0.225	0.249	0.801
	GLG 4	0.236	0.166	**0.831**	0.137	0.140	0.338	0.385	0.272
GCU	GCU1	0.287	0.229	0.234	**0.880**	0.227	0.256	0.278	0.125

	GCU2	0.498	0.137	0.291	**0.768**	0.110	0.168	0.282	0.165
	GCU3	0.367	0.101	0.437	**0.772**	0.106	0.274	0.391	0.104
	GCU4	0.353	0.078	0.100	**0.878**	0.129	0.315	0.182	0.165
ERD	ERD 1	0.321	0.181	0.077	0.269	**0.774**	0.181	0.318	0.254
	ERD 2	0.456	0.294	0.331	0.228	**0.754**	0.091	0.150	0.140
	ERD 3	0.564	0.137	0.355	0.312	**0.804**	0.205	0.209	0.064
	ERD 4	0.424	0.108	0.407	0.103	**0.884**	0.261	0.101	0.121
FP	FP 1	0.214	0.084	0.094	0.079	0.131	**0.781**	0.212	0.223
	FP 2	0.189	0.167	0.073	0.219	0.274	**0.776**	0.245	0.156
	FP 3	0.238	0.258	0.234	0.332	0.082	**0.728**	0.159	0.156
	FP 4	0.214	0.326	0.265	0.388	0.317	**0.777**	0.148	0.137
SP	SP 1	0.412	0.098	0.338	0.101	0.206	0.089	**0.763**	0.166
	SP 2	0.541	0.076	0.100	0.078	0.192	0.268	**0.746**	0.141
	SP 3	0.358	0.115	0.077	0.322	0.232	0.260	**0.702**	0.165
	SP 4	0.457	0.225	0.202	0.498	0.087	0.208	**0.746**	0.128
EP	EP 1	0.365	0.229	0.236	0.360	0.080	0.283	0.161	**0.784**
	EP 2	0.125	0.216	0.411	0.098	0.151	0.108	0.213	**0.755**
	EP 3	0.254	0.105	0.095	0.076	0.174	0.083	0.103	**0.729**
	EP 4	0.364	0.081	0.074	0.506	0.260	0.351	0.080	**0.711**

Table 07 exhibits the results of factor loadings and cross-loadings, articulating the benchmark.

Hypothesis Relationship

Finally, in overall point, the reliability and validity test with forwarding usage of the analysis was conducted and it depicts with certain editions the purified measurement model is satisfactory to be utilized eliminating the most factors that not support to get the adequate relevancy, where several other implications were raised that certainly match with the model that will be carried forward in testing the structural model of the study.

Table8: Results of path coefficients

Hypothesized path	Path coefficient	C.R	P-value
GSH ⟶ ED	0.395	3.994	0.000
GBP ⟶ ED	0.302	4.204	0.000
GLG ⟶ ED	0.332	4.009	0.000

GCU → ED	0.273	3.799	0.000
ED → FP	-0.372	3.996	0.000
ED → SP	0.227	4.658	0.000
ED → EP	0.425	8.584	0.000

GSH: Green Shareholding, GBP: Green Business Processes, GLG: Green learning and growth, GCU: Green Customers, ED: Environmental Dynamism, FP: Financial Performance, SP: Societal Performance, EP: Environmental Performance

The path coefficient depicted in the model generates a positive relationship between Green Shareholding, Green Business Processes, Green learning and growth, Green Customers, Environmental Dynamism, Societal Performance, and Environmental Performance while generating a negative relationship between Financial Performance. The outcomes of the model are shown in the above table (Table 8), describes as path coefficients, t-statistics, and significance values (P-Values) of the regression data. GSH, GBP, GLG and GCU have significant positive relationship with ED; with respective coefficient and p-value GSH (β=0.395, p=0.000), GBP (β=0.302, p=0.000), GLG (β=0.332, p=0.000), GCU (β=0.273, p=0.000).

However, the study ascertained a significant negative relationship between ED and FP (β=-0.372, p=0.000). Nonetheless, the results confirmed that ED has a significant positive relationship with SP (β=0.227, p=0.000), and EP (β=0.425, p=0.000).

In addressing the attempt of this study, the study overviewed the implication of greening the balanced scorecard that articulates financial and nonfinancial environmental measures on achieving the environmental pillar within the Hospitality Industry. Hence the reliability and validity of the model were approached with strong path-coefficients, the model derived a significant relationship between green balanced scorecard and sustainable performance. Furthermore, the organizational dynamism that reflects the organizational ability to respond to the demand for environmental changes mediated the relationship between the green balanced scorecard and sustainable performance. Thereby, the study witnessed that environmental measures aligned with the environmental performance would drive the organization towards environmental sustainability.

Accordingly, the strong relationship depiction emphasizes the fact that Green practices would generate a positive cohesion towards social and environmental upliftment although it creates a negative determination for the financial performance of the hotel industry concerning the above study. Although the industry seeks more weights in financial upliftment for survival the utilization

of green card practices has to be launched sustainably in the way that exerts social and environmental performance of the organization as depicted in the analysis below. Also, the mediation given by the organization dynamism has to be involved in making the approaches efficient and effective in the hotels in Sri Lanka.

DISCUSSION

The study designed to encapsulate the perceptions of managerial level employees in the hospitality and tourism sector refers to the impact of greening the balanced scorecard in achieving sustainable performance concludes that greening balanced scorecard has significant influence in achieving sustainable performance. Firstly, the green balanced scorecard elements namely; green shareholding (GSH), green business processes (GBP), green learning and growth (GLG), and green consumers (GCU) were widely concentrated elements in the hospitality and tourism sector with the respective means values of 3.893,4.320,4.112 and 3.778. As Kalendera & Vayvaya (2016) claimed that BSC as a strategic management tool that has the highest potential in integrating environmental, social, and economic aspects, the respondents agreed to the point that a conventional balanced scorecard can be converted into an environmentally friendly scorecard that reflects green aspects.

Then, the study establishes the reliability with Cronbach's alpha and composite reliability values greater than 0.7. Finally, the study developed a structural equation model to ascertain the relationship between the impacts of greening the balanced scorecard in achieving sustainable performance considering the mediator's influence of environmental dynamism. Accordingly, the results summarized GSH, GBP, GLG and GCU have significant positive relationship with ED; with respective coefficient and p-value GSH (β=0.395, p=0.000), GBP (β=0.302, p=0.000), GLG (β=0.332, p=0.000), GCU (β=0.273, p=0.000). Teece (2007) reflected that ability to execute the right decision, sense new business opportunities, reconfigure an entity's business resources depend on the entity's dynamic capabilities. The study findings ensure that the entity's environmental dynamic capabilities result in successful implementation of a green balanced scorecard.

However, the study ascertained a significant negative relationship between ED and FP (β=-0.372, p=0.000). These findings are different from (Anis, Gretta, Octrine , Bourinta , & Daisy , 2018) ; (Heinkel, Kraus, & Zechner, 2001) and (Ranganathan, 1998) studies because they concluded that entity's greening ability and skill has resulted in substantial financial gains. Hereby, (King & Lenox, 2001) pinpointed that even though, the pursuit of environmentally friendly goals is associated with the increased cost subsequently these practices will result in better performance in long run.

Nonetheless, the results confirmed that ED has a significant positive relationship with SP ($\beta=0.227$, $p=0.000$), and EP ($\beta=0.425$, $p=0.000$). Hence, (Vrchota , Pech, & Rolínek , 2020) found that implementation of green technologies in production processes would deliver sustainable performance outcomes such as emission reduction, energy savings, resource optimization, workplace safety, and social welfare. In essence, the implementation of green processes results in environmental and societal performance. Likewise, sustainable performance can be viewed from different perspectives such as managing ecosystem, environmental protection, license to operate, reducing externalities, and social acceptance (Büyükozkan & Karabulut, 2018).

CONCLUSION AND RECOMMENDATIONS

Environmental concern has become the rule of thumb in achieving competitive advantage in this contemporary era. Accordingly, the business entities have adopted robust systems and strategies to cope with the rapidly changing business environment via accepting environmental sustainability as their core values. Thereby, this study which an analysed managerial level employees' perception of establishing green performance measurement tool; green balanced scorecard derived positive implications in the form of sustainable performance. The study integrated green elements to conventional balanced scorecard developed by Kaplan and Norton and ascertained positive relationship between green balanced scorecard and sustainable performance. Furthermore, this relationship has been mediated by the environmental dynamism which considered business entities capacity to adapt for environmental changes. Hence, the study witnessed that environmentally-friendly measures drive business entities to sustainability. Therefore, business entities should establish environmental measures to drive their business toward environmental, societal and economic goals in long run.

The further studies should explore the relationships between organizational strategies, functions and performance measures in-detail. For this purpose, the new methodology can be established considering longitudinal study by combining qualitative and quantitative techniques.

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