The Impact of Green Banking Practices on Bank's Environmental Performance: Evidence from Sri Lanka

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Abstract

Today, all the sectors of world economy are facing huge challenges to deal with the environmental problems and their related impacts in their day to day businesses. In Sri Lanka, banks are launching green banking initiatives in recent years. Apparently, there are lacunas in empirical studies undertaken in Sri Lankan context regarding green banking and bank's environmental performance. Hence, the objective of this paper is to measure the impact of green banking practices on bank's environmental performance. In order to achieve the objective, primary data were collected from 155 employees of selected bank branches and the structured questionnaire was administered to collect the data. The data were analyzed by using univariate, bivariate and multivariate analyses. The finding of the study revealed that green banking practices have positive and significant impact on bank's environmental performance in overall. And it also found that employee related practice, daily operation related practice and bank's policy related practice were found to have positive and significant impact on bank's environmental performance however, customer related practice has no significant impact on bank's environmental performance. The current study will be vital in understanding the empirical knowledge regarding the impact of green banking practices on bank's environmental performance.

Keywords: Green Banking, Practice, Environmental Performance, Commercial Banks

1. Introduction

In the last few decades, the awareness of environmental issues by governments, policy makers, advocacy groups, business firms, and the public is given much importance in all over the world (Banerjee, 2002). There have been numerous debates about the issues of environmental degradation, climate change, ethics, social responsibility, marginalization and formation of strong voices of groups, radicalism and protest on capitalism since the society is more concerned about the environmental performance (Jabbour & Santos, 2008). Environment protection activity that was limited to households and community in the past has now become a compulsion on commerce (Gunathilaka, Gunawardana, & Push pakumari, 2015). It adds value to businesses. So investors and shareholders take pride in being associated with such activities. The industrial development which has enhanced global warming, ozone depletion, air and water pollution, soil erosion, and deforestation are now widely recognized as global environmental problems demanding immediate solutions (Banerjee, 2001). Hence, organizations are seriously focused on the environmental performance in addition to the social and economic performance. Moreover, several international and local environmental standards, environmental authorities and environmental oriented customers emphasize on the environmental performance of the organizations. Environmental authorities have given organizations very strict norms to follow and are much more vigilant as this issue has caused much uproar in the recent past with the society. Further, environmental protection license (EPL) is mandatory today for an industry to operate.

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Hence, organizations are focusing much attention to protect the environment in their day to day activities. As society is more concerned about the environmental performance, it has led companies to adopt environmental management practices. So, companies voluntarily implement environmental management system (EMS) for this purpose. An environmental management system is a set of management processes that requires firms to identify the measures and controls their environmental impact (Bansal & Hunter, 2003). It provides a management framework for achieving environmental performance. Hence, companies insist on implementing environmental management systems to enhance control over the company's negative environmental impact. It helps the company in preventing pollution and saving company's money by reducing wastes, reducing energy consumption, carrying recycling activities and overall enhancing the corporate image. Moreover, some authors suggest that environmental management may be a tool, which helps and cited by organizations to improve their competitiveness (Hart, 1995; Porter & Linde, 1995). In order to achieve competitive advantage, commitment to safeguard natural environment has become an urgent issue within the current competitive scenarios. Further, Miles and Covin (2000) stated that environmental performance of an organization improves its reputation and goodwill. It contributes to environmental and economic benefits to the organizations. It reveals that environmental issues (e.g. climate change, pollution and energy crisis etc.) create not only challenges but also opportunities for business organizations (Thevanes & Arulrajah, 2016a and 2016b).

For a long time, these environmental issues were regarded as hardly relevant to the financial sector. Within the last few decades this view has changed, and banks have recognized that the sector is increasingly affecting, and is affected by, environmental issues (Kiernan, 2001; McKenzie &Wolfe, 2004). Since banking sector is one of the major sources of financing to the many industries and businesses, it creates huge responsibility and accountability to the banks because, this may indirectly lead to environmental pollution if banks fail to exercise strong verification measures regarding the negative environmental impact of those industries and businesses prior to financing. So, encouraging environmentally accountable investments and lending must be the prime responsibilities of banks (Thombre, 2011). If a bank finances environmental polluting industries and businesses, that particular bank will definitely contribute to the environmental degradation. On the other hand, banks should play a pro-active role to oblige industries for mandated investment for environmental management, use appropriate technologies and management systems (Masukujjaman & Aktar, 2013). Thus, banks can act as an ethical organization by the disbursement of loans only to those organizations, which have environmental concerns (Muhamat, Jaafar, &Azizan, 2011; Goyal & Joshi, 2011; Thombre, 2011). In this way, banks can contribute to improve the overall environment, the quality and conservation of life, level of efficiency in using materials and energy, quality of services and products even though environmental protection is not a primary goal of banking industry.

In the industrialized nation of developing countries, the issues related to the environment have become very critical and their dependence on natural resources for the growth and development underline the need of implementing policy and plans for sustainable use of resource (Stockholm Environment Institute Report, 2013). Paying greater attention on the environmental issues across the globe has exerted pressure on all industries, including financial services particularly banks to go green which are till now considered as environmental friendly. Banks have to address environmental issues, both in terms of their obligations and opportunities by virtue as a responsible corporate entity. Usually banking activities are not physically related to the environment, but the external impact of their customer activities is substantial. So, there is a need for banks to adopt green banking practices into their operations, buildings, investments and financing strategies. Thus, green banking contributes in reducing carbon footprints by providing assistance to companies involved in renewable and clean energy technology (Sahoo&Nayak, 2007; Bihari & Pradhan, 2011).

The ultimate objective of green banking is to protect and safeguard the natural environment. Basically, it can take place in two ways. They are: (1) technological innovation in banking, (2) behavioral and management innovations in banking practices (Shaumya & Arulrajah, 2016a and 2016b). Technological innovation in banking can help banks to reduce their negative environmental impact or to improve their positive environmental impact. For example, using online banking instead of traditional banking system, online bills payment system instead of manual payment system, and etc. Similarly, behavioral and management innovations in banking practices can also contribute to reduce negative environmental impact of the banks. For example, energy saving behavior of bank staff in their respective branches, waste reduction efforts of bank employees, environmental friendly initiatives of bank employees, providing loans to the environmental friendly project and etc. According to Rashid (2010), banks should prioritize in providing loans to the sectors that promote various environmental protection activities.

So, it can be concluded that green banking approach involves using environmentally friendly practices at every level from adapting environment friendly practices within the banking organizations and also considering the environmental aspect of the projects while funding and investing in commercial projects. Therefore, green banking has gained unique position in the recent research since it advances towards achieving bank's environmental performance.

Today, many Sri Lankan banks are making efforts to "go green" through offering various green products and services to their customers and taking initiatives in their day to day business operations for the environmental concerns. So in this context, it is very imperative to study the green banking practices towards bank's environmental performance. Apparently, there are lacunas in empirical studies undertaken in Sri Lankan context regarding green banking practices together with bank's environmental performance. In order to fulfill this gap, this study was conducted theoretically and empirically in Sri Lankan banks. Hence, the objective of this paper is to measure the impact of green banking practices on bank's environmental performance.

To empirically find the impact of green banking on bank's environmental performance, the paper is divided into following sections, section 1 presents insights of environmental performance, green banking and its current needs, section 2 provides a brief review of literature, section 3 gives methodology, followed by analysis and interpretations of results contained in section 4. Finally, section 5 indicates conclusions, implications and future directions.

2. Literature Review

2.1 Green Banking

The concept of green banking was established in 1980 at Triodos bank from Dutch origin which started the environmental sustainability in the banking sector from the very first day. In 1990, the bank launched 'green fund' for funding environment friendly projects and all the other projects followed later (Dash, 2008). Taking this bank as example, the banks all over the world are motivated to proceed with green banking initiatives. Moreover, the first green bank commenced its operations in Mt. Dora, Florida, United States in 2009.

Green can be defined as an area of land covered with grass, plants and trees without buildings. Generally, it can be referred as something that is related with natural environment. "Green" in green banking principally indicates banks' environmental accountability and environmental performances in business operations (Bai, 2011). A green banking is an ethical banking/social banking (banks with a conscience) as there is a strong building block which is corporate social responsibility (CSR) within the agenda of green banking (Benedikter, 2011). It is a kind of banking conducted in selected area and technique that helps in the reduction of internal carbon footprint and external carbon emissions (Bahl, 2012). Banks can reduce their carbon footprints by adopting the following measures such as paper-less banking, energy consciousness, using mass transportation, green building, go online, save paper, use of solar and wind energy (Chaurasia, 2014). Green banks' intention is to use resources, avoid waste and give priority to environment and society (Habib, 2010).

Green banking has many benefits and advantages (Ragupathi & Sujatha, 2015). They are: (1) basically green banking avoids paper work and all the transactions are done through online banking, (2) creating awareness to business people about environmental and social responsibility enabling them to do an environmental friendly business practice, and (3) banks follow environmental standards for lending, which is really an excellent idea and it will make business owners to change their business to environmental friendly which is good for the future generations. Ginovsky (2009) stated that banks should launch new banking products which promote the sustainable practices and also need to restructure their back office operations in order to implement ecologically friendly practices. The author suggested two strategies which banks should follow to go for green banking. They are: (1) use of paperless banking which results in reducing the carbon footprint from internal banking operations and cost saving to banks, and (2) adoption of Green Street lending, which means offering low rate of interest to consumers and businesses for installing solar energy systems and energy-saving equipments.

According to Dharwal and Agarwal (2013), green banking is a key in mitigating the credit risk, legal risk and reputation risk. The authors had suggested some green banking strategies like carbon credit business, green financial products, green mortgages, carbon footprint reduction, energy consciousness, green buildings and social responsibility services towards the society. Based on the above literature, the researchers define green banking as an environmental oriented banking practice that safeguards the environment from the negative impact to achieve environmental goals of the banks. In this perspective, banks implement several green banking practices such as environmental training, usage of energy efficient equipments, constructing green buildings, and etc. Therefore, through these practices banks can achieve their environmental goals.

In this context, the green banking practices can be considered as good evidences to prove that, banks are very keen in reducing their carbon footprint and energy consumptions. It is seen that banks around the world have started giving high priority and attention to green banking. However, several literatures and studies have been found regarding 'Green Banking' in USA, Europe, China, India and Bangladesh (Shakil, Azam, &Raju, 2014), if these factors hold true for other countries and contexts need further investigation.

2.2 Environmental Performance

Environmental performance is not just a corporate environmental protection; it is something much broader to include a proactive, transparent and long-term administration to meet certain well defined objectives in corporate planning to protect natural resources and competitiveness of firms. Corporate environmental performance defines the sustainability targets that articulate the goals of the companies by achieving set targets to satisfy shareholders, creditors, employees, customers, suppliers and community and to comply with the regulatory compliance and legal requirements in organizations. As suggested by Karagozoglu and Lindell (2000), environmentally proactive strategies promote ecological innovation and can lead to competitive advantage.

Environmental performance is a matter of output in environmental management, which refers to the firm's activities and products on the natural environment (Klassen & Whybark, 1999). It reflects an output demonstrating the degree to which firms are committed to protecting the natural environment. Horvathova (2010) identified environmental performance by ratio of toxic wastes, penalties paid for the violations of environmental regulations, adoption of ISO 14001 and environmental efficiency score. Qi, Zeng, Shi, Meng, Lin, and Yang (2014) adopted the emission intensity to measure the environmental performance. Hence, it is found that the environmental impact of the firm can be measured by rating, index or environmental score. Further, Tung, Baird, and Schoch (2014) pointed out that the efficient use of material is the best metrics to measure the environmental performance of the firms.

2.3 Green Banking and Bank's Environmental Performance

The term green banking is now very popular worldwide. It is for preventing the environmental degradation and making this planet habitable. As it is an environmental friendly practice, banking sector is started to practice green banking concept recently. Because, banking is never considered as a polluting industry, the present scale of banking operations have considerably increased the carbon footprint of banks due to their massive use of energy (e.g., excessive usage of lighting, air conditioning, electronic/electrical equipments, IT, etc.), high paper wastage, lack of green buildings, and etc. In Sri Lanka, banking sector has started practicing green banking concept recently. This sector consists of 25 licensed Commercial Banks (LCBs) and 7 licensed specialized banks (LSBs) in Sri Lanka (Central Bank of Sri Lanka-CBSL, 2015). These banks are the pioneering banks in adopting green banking concept in Sri Lanka. Hence, green banking has become an issue of concern in Sri Lanka's banking sector.

Many authors state that green banking is environmental concern practice and it reduces the negative environmental impact (Bai, 2011; Azam, 2012; Singh & Singh, 2012). According to Azam (2012), green banking is an eco-friendly or environment friendly banking to stop environmental degradation to make this planet more habitable. It signifies encouraging environment friendly practices and plummeting carbon footprint by banking activities through various environment friendly acts (Singh & Singh, 2012). Green banking includes promoting social responsibility where banks consider before financing a project whether it is environment friendly and has any future environmental implications (Bihari, 2011).Bhardwaj and Maholtra(2013) state that it makes the industries grow green and restore the natural environment. Hence, it is visible that green banking is the way of conducting the banking business along with considering the social and environmental impacts of its activities (Jha & Bhome, 2013; Mishra, 2013; Biswas, 2011).

Therefore, the green bank is known to focus entirely on environmentally friendly banking practices.By greening the business operations, banks started to take various initiatives for the concern of environmental protection and sustainability. The degree to which firms are committed to protecting the natural environment reflects environmental performance. Lober (1996) mentioned that environmental performance can be evaluated by a set of indicators such as low environmental releases, prevention of pollution, waste minimization, and recycling activities. These indicators are addressed by green banking by creating an effective and far reaching market based solutions. Hence, green banking practices in the banks lead to improve the environmental performance of the banks by reducing negative environmental impact (reducing paper usage, reducing the energy conservation, reducing fuel consumption and emission) and improve the positive environmental impact (improving environmental training and awareness of employees, establishing green building and usage of solar and wind energy) of the banks. Since environmental issues are emerging rapidly in banks, their dire need, now, is to adopt green banking practices, so that it would ultimately result in saving the environment and enhancing environmental performance of banks.

The literature review reveals that with the exception of a few, no wide-ranging study deals with the impact of green banking on environmental performance around the world. Especially in Sri Lanka, this study needs to be explored thoroughly. So, the present study is an attempt to take a step forward towards the analysis of the impact of green banking practices on bank's environmental performance. Hence, this study has been initiated in Sri Lankan context in order to fill this empirical knowledge gap. Based on the above cited literature evidences, hypothesis for this study has been developed as:

Hypothesis 1: Green banking practices have positive and significant impact on bank's environmental performance.

3. Conceptual Model

The research model of this paper was shaped from two comprehensive variables including green banking practices and bank's environmental performance. Based on theoretical background and review of the previous literature, a conceptual model was developed to examine the impact of green banking practices on bank's environmental performance. Figure 1 presents the research model.

Figure 1: Conceptual Model
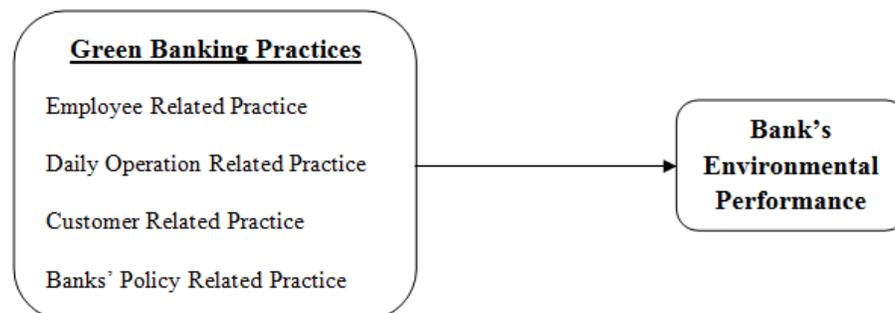
Source: Developed for this study purpose

4. Method

The objective of this study is to measure the impact of green banking practices on bank's environmental performance. The study was done in the natural environment where work was preceded normally. None of the variables were controlled or manipulated. Hence the study was a non-contrived study. This study depended on the primary data. The primary data were collected through self-administrated questionnaire. The structured questionnaire of this study consists of three parts. Part I: data on employee profile. Part II: regarding green banking practices. Finally, in part III: employees were asked to provide their views on environmental performance of their banks. Five point Likert scale was assigned to measure the variables of the study and all are closed questions.

The survey was carried out among the sample of 155 employees of selected Commercial Banks in Batticaloa Region of Sri Lanka. The sample method of the survey was disproportionate stratified sampling, because to assure representation of employees belonging to different grades in the selected banks. The primary data collected from the sample were analyzed using the computer based statistical data analysis package, SPSS (version 19.0) to measure the descriptive statistics, simple regression and multiple regression analysis. The data analyses include univariate, bivariate and multivariate analyses.

5. Measures

Shaumya and Arulrajah (2016b) developed a 16 items instrument with four key dimensions to measure the green banking. This tested instrument was used in this study.The dimensions are:(1) employee related practice was measured by three items such as environmental training and education, green performance evaluation and green reward system, (2) daily operation related practice was measured by using four items such as reduce paper usage, energy efficient equipments, e-waste management and eco-friendly banking practices, (3) customer related practice was measured by four items such as green loan, green projects, facilitate green enterprises and green credit evaluation, and (4) bank's policy related practice was measured using five items such as green branches, green policy, green partnership, green strategic planning and green procurement. Each item of this instrument was rated using a five points Likert scale (1 = strongly disagree to 5 = strongly agree) to indicate how respondents agree or disagree regarding availability of green banking practices in their banks. The instrument had a good degree of reliability with a Cronbach's alpha of 0.94. Table 1 shows the quality of the four dimensions of their instrument

Table 1: The Reliability Analysis of the 4 Dimensions of Green Banking

Employee related Practice			
Daily Operation related Practice			
Customer related Practice			
Bank's Policy relatedPractice			
[a]AVE (Average Variance Extracted) [b]CR (Composite Reliability)			

(Source: Shaumya &Arulrajah, 2016b)

The bank's environmental performance (dependent variable) was measured by an opinion question through five point Likert scale (1 = very low to 5 = very high) that was the perceived level of bank's environmental performance. This study has used only a single item question to measure the bank's environmental performance. Hence, its alpha value is 1.

6. Results and Discussion

The profile of sample consists of bank, job position, gender, age, educational qualification and working experience of 155 employees of selected Commercial Banks in Batticaloa Region of Sri Lanka. The frequencies and percentages are shown in Table 2.

Table 2: Sample Profile

Sample Profile	Category	Frequency	Percentage
Banks	Commercial Bank of Ceylon PLC	13	8.4
	HNB PLC	29	18.7
	Seylan Bank PLC	15	9.7
	Sampath Bank PLC	20	12.9
	People's Bank	27	17.4
	DFCC Bank PLC	7	4.5
	NDB PLC	15	9.7
	NTB PLC	11	7.1
	Union Bank PLC	11	7.1
	Pan Asia Banking Corporation PLC	7	4.5
Job position	Manager	12	7.7
	Assistant Manager	15	9.7
	Officer	33	21.3
	Banking Assistant	61	39.4
	Banking Trainee	21	13.5
	Other	13	8.4
Gender	Male	92	59.4
	Female	63	40.6
Age	18-28years	87	56.1
	29-38years	53	34.2
	39-48years	11	7.1
	Over 49years	04	2.6
Educational qualification	Ordinary Level	-	-
	Advance Level	117	75.5
	Graduate	30	19.4
	Postgraduate	08	5.2
Working experience	3 years and below	49	31.6
	4-5 years	33	21.3
	Above 5 years	73	47.1

(Source: Survey data)

The result shows, the Coefficient of Correlation (r) is 0.769. Based on the decision rule, there is a strong positive correlation between green banking practices and bank's environmental performance. The significance level is 0.000 which is below 0.05 ($p < 0.05$). Therefore, we conclude that there is a positive relationship between green banking and bank's environmental performance. This means that the extent of implementation of green banking has positive effect on the level of bank's environmental performance. This implies that banks that implement green banking practices tend to improve the environmental performance of banks. Based on the objective and hypothesis of the study, the researchers applied the simple regression analysis. Tables 5 and 6 represent the test of the hypothesis by using simple regression analysis, based on the significant level of (0.05).

It could be indicated from Table 2 that among the respondents, 8.4% are from Commercial bank, 18.7% are from HNB, 9.7% are from Seylan bank, 12.9% are from Sampath bank, 17.4% are from People's bank, 4.5% are from DFCC, 9.7% are from NDB, 7.1% are from NTB, 7.1% are from Union bank and 4.5% are from Pan Asia bank. Out of 155 respondents, 7.7% are managers, 9.7% are assistant Managers, 21.3% are officers, 39.4% are banking assistants, 13.5% are banking trainees and 8.4% are other staffs. Among the respondents, 59.4% are males and 40.6% are females and 56.1% of the respondents are between 18 to 28 years of age, 34.2% are between 29 to 38 years of age, 7.1% are between 39 to 48 years of age and 2.6% of the respondents are above 49 years of age. Based on the educational qualification, 75.5% of the respondents are advance level, 19.4% of the respondents are graduates and 5.2% of the respondents are post graduates. And based on the working experience, 31.6% of the respondents have 3 years and below 3 years of experience, 21.3% have 4 to 5 years of experience and 47.1% of the respondents have above 5 years of experience. The results of univariate analysis for green banking and bank's environmental performance are presented in Table 3.

Table 3: Univariate Analysis

	N	Mean	Standard Deviation
Green Banking	155	3.99	0.65
Bank's Environmental P	155	4.10	0.82

(Source: Survey data)

Mean and standard deviation for green banking is 3.99 and 0.65 respectively and mean and standard deviation for environmental performance is 4.10 and 0.82 respectively. Correlation between the green banking and bank's environmental performance is shown in Table 4.

Table 4: Correlations between the Green Banking and Bank's Environmental Performance

		Green Banking	Bank's Environmental Performance
Green Banking	Pearson Correlation	1	.769[**]
	Sig. (2-tailed)		.000
	N	155	155
Bank's Environmental Performance	Pearson Correlation	.769[**]	1
	Sig. (2-tailed)	.000	
	N	155	155
[**]. Correlation is significant at the 0.01 level (2-tailed).			

(Source: Survey data)

The result shows, the Coefficient of Correlation (r) is 0.769. Based on the decision rule, there is a strong positive correlation between green banking practices and bank's environmental performance. The significance level is 0.000 which is below 0.05 ($p < 0.05$). Therefore, we conclude that there is a positive relationship between green banking and bank's environmental performance. This means that the extent of implementation of green banking has positive effect on the level of bank's environmental performance. This implies that banks that implement green banking practices tend to improve the environmental performance of banks. Based on the objective and hypothesis of the study, the researchers applied the simple regression analysis. Tables 5 and 6 represent the test of the hypothesis by using simple regression analysis, based on the significant level of (0.05).

Table 5: Model Summary of Impact of Green Banking Practices on Bank's Environmental Performance

Model	R	R square	Adjusted R Square	Std. Error of the Estimate
1	.769[a]	.592	.589	.528
a. Predictors: (Constant), Green Banking Practices				
b. Dependent Variable: Bank's Environmental Performance				

(Source: Survey data)

Table 6: Coefficientsof Green Banking Practices on Bank's Environmental Performance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.250	.262		.952	.343
Green Banking Practices	.965	.065	.769	14.892	.000
Dependent Variable: Bank's Environmental Performance					

(Source: Survey data)

The impact of green banking practices on bank's environmental performance has been studied using simple regression analysis. The results revealed R at 0.769, which represents positive correlation between green banking practices and bank's environmental performance and R square at 0.592, which implies that 59.2% of variability in bank's environmental performance is accounted by the green banking practices. In other words, 40.8% of variance of bank's environmental performance is affected by other variables (Table 5).

The t-value (14.892, Sig. <0.001) further confirms that green banking is associated with the improved environmental performance and thus leads to the acceptance of the hypothesis i.e. green banking practices have

positive and significant impact on bank's environmental performance (Table 6).Moreover, to analyze the impact of each dimensions of green banking on bank's environmental performance stepwise multipleregression analysis was used. The results are shown in Tables7, 8, and 9.

Table 7: Model Summary of the Impact of each Dimensions of Green Banking on Bank's Environmental Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.743a	.552	.549	.553	.552	188.818	1	153	.000
2	.759b	.575	.570	.540	.023	8.251	1	152	.005
3	.769c	.591	.583	.532	.016	5.768	1	151	.018
a. Predictors: (Constant), Bank's Policy Related Practice									
b. Predictors: (Constant), Bank's Policy Related Practice, Employee Related Practice									
c. Predictors: (Constant), Bank's Policy Related Practice, Employee Related Practice, Daily Operation Related Practice									

(Source: Survey data)

Table 8: ANOVA Model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57.641	1	57.641	188.818	.000a
	Residual	46.707	153	.305		
	Total	104.348	154			
2	Regression	60.046	2	30.023	103.008	.000b
	Residual	44.302	152	.291		
	Total	104.348	154			
3	Regression	61.676	3	20.559	72.749	.000c
	Residual	42.672	151	.283		
	Total	104.348	154			
a. Predictors: (Constant), Bank's Policy Related Practice						
b. Predictors: (Constant), Bank's Policy Related Practices, Employee Related Practices						
c. Predictors: (Constant), Bank's Policy Related Practices, Employee Related Practices, Daily Operation Related Practices						
d. Dependent Variable: Environmental Performance						

(Source: Survey data)

As shown in Table 7, the extent to which these individual dimensions have contributed separately to the bank's environmental performance. Among these dimensions, bank's policy related practices have an impact on 55.2%, employee related practices have an impact on bank's environmental performance was 2.3%, and daily operation related practices have an impact of 1.6% on bank's environmental performance. Finally, out of four dimensions, these three dimensions totally contribute 59.1% to the bank's environmental performance. Table 8 indicates that this prediction model was statistically significant, $F(3,151) = 72.749$, $p < .001$. The final model included bank's policy related practice, employee related practice and daily operation related practice. However, the final model has excluded customer related practice.

Table 9: Coefficient Model

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.715	.251		2.854	.005
Bank's Policy Related Practice	.856	.062	.743	13.741	.000
2 (Constant)	.600	.248		2.420	.017
Bank's Policy Related Practice	.576	.115	.499	4.995	.000
Employee Related Practice	.311	.108	.287	2.872	.005
3 (Constant)	.241	.286		.843	.401
Bank's Policy Related Practice	.466	.122	.404	3.806	.000
Employee Related Practice	.262	.108	.242	2.415	.017
Daily Operation Related Practice	.235	.098	.185	2.402	.018
a. Dependent Variable: Environmental Performance					

(Source: Survey data)

Table 9 depicts that bank's policy related practice (beta = 0.404), employee related practice (beta = 0.242) and daily operation related practice (beta = 0.185) have positive and significant impact on bank's environmental performance. At the same time, customer related practice was not a significant predictor of bank's environmental performance. Hence, it was excluded from the model.

7. Conclusion

Green banks are at startup mode in Sri Lanka. They should expand the use of environmental information in their business operations, credit extension and investment decisions. The endeavor will help them proactively to improve their environmental performance. As green banking is becoming an urgent need for banks in order to eliminate or reduce environmental degradation, both researchers and practitioners have called for more research works.

Although, many research works have been done on green banking, however, exploring the impact of green banking on bank's environmental performance has not been done so far. Hence, researchers have conducted this study in order to fulfill this empirical gap. The present study examined the impact of green banking practices on bank's environmental performance. So, the analysis has made use of descriptive statistics, correlation, and regression analyses.

Based on hypothesis testing, this research has confirmed a statistically significant and positive impact of green banking practices on bank's environmental performance. As such, higher the green banking practices the higher would be the bank's environmental performance. Similarly, the simple regression analysis showed green banking could be significantly explained by the variance of bank's environmental performance. This result provides a support to the hypothesis of this study. Further, stepwise multiple regression analysis proved that bank's policy related practice, employee related practice, and daily operation related practice were found to have positive and significant impact on bank's environmental performance however, customer related practice was not a significant predictor of bank's environmental performance. Even though customer related practice is one of the green banking practices, it does not directly contribute to the environmental performance of banks, as it deals directly with customers' or general environmental performance. This may be the reason to exclude it from the final model of this study. At the same time, bank's policy, employee and daily operations related practices are directly contribute to reduce the negative environmental impact and to improve the positive environmental impact of banks. Due to that they contribute to the final model of the study.

Banking sector is generally considered as environmental friendly in terms of emissions and pollutions. Based on the results of the study, green banking has significant impact on bank's environmental performance. So, through the green banking practices, banks can improve their environmental performance. It enables the banks to safeguard the environment and build an image as the good corporate citizens. Hence, green banking can be an avenue to reduce pollution and save the environment.

8. Implications of the Study

The study has implications for both academicians and practitioners. For the academics, this study contributes to understand the impact of green banking practices on bank's environmental performance and findings of the study also contribute to green banking literature. And this study is useful to banks that are intended to become greener banks as well as to achieve environmental goals. Firstly, it helps other banks which may have plans to implement green banking practices in future more effectively. Secondly, the banks which are practicing green banking concept can compare with other green banks and understand the strength and weakness of their own green practices and performance through this study. Thirdly, this study also promotes and motivates green banking practices of banking sector in Sri Lanka. Through this study, the employees of the banks will become knowledgeable about green banking practices and successfully achieve environmental performance of banks by involving in implementation of green banking practices in future. Finally, this study may contribute to environmental protection and management.

Further, taking care about environmental performance would help the banks to get subsidies from the government for implementing green banking practices. Also this study may guide the banks to use modern plants and machineries which save energy, generate low CO_2 emission and ensure water conservation for the better environmental performance. These practices would help the banks to practice sustainable practices and improve their competitiveness. The better environmental performance of the bank would help to attract the socially responsible investors across the globe to invest their investments and create investment opportunities. In the light of these implications, this study is considered to be important for the sustainability of banks.

9. Limitations and Future Directions

There are some limitations that exist in this study. Firstly, the current study is carried out based on the information collected only from the selected Commercial Banks in Batticaloa region of Sri Lanka. Secondly, data were collected at one point of time, applying a cross sectional design. Thirdly, sample size of the study is limited. Fourthly, this study is mainly conducted based on the data collection through the questionnaire. Finally, antecedent variables are not taken into consideration. Despite these limitations, it is believed that this study makes a significant contribution to the existing literature on green banking. The current study is a cross-sectional study. Therefore, it is important for future studies to validate the current findings in a longitudinal designs could be more appropriate than cross-sectional ones. The current study only applies a quantitative research design. Therefore, future studies may consider collecting deeper data from the respondents. In addition to that, future studies have the further opportunities to consider the antecedent variables related to this study. And the findings of this study are methodologically limited into Batticaloa region of Sri Lanka, which not permit the generalization of findings. Hence, it is suggested that it is possible to conduct the study in the public and private sector banks in Sri Lanka and all over the island. In order to overcome these limitations, further studies are needed.

References

Azam, S. (2012). Green corporate environment through green banking and green financing. The *Financial Express.* Retrieved March, 2014, from http://www.thefinancialexpressbd.com/more.php?news_id=135391&date

Bahl, S. (2012, February). Role of green banking in sustainable growth. *International Journal of Marketing, Financial Services and Management Research, 1*(2), 27-35.

Bai, Y. (2011, June). *Financing a green future.* (Master's thesis). Lund University, Sweden. Retrieved September 15, 2012, from http://lup.lub.lu.se/luur/download?func=downloadFile&recordOId=2203222&fileOId=220322

Banerjee, S. B. (2001). Managerial perceptions of corporate environmentalism: Interpretations from industry and strategic implications for organizations. *Journal of Management Studies, 38*(4), 489-513.

Banerjee, S. B. (2002). Corporate environmentalism: The construct and its measurement. *Journal of Business Research, 55*(1), 177-191.

Bansal, P., & Hunter, T. (2003). Strategic explanations for the early adoption of ISO 14001. *Journal of Business Ethics, 46*(3), 289-299.

Benedikter, R. (2011, February). *Social banking and social finance: Answers to the economic crisis.* New York: Springer. doi: 10.1007/978-1-4419-7774-8

Bhardwaj, B. R., & Maholtra, A. (2013, May). Green banking strategies: Sustainability through corporate entrepreneurship. *Greener Journal of Business and Management Studies, 3*(4), 180-193.

Bihari, S. C. (2011). Green banking towards socially responsible banking in India. *International Journal of Business Insights and Transformation, 4*(1), 82-87.

Bihari, S. C., & Pradhan, S. (2011). CSR and performance: The story of banks in India. *Journal of Transnational Management, 16*(1), 20-35.

Biswas, N. (2011). Sustainable green banking approach: The need of the hour. *Business Spectrum, 1*(1), 32-38.

Central Bank of Sri Lanka (CBSL). (2015). Annual Report, Central Bank of Sri Lanka.

Chaurasia, A. K. (2014). Green banking practices in Indian banks. *Journal of Management and Social Science, 1*(1), 41-54.

Dash, R. N. (2008). Sustainable green banking: The story of Triodos Bank. *Cab Calling*, 26-29.

Dharwal, M., & Agarwal, A. (2013). Green banking: An innovative initiative for sustainable development. *ACCMAN Institute of Management Article, 2*(3). Retrieved from www.accman.in/images/j11/Green_Banking__(2).doc

Ginovsky, J. (2009). Green banking: Inside and out. *Community Banker, 1*(1), 30-32.

Goyal, K. A., & Joshi, V. (2011). A study of social and ethical issues in banking industry. *International Journal of Economics and Research, 2*(5), 49-57.

Gunathilaka, L. F. D. Z., Gunawardana, K. D., &Pushpakumari, M. D. (2015). An impact of environmental practices on financial performance: A literature review. *Proceedings of 12th International Conference on Business Management (ICBM).* University of Sri Jayewardenepura.

Habib, S. M. A. (2010). Green banking: A multi-stakeholder endeavor. *The Daily Star.* Retrieved August 07, 2010, from http://archive.thedailystar.net/newDesign/news-details.php?nid=149676

Hart, S. (1995). A natural resource-based view of the firm. *Academy of Management Review, 20*(4), 986- 1014.

Horvathova, E. (2010). Does environmental performance affect financial performance? A meta -analysis. *Ecological Economics, 70*(1), 52-59.

Jabbour, C. J. C., & Santos, F. C. A. (2008). The central role of human resource management in the search for sustainable organizations. *The International Journal of Human Resources Management, 19*(12), 2133-2154.

Jha, N., &Bhome, S. (2013, May). A study of green banking trends in India. *International Monthly Referred Journal of Research in Management and Technology, 2,* 127-132.

Karagozoglu, N., &Lindell, M. (2000). Environmental management: Testing the win-win model. *Journal of Environmental Planning and Management, 43*(6), 817-29.

Kiernan, M. (2001). Eco-value, sustainability, and shareholder value: Driving environmental performance to the bottom line. *Environmental Quality Management, 10*(4), 1-12.

Klassen, R. A., &Whybark, D. (1999). The impact of environmental technologies on manufacturing performance. *Academy of Management Journal, 42*(6), 599-615.

Lober, D. J. (1996). Evaluating the environmental performance of corporations. *Journal of Managerial Issues, 8*(2), 184–205.

Masukujjaman, M., &Aktar, S. (2013). Green banking in Bangladesh: A commitment towards the global initiatives. *Journal of Business and Technology (Dhaka), VIII*(1&2), 17-40.

McKenzie, G., & Wolfe, S. (2004). The impact of environmental risk on the UK banking sector. *Applied Financial Economics, 14*(14), 1005-1016.

Miles, M. P., & Covin, G. (2000). Environmental marketing: A source of reputational, competitive and financial advantage. *Journal of Business Ethics, 23*(3), 299-311.

Mishra D. K. (2013). Green strategies: Response of Indian banks to climate change. *The Ecoscan, Special Issue, 3,* 345-348.

Muhamat, A. A., Jaafar, M. N., &Azizan, N. B. A. (2011). An empirical study on banks' clients' sensitivity towards the adoption of Arabic terminology amongst Islamic banks. *International Journal of Islamic and Middle Eastern Finance and Management, 4*(4), 343-354.

Porter, M. E., &Linde, V. D. C. (1995). Green and competitive: Ending the stalemate. *Harvard Business Review, 73*(5), 120-134.

Qi, G. Y., Zeng, S. X., Shi, J. J., Meng, X. H., Lin, H., & Yang, Q. X. (2014). Revisiting the relationship between environmental and financial performance in Chinese industry. *Journal of Environmental Management, 145,* 349-356.

Ragupathi, M., &Sujatha, S. (2015). Green banking initiatives of commercial banks in India. *International Research Journal of Business and Management - IRJBM, VIII*(2), 74-81.

Rashid, M. (2010, September 17). Green banking comes to focus. *The Daily Star*. Retrieved from http://www.thedailystar.net/ newDesign/newsdetails.php?nid=154690

Sahoo, P., &Nayak, B. P. (2007). Green banking in India. *Indian Economic Journal, 55*(3), 82-98.

Shakil, M. H., Azam, M. K. G., &Raju, M. S. H. (2014). An evaluation of green banking practices in Bangladesh. *European Journal of Business and Management, 6*(31), 8-16.

Shaumya, K., &Arulrajah, A. A. (2016a, August). Green banking practices of selected private sector banks in Sri Lanka. *Proceedings of 3rd Jaffna University International Research Conference (JUICE).* University of Jaffna.

Shaumya, K., &Arulrajah, A. A. (2016b, December). Measuring green banking practices: evidence from Sri Lanka. *Proceedings of 13th International Conference on Business Management (ICBM).*University of Sri Jayewardenepura.

Singh, H., & Singh, B.P. (2012). An effective & resourceful contribution of green banking towards sustainability. *International Journal of Advances in Engineering Science and Technology, 1*(2), 41-45.

Stockholm Environment Institute Report. (2013). Atmospheric environment issues in developing countries. Retrieved July 09, 2013, from http://www.sei-international.org/mediamanager/documents/Publications/Atmospheric/atmospheric_environment_ developing_countries.pdf

Thevanes, N., &Arulrajah, A. A. (2016a).The relationships among environmental training, environmental attitude of employee and environmental orientation of organization.*Proceedings of 3rd Jaffna University International Research Conference (JUICE).* University of Jaffna.

Thevanes, N., &Arulrajah, A. A. (2016b). The relationships among environmental training, environmental attitude of employee environmental behaviour of employee and environmental orientation of organization: A review of literature.*Proceedings of 13th International Conference on Business Management (ICBM).* University of Sri Jayewardenepura.

Thombre, K. A. (2011). The new face of banking: Green banking. *Indian Streams Research Journal,1*(2), 1- 4.

Tung, A., Baird, K., &Schoch, H. (2014). The relationship between organizational factors and the effectiveness of environmental management. *Journal of Environmental Management, 144*, 186-196.

Appendix-1: Questionnaire

Part I: Personal Information

1.	Bank	Commercial Bank of Ceylon PLC		Pan Asia Banking Corporation PLC	
		HNB PLC		NTB PLC	
		Sampath Bank PLC		NDB PLC	
		Seylan Bank PLC		DFCC Bank PLC	
		People's Bank		Union Bank PLC	
2.	Job position	Manager		Banking Assistant	
		Assistant Manager		Banking Trainee	
		Officer		Other	
3.	Gender	Male		Female	
4.	Age	18-28years		39-48years	
		29-38years		Over 49years	
5.	Educational qualification	Ordinary Level		Graduate	
		Advance Level		Postgraduate	
6.	Working experience	3 years and below		Above 5 years	
		4-5 years			

Please mark "X" in appropriate boxes or fill the details in the space provided.

Part II: Information Regarding Green Banking Practices

Please mark "X" to show to what extent you agree with the following statements.

No	Statements	1	2	3	4	5
01	My bank provides training and education to the staff on environmental protection, energy sa					
02	My bank has environmental (green) performance evaluation practices (environmental sustain					
03	My bank implements environmental (green) reward system in the branches who support the					
		1	2	3	4	5
04	My bank has initiatives to reduce paper usage and other wastage of materials.					
05	My bank has introduced energy efficient equipments, system solutions and practices (ATMs,					
06	My bank uses e-waste management practices.					
07	My bank has environmental friendly banking practices (e-mail, intranet, e-statements, online					
		1	2	3	4	5
08	My bank provides loan to environmental protection and energy saving related projects.					
09	My bank implements certain independent and unique green initiatives, projects, and etc. (e.g.					
10	My bank promotes and facilitates environmental oriented enterprises through special grants,					
11	My bank uses social and environmental management system or any other mechanisms to eva					
		1	2	3	4	5
12	My bank involves in setting up green branches (energy efficient buildings/green buildings).					
13	My bank has environmental (green) policy.					
14	My bank has environmental related agreements with relevant parties/stakeholders (suppliers,					
15	In my bank, head office level or top management involves in environmental protection relate					
16	My bank purchases its stationeries, equipments and other items from environmental friendly					

Part III: Information Regarding Environmental Performance

1 - Strongly disagree	2 - Disagree	3 - Uncertain	4 - Agree	5 - Strongly agree

Please mark "X" to show to what extent you agree with the following statements.

1 - Very low	2 - Low	3 - Moderate	4 - High	5 - Very high

No	Statements	1	2	3	4	5
01	My bank provides training and education to the staff on environmental protection, energy sa					