European Journal of Business and Management
ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online)
Vol.9, No.12, 2017

Factors Influencing Customers' Expectation Towards Green Banking Practices in Bangladesh

Tanima Saha Shampa [1*] Md. Imrul Jobaid [2]
1.MBA, Department of Marketing, Faculty of Business Studies, University of Dhaka, Ramna, Dhaka-1000
2.Lecturer, Department of Marketing, Faculty of Business Studies, University of Dhaka, Ramna, Dhaka-1000

Abstract
Green banking, considered as sustainable banking practices, has created incessant buzz among banks and financial institutions which are consistently seeking an exhaustive framework to sustain in dreadful environmental changes. Attachments to green strategies upraise customers' interests and expectations on enterprises' environmental responsibilities. The article dwells on addressing the factors impacting customers' expectations towards green banking practices from the perspective of banking industry in Bangladesh. Total 246 samples have been finalized from target population using simple random sampling. The survey has used five (5) point Likert scale and 23 dimensions are identified which are summarized into five factors by using factor analysis. After analysis, it has been found that information availability and customer needs, spirit of ethics and high yield savings, energy efficiency, product benefits as well as integration and personalization- these five prominent factors are responsible for influencing customers' expectations towards green banking practices in Bangladesh. The study offers an insight into what banks should do, being environmentally proactive, to create a strong customer base in future.
Keywords: Green Banking, Customer Expectation, Sustainable Business

1. Introduction

Bangladesh, one of the severely affected countries, is suffering from bitter consequences of environmental degradation due to massive carbon emission and reckless industrialization in all over the world. At this moment, situation urges for taking green initiatives all over the industries including financial industry as well. A good sign is that comprehensive awareness has been created among stakeholders to dwindle environmental problems into reasonable manner. Customers are also considering maneuvers adopted by banks and demonstrate extreme reaction if bank's or financial institution's action cause environmental degradation. As banks interact with environment both directly and indirectly, customers demand more actions to arrest environmental depletion. In general, banks upset environment directly by the excessive use of paper, wastage of water, keeping electrical equipment working without any use, unnecessary lighting and such other imprudent activities in their day- to-day operations. So, concerned customers assume that banks should embrace green strategies in their daily operations (Islam et al., 2014). Again banks can contribute to carbon footprint through long term investment in commercial projects without taking into consideration whether the project has ultimate influence on environment or not. Though banks provide loans to these projects for the country's economic growth, the subsequent impact on environment may be dreadful. In this case, customers' expectation is that banks will gauge risk and return on environmental consequences and thus will take prudent decision while sanctioning loans on these projects. Green banking also implies as ethical banking and sustainable banking. Customers perceive that banks will maintain ethical standards to a great extent while conducting eco-friendly business. Customers, now-a-days ask for green financial products and services from conventional banks (Arnsperger, 2014; Rahman and Barua, 2016). A survey-research operated by Javelin Strategy and Research also unveils customer's growing interest in green banking. On that survey, 43% customers provide opinion that they will prefer the bank which practices green banking activities (Green Wiki, 2013). However, this article sheds light on expectations from customer perspective by raising question, "What are customers' expectations from green banking?" or "what factors affect customers' expectations towards green banking practices?" On a whole, time has come to think beyond profit making, to think about environmental protection and to think about saving planet. Green banking policy is a step towards this thinking which can unfold a new dimension by taking customer's perception into consideration.

2. Review of Related Literature

2.1 The Emergence of Green Banking Concept

Das and Islam (2013) stated that green banking can be defined as reduction of carbon emission from banking activities by adopting environment-friendly measurements which has two-folded approaches- a) Green transformation should be occurred using renewable energy efficiently and reducing paper based works through embracing automation of working methods; b) Banking activities should foster green initiatives by supporting environmentally responsible projects. Singh and Singh (2012) have mentioned that green banking activities need to be conducted in environment-friendly ways so that carbon footprints can be reduced. According to the report Institute for Development and Research in Banking Technology (2013), 'Green Banking is an umbrella term

referring to practices and guidelines that make banks sustainable in economic, environmental, and social dimensions.' For propagating, environmental, ethical and social propaganda, green banking can also be referred as ethical banking, social banking, sustainable banking, alternative banking or civic banking (Islam et al., 2013). Green banking concept was first unveiled by a Dutch bank named Triodos bank which was established in 1980 (Yadav and Pathak, 2013). The bank had formed a "Green Fund" in 1990 to provide support environment friendly projects and thus acted as a precursor for other banks intended to adopt green bank initiatives (Das, 2008; Yadav and Pathak, 2013). Islam et al. (2014) espoused the green banking concept as it augments the value of an organization through environmental management processes. Das (2008) argued with the concept, though green banking creates win-win situation both for investor and the banking institution, it does not generate highest profit in short run rather it focuses on sustainable profit in the long run. However, in the opinion of Islam et.al (2014), banks adopting green banking strategies should come forward to the greater extent as society's people are more concerned about green activities of a banking organization.

2.2 Green Banking in Bangladesh

Though world's banking industry is quite familiar with green banking approach, Bangladesh still remains in a nascent stage in adopting green banking measurements (Islam et al., 2014). In 2011, Central Bank of Bangladesh, Bangladesh Bank had developed green banking guidelines which is a three phase policy framework. All scheduled banks of Bangladesh had to implement the initiative by 2013 (Phase-1 by 31 December 2011; Phase-2 by 31 December 2012; and Phase-3 by 31 December 2013) (Rahman and Barua, 2016). The policy illuminated three perspectives- Economic, Social and Environmental sustainability.

Green Banking activities are ramified by Bangladesh Bank in two ways- green activities in house and other than in-house (Islam et al., 2013). Overall activities can be organized into seven steps-

1. Policy Formulation and Governance
2. Allocation and Utilization of fund for green Banking activities
3. Environmental Risk Rating (ERR)
4. In-house Environment Management
5. Green Finance
6. Online Banking
7. Training, Promotion and Disclosure

Very recently Bangladesh Bank has published a quarterly review report on green Banking activities of Banks and Financial institutions January- March, 2016 on its website. The report has encapsulated a luminous progress of all 56 scheduled banks in green banking activities. A snapshot about allocation and utilization of fund for green banking activities is given (Table. 1).

Table 1: Allocation and Utilization of Funds for Green Banking activities

	Annual Allocation of Fund, 2016 (in million taka)				**Utilization of Funds, January-March,2016 (in million Taka)**			
Type of Bank/FI	Green Finance	Climate Risk Fund	Marketing, Training and capacity Building	Total	Green Finance	Climate Risk Fund	Marketing, Training and capacity building	Total
SOCBs (06)	11,534.75	142.00	397.75	12074.50	654.92	0.00	4.86	659.78
SDBs (02)	210.00	0.20	0.10	210.30	8.95	0.00	0.00	8.95
PCBs (39)	260,153.98	387.29	286.45	260,827.71	103,781.20	45.57	11.86	103,838.63
FCBs(09)	67,102.30	122.05	65.10	67,289.45	19,126.02	15.00	0.00	19,141.02
Total	**339,001.03**	**651.54**	**749.40**	**340,401.96**	**123,571.09**	**60.57**	**16.72**	**123,648.38**
FIs (31)	18,231.05	37.43	7.35	18,275.83	2874.17	0.45	0.97	2,875.59
Grand Total	**357,232.08**	**688.97**	**756.75**	**358,677.79**	**126,445.26**	**61.02**	**17.69**	**126,523.97**

Source: Quality review report on green banking, March 2016 quarter, Bangladesh Bank

2.3 Customers' Expectation towards Green Banking

While a considerable research studies have been carried out to find out the driving forces behind the adoption of green banking polices (Islam et al., 2014 ; Biswas, 2011; Ahmad et al., 2013), nuance studies have been conducted to delve into customers' expectations towards the banking organizations implementing green banking policies (Hossain et al., 2015). Still the basic question about the research-what forces work behind to form

customers' expectation – is in exploratory stage but the matter of hope is that more empirical investigations are emerging. Zeithaml et al. (2013) has defined customer expectations as beliefs about service delivery serving as standards or reference points against which performance is judged. Ankit (2011) has added to the concept that levels of customers' expectation and satisfaction varies as per their attitudes and experiences perceived from the company. Parasuraman (1991) had mentioned that customers always make a comparative analysis between their perceptions and service performance and for this, understanding customer expectation is a prerequisite for every organization. Beard (2013) argued that understanding customers' expectations is not an easy task, so the first task should be to ask them what they want from a product or service. In this competitive arena, customers expect high quality of service from bank based on which customers form their satisfaction level (Ankit, 2011). If service dropped below the minimum expectation level, customers will be disappointed and if the performance exceeds the desired service, they will be very pleased (Zeithaml et al., 2013).

The research poses a plethora of variables influencing customers' expectation level towards green banking practices. Study has shown that a positive correlation exists between environmental performance and financial performance (Horvathova, 2010). Investors in stock market are very much concerned about environmental pollution and will not hesitate to take a stand against those industries which do not abide by pollution and norms (Goldar, 2007). In this regard, customers expect that every banking and financial institution will abide by green banking policy guidelines as banks are equally concerned about environment. Jani (2012) gives opinion that customer expectation also varies from public sector banks to private sector banks. The areas of strength for public sector banks are- accessibility, privacy, transfer of funds, timeliness, cost of service and network coverage and for private banks are- Bill payment, technical efficient services, mobile banking, online trading and advertising, E-shopping and loan application.

According to Mudassar (2013), today's customers are not only price or quality conscious but also environment conscious. Being socially responsible, each customer wants to know information about carbon emission of a product and thus provides priority to low carbon emission products. Customers expect that green banking financial products will be easy to understand and services will be accessible to everyone. According to the report of UNEP (2007), environmental awareness programs and government support for sustainability have triggered consumer demand for eco-friendly products and services. Traditional banks practicing green banking offer a wide range of green products like- green mortgages, green equity loans, green commercial and residential building loans, green car loans, green cards and so forth. They also offer customers some more other options such as electronic and telephone banking, automation of payment systems and paperless statements like product information, annual report or any other guidelines. Additionally, they also render mutual funds on environmental project, credit cards co-branded with environmental charities and a special line of credit card to encourage homeowners to do an energy efficiency upgrades in their home (IDRBT, 2013). Already, the central bank of Bangladesh has brought 50 green products into play under 11 categories which has refinancing eligibility (Rahman, 2016).

Now-a-days, customers expect cashless activities and 24 hours access to electronic banking (Alininvi, 2009). Technology progress has brought new options like e-cards, internet banking, ATMs (Automated Teller Machines) and other automation systems which have made customers more knowledgeable and independent (Claesness et al., 2002). Nasierowski (1997) clarified the fact that banks should incorporate customers' expectations with strategic organizational changes, otherwise they will have the risk of losing customers. Hossain et al. (2015) differed in their opinion as customers' perception as to e-banking facilities varies according to age groups. Aged people have significant inclination in using internet because they perceive that internet channel has lack of proper utility. So, training is necessary to get the different age groups with proper facilities.

A survey conducted by Shelton reveals a new truth that customers are aware about the energy efficient options and they like the idea of saving energy as it is one of many effective solutions to face global warming problems (Tweed, 2013). For this, banks are coming with new ideas to make their infrastructure environment friendly such as greening use of laptops, desktop computers and servers; constructing an energy efficient, resource efficient and environmentally responsible green buildings; establishing green data centers incorporating reliability, availability, serviceability, scalability, modularity and security; overall creating a new avenue to meet the customers' expectation of establishing a sustainable bank (IDRBT, 2013). Meena (2013) claims that banking industry is never thought to be a polluting industry. But present day's operations of this industry is considerably contributing to carbon footprints through extensive consumption of energy (lighting, air conditioning, electronic or electrical equipment, IT etc.), massive use of paper, financing in environmentally risky projects etc. Anticipation regarding energy savings comes in the form of avoiding much paperwork as less paperwork means less cutting off trees, increasing recycling (paper, tones, cartridges and batteries), reducing electricity consumption and transportation, using renewable energy and so forth (Singh and Singh, 2012).

Sharma, K and Gopal mentioned in their study "A study on customer's awareness on green banking initiatives in selected public and private sector banks with special reference to Mumbai" that consumers find the traditional bank's shift toward green banking beneficial for them. Because, this shift will provide them different

loan products and better deposit rate on CDs, money market accounts and savings accounts. Consumers also expect that energy efficient projects will provide them substantial concession and lower fees on loans. Green and Belle (2003) posited the expectation of lower fees as a salient trait for early adopters of technology who are highly active, autonomous and willing to experiment. As they have vivacious power, knowledge and information, banks should concentrate on winning the trust of this "next generation" group.

Singh and Singh (2012) illuminates a new aspect that compliance with regulatory actions basically which is related to price certainty stimulates the demand for green products and services. Every bank has some environment-oriented guidelines following which it can develop green concerns among stakeholders. Bangladesh bank has also developed ERM (Environmental Risk Management) guidelines and following these guidelines, banks and financial institutions have to submit quarterly report (Rahman, 2013). Customers expect that banking intuitions will abide by these guidelines and hopefully, banks are responding to this "Green Banking Drive" (Islam et al., 2014.) As per Green Banking Policy report of IDLC Finance Limited (2014), implementation of these policies will provide inherent benefits of environmental management. Along with this, the institution will be awarded points by Bangladesh Bank while computing CAMELS rating and will get special permission in case of opening new branches for complying green banking guidelines.

Sabharwal (2013) elucidates that banks are adopting Eco-friendly technology widely which can improve bank's productivity in two ways: energy efficiency and resource utilization. Sense of Eco-responsibility urges customers to expect their banks and financial institutions will use Eco-friendly technology and green methods. Environment friendly technology like Solar Powered branches, ECO friendly ATMs and use of less power consuming devices will reduce carbon footprint and render a clear image about bank's green initiatives.

Initially, a qualitative phase of research was conducted to get idea about possible antecedents which may likely affect customers' expectation level. Quantitative part of the study will yield a conspicuous view about latent factors regarding customer expectation.

Based on preceding discussion in literature review, a graphical model is developed to demonstrate the interconnection among green banking variables, customers' expectation and the benefits of meeting customers' expectation (Fig. 1).

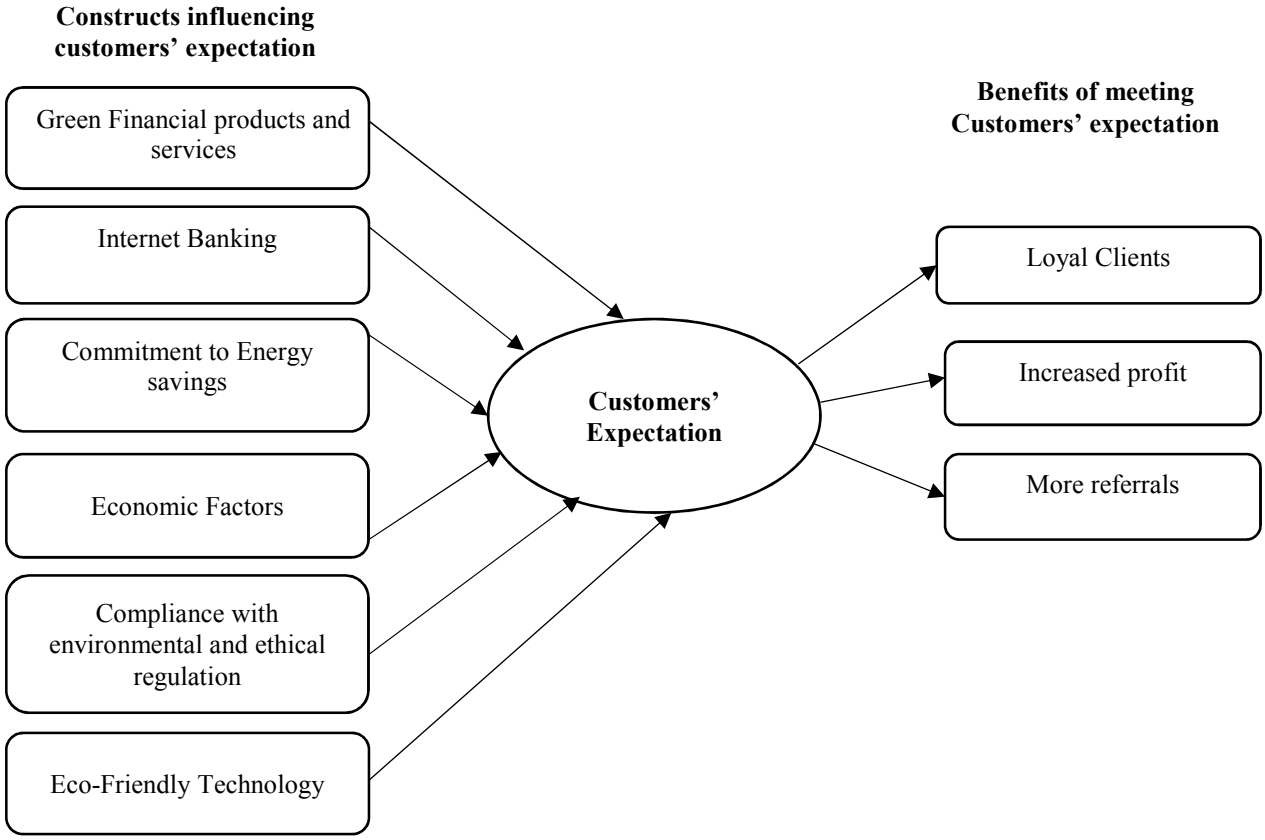

Fig. 1. Conceptual Framework

3. Research Objectives

Specific objectives of the study are-

- To identify latent components which drive customers' expectation towards green banking practices

from the perspective of banking industry in Bangladesh
- To examine interdependent relationship among measured variables
- To investigate a reduced number of factors from a large set of dominant variables

4. Methodology

4.1 Research Design

Both exploratory and descriptive research design are formulated throughout the study. In order to procure insights and understanding about the influencing factors of customers' expectation concerning green banking practices, an exploratory research is designed initially. This exploratory research study has generated qualitative information which is presented in theoretical part of the paper. As a part of descriptive research study, a single cross-sectional research design is formulated to glean information from a selected sample of target population. This information has helped to take conclusive decision by examining relationships among the variables.

4.2 Data Sources

To bring forth necessary information and to outline research objectives, both primary and secondary sources have been used. Theoretical part of the study is prepared based on the secondary sources of data such as review of the scholarly journals, websites, reports and seminar speech as well as government publications. Various studies were conducted about green banking practices and critical review some of those studies are presented in this article. In order to gather primary data, a structured questionnaire was distributed using survey methods.

4.3 Measurement and Scaling

The designed survey questionnaire has two parts. The first part consists of demographic questions about respondents like name, gender, education and age group. In the second part, the 5-point Likert scale of itemized rating scale which is a non-comparative scaling technique is used and respondents are asked to rate their agreement level on 23 dimensions ranging from "Strongly Agree=5", "Agree=4", "Neither Agree nor Disagree=3", "Disagree=2" to "Strongly Disagree=1". These 23 constructs have been adapted from the previous studies of related literature (see Appendix A). The questions are delineated purposively for analyzing through multivariate analysis technique in Statistical Package for the Social Sciences (SPSS).

4.4 Sampling Design Process

4.4.1 Target Population

Elements: Both male and female (aged 21-61 and above) participants who have a bank account are considered as elements.

Sampling units: The basic units containing the elements are private commercial banks (PCBs) – Dutch Bangla Bank (DBBL), Shantinagar Branch; Pubali Bank, Mouchak Branch; National Credit and Commerce Bank (NCCB), Motijheel Branch; Eastern Bank, Kakrail Branch and State Owned Commercial Bank (SOCBs) - Sonali Bank, Motijheel Branch.

Extent: Metropolitan Dhaka City

Time: From July 04, 2016 to August 16, 2016

4.4.2 Sampling Frame and Sampling Technique

For this study, sampling frame is customer database of the branches of selected banks and the list is appropriate as it contains detailed information of study object. Simple random sampling of probability sampling technique is used and sample is drawn by a random procedure. In the sampling fame, each element has a unique identification number. Later, random numbers are generated to decide the samples to be included.

4.4.3 Sample Size

To finalize number of respondents, we have applied "The proportion sample size determination technique" and sample size is calculated using the formula: $n = (Z^2 \times P (1 – P))/e^2$. Initially, 30 customers are selected randomly and asked whether they are acquainted with green banking idea or not. 80% of them replied that the idea is familiar to them and for this, population proportion, P is calculated as 0.80. The estimated precision level, e is ±0.05 with 95% confidence level (Z) and 246 sample size has come out as output. So, we had decided to conduct the survey among the 246 randomly selected bank customers. A brief description of population elements is given in Table 2.

Table 2: Demographic Profile of Participants

Demographic Characteristics		Frequency	Percentage distribution
Variable	**Category**		
Gender	Male	116	46%
	Female	136	54%
Education	Higher Secondary	44	17.5%
	Graduate	113	44.8%
	Post Graduate	95	37.7%
Age Group	21-30	101	40.2%
	31-40	47	18.7%
	41-50	55	21.9%
	51-60	37	14.7%
	61 and above	11	4.4%

5. Data Analysis

For data analysis, factor analysis which is a multivariate interdependence technique, is used. Factor analysis is opted to structure an association among closely related variables. Principal Component Analysis (PCA) is used as the researchers want to determine minimum number of factors which will responsible for maximum amount of variance. From the literature review and survey techniques, 23 variables are identified finally (Table. 3)

Table 3: Detailed Explanation of Identified Variables

Variable Name	Explanation of Variables
V1	Eco-friendly Products and Services
V2	Bundled Package Options
V3	Understandable and Accessible Product Information
V4	Complimentary to lifestyle, interest and personal goal
V5	Speed of Transaction
V6	Integration between Branches and Internet
V7	Available Information in Website
V8	Personalized Communication
V9	Convenience and Flexibility
V10	Lower habit of Paper Consumption
V11	Usage of Energy Savings Bulbs
V12	Usage of Renewable Energy
V13	Usage of Recycled Water and Paper
V14	Eco-friendly Technology with Multi-functionality
V15	Less Carbon emission
V16	Less Polluting Substance emission
V17	Usage of Space and Power Efficient Server
V18	Better Deposit Rate
V19	Lower Maintenance Fees
V20	Lower Transaction Cost
V21	Audit Team and Executing Bodies
V22	Maintaining High Degree of Ethical Standards
V23	Contribution to Environment oriented activities

Analytical model for factor analysis is

$F_i = W_{i1} X_{i1} + W_{i2} X_{i2} + W_{i3} X_{i3} + \ldots\ldots\ldots\ldots + W_{ik} X_{ik}$

Here, F_i= Estimate of *i* th factor

W_i =Weight of the factor or factor score coefficient

k = number of variables

5.1 KMO and Bartlett's Test and Reliability Statistics

KMO and Bartlett's Test of Sphericity measures the acceptance level of sampling adequacy. Minimum standard should be passed through these two tests before conducting factor analysis. KMO test is a gauge of correlation among dimensions and ascertains whether the factor analysis is able to generate reliable and distinct factors. Kaiser (1974) expounds that high values (between 0.5 and 1.0) determines appropriateness of the test. Values below 0.5 suggests that the researchers should collect more data and should examine the variable again.

Table 4: KMO &Bartlett's Test and Reliability Statistics

KMO &Bartlett's Test			Reliability Statistics	
			Cronbach's Alpha	N of Items
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.927	.926	23
Approx. Chi-Square		2580.232		
Bartlett's Test of Sphericity	df	253		
	Sig.	.000		

For this study, value of KMO test statistic is 0.927 (Table 4) which particularizes the appropriateness of factor analysis and also envisage that the analysis will yield a compact pattern of relationship. Bartlett's Test of Sphericity assesses the significance level and validity of factor analysis. It's a hypothesis testing measurement and level of significant less than 0.05 appraises the test to be significant (Field, 2005). High value of chi-square 2580.232 with 253 degrees of freedom specifies that null hypothesis is rejected, it means that there are some relationships among the variables and factor analysis is appropriate. The reliability of data is checked through Cronbach's alpha coefficient (α) and also measures the validity of the selected dimensions. Hendrickson et al.(1993) and McGraw and Wong (1996) stated that coefficient (α) should be greater than 0.700 to approve that items can be used together as a scale and to ensure that internal constancy exists at a proper level. Here, coefficient (α) value .926 (Table 4) shows that the 23 item scale has a very good reliability.

5.2 Initial Eigenvalues, Extraction Sums of Squared Loadings and Rotation Sums of Squared Loadings

Table-5 enlists eigenvalues of 23 components accordingly before extraction, after extraction and after rotation. Eigenvalue of a factor represents total variance of that factor. It has been assumed that each component should have a standard variance of 1 (Zikmund et al., 2010). So only components greater than 1 will be selected, others will be deduced owing to standardization problem. In this analysis, "Extraction Sums of Squared Loadings" column has extracted five (5) factors because their eigenvalue is greater than 1. The values in this column are same as "Initial Eigenvalues Column". The first few factors (especially factor 1) have much explanatory power than other subsequent factors. Here, component 1 has highest amount of variation 38.852% on customer's expectation. Total 5 factors are responsible for 61.977% cumulative variance. It is recommended that the extracted factors should have 60% of combined variance (Malhotra and Dash, 2010). In total, 23 variables have 100% variance power. The column labelled as "Rotation Sums of Squared Loadings" represents after rotated eigenvalues and for this, results are different. For example, before rotation, component 1 has 38.852% variance which is considerably higher than the variance of 7.508%, 6.488%, 4.722% and 4.407% of remaining four components respectively. After rotation, Component 1 is responsible for 16.046% variance whereas remaining four components have 14.247%, 12.306%, 10.179% and 9.200% accordingly. In general, rotation is used to generalize the relationship among different components and to equalize the relative importance of the extracted factors.

Table 5: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.936	38.852	38.852	8.936	38.852	38.852	3.691	16.046	16.046
2	1.727	7.508	46.360	1.727	7.508	46.360	3.277	14.247	30.292
3	1.492	6.488	52.848	1.492	6.488	52.848	2.830	12.306	42.598
4	1.086	4.722	57.570	1.086	4.722	57.570	2.341	10.179	52.777
5	1.014	4.407	61.977	1.014	4.407	61.977	2.116	9.200	61.977
6	.816	3.549	65.526						
7	.736	3.198	68.724						
8	.717	3.119	71.843						
9	.685	2.978	74.821						
10	.617	2.684	77.504						
11	.591	2.569	80.073						
12	.562	2.444	82.517						
13	.493	2.144	84.662						
14	.471	2.047	86.708						
15	.433	1.881	88.589						
16	.407	1.769	90.358						
17	.391	1.699	92.057						
18	.374	1.626	93.683						
19	.354	1.538	95.221						
20	.301	1.310	96.531						
21	.285	1.241	97.772						
22	.261	1.136	98.908						
23	.251	1.092	100.000						
Extraction Method: Principal Component Analysis									

Source: Presented by Researchers Using SPSS v 20 Output

5.3 Rotated Component Matrix

Rotated component matrix contains loaded value of a variable for each factor and correlation value between factor and variable is from -1 to +1. To avoid clutter, we asked SPSS for those loadings which are more than 0.3 and for this reason, the rest of the loadings are not demonstrated.

Table 6: Rotated Component Matrix
Source: Presented by Researchers Using SPSS v 20 Outputs

Description of Variables	Component				
	1	2	3	4	5
Eco-friendly products and services				.632	
Bundled Package Options				.645	
Understandable and Accessible Product Information	.550			.449	
Complimentary to your lifestyle, interest and personal goal	.481				.410
Speed of Transaction				.639	
Integration between Branches and Internet				.422	.635
Available Information in Website	.714			.351	
Personalized Communication	.537				.545
Convenience and Flexibility	.755				
Lower habit of Paper Consumption			.770		
Usage of Energy Savings Bulbs	.324				.593
Usage of Renewable Energy	.441		.447		.391
Usage of Recycled Water and Paper	.570	.403			
Eco-friendly Technology with Multi-functionality			.658		.324
Less Carbon emission		.553	.319		.454
Less Polluting Substance emission	.557		.588		
Usage of Space and Power Efficient Server	.451	.606			
Better Deposit Rate		.523	.492	.390	
Lower Maintenance Fees		.737			
Lower Transaction Cost	.461	.535	.360		
Audit Team and Executing Bodies		.360	.503	.462	
Maintaining High Degree of Ethical Standards		.750		.333	
Contribution Environment Oriented Activities	.512	.459			

We have used varimax procedure for rotation, an orthogonal rotation. We assume that produced factors will be uncorrelated with each other which means they will be theoretically independent (Field, 2005).

However, factor matrix before rotation creates interpretation problem as one component is associated with multiple variables. But rotated factor matrix resolves this problem because researchers can select only the variable which is highly associated with its respective factor. For example, in table 6, Eco-friendly products and services is highly loaded in component 4 whereas understandable and accessible product information is strongly associated with component 1. Rotated component matrix eases the task of labelling factors.

5.4 Measuring Number of Factors

Several theoretical implications work behind determining number of factors. Five factors are selected after the analysis and the reasons are-

- The factors which have eigenvalues more than one are picked and five factors have satisfied this condition (Table 5).
- Satisfactory level of cumulative variance should be at least 60% and combined value of five factors is 61.977% (Table 5).
- Scree plot also provides idea about number of factors. The thunderbolt indicates the break of the curve and from sixth factor the curve is tailed off and turned into a stable plateau (Fig. 2).

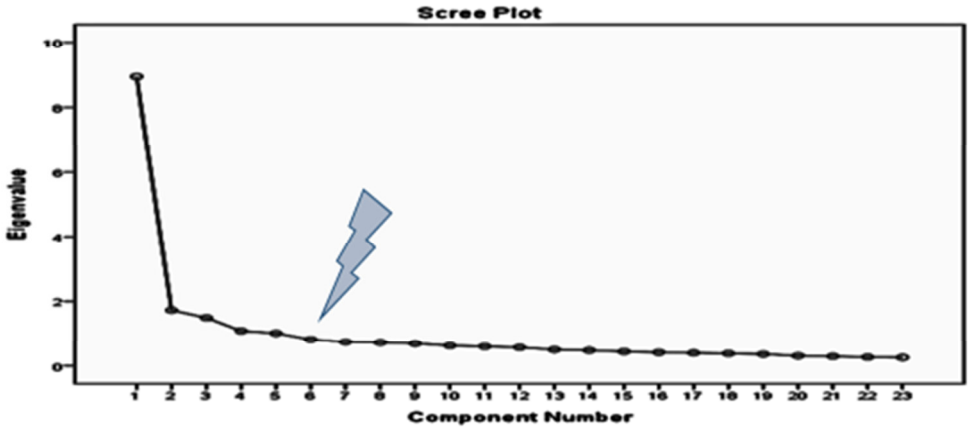

Fig. 2. Scree Plot

6. Findings

The number of factors regarding customers' expectations towards green banking practices are already divulged in quantitaive part of the study. Detaled explanation of these factors will be helpful to take decisive decision. A table (Table 7) is established labelling these factors.

Table 7: Labelling Factors

Factor No.	Description of Variables	Factor Loadings	% of Variance	Labeling Factors
1	Understandable and Accessible Product Information	.550	16.046%	Information Availability and Customer Needs
	Complimentary to your lifestyle, interest and personal goal	.481		
	Available Information in Website	.714		
	Convenience and Flexibility	.755		
	Usage of Recycled Water and Paper	.570		
	Contribution Environment Oriented Activities	.512		
2	Less Carbon emission	.553	14.247%	Spirit of Ethics and High Yield Savings
	Usage of Space and Power Efficient Server	.606		
	Better Deposit Rate	.523		
	Lower Maintenance Fees	.737		
	Lower Transaction Cost	.535		
	Maintaining High Degree of Ethical Standards	.750		
3	Lower habit of Paper Consumption	.770	12.306%	Energy Efficiency
	Usage of Renewable Energy	.447		
	Eco-friendly Technology with Multi-functionality	.658		
	Less Polluting Substance emission	.588		
	Audit Team and Executing Bodies	.503		
4	Eco-friendly products and services	.632	10.179%	Product Benefits
	Bundled Package Options	.645		
	Speed of Transaction	.639		
5	Integration between Branches and Internet	.635	9.200%	Integration and Personalization
	Personalized Communication	.545		
	Usage of Energy Savings Bulbs	.593		

The first fatcor influencing customers' expectation is labelled as "Information Availability and Customer Needs" which generates maximum 16.046% variance. The discernible varibles which are attached highly to the factor are - Customers's expectation of available information in website (.714) and convinence and flexibility of using 24/7 services (.755). Obtaining updated information about green banking practices, products, services will make customers more concerned about a bank's environment related initiatives. Moreover, products

complimentary to their lifestyle, interest and personal goal, company's usage of recycled water and products, company's contribution to envronment oriented activities such as tree plantation, understandable and accissible product information are also expected by customers.

The second factor is termed as "Spirit of Ethics and High Yield Savings" which is significantly mingled with maintaining high degree of ethical standards (.750), lower maintenance fees (.737), better deposit rate (.523) and lower transaction cost (.535). Being ethical, banks should be concerned with its' social and environmental impacts in case of providing loans and investment. Furthermore, green banking practices stimulates banks to cut down their costs and in turn, they can offer high return which will shape customers' expectations up.

The third factor is referred as "Energy Efficiency" which galvanizes banks to utilize available resources and renewable energy in an efficient way. Customers expect that banks should reduce heavy consumption of paper. Consequently, less consumption of paper will considerably diminish cutting down trees. Eco-friendly technology with multi functionality and equipment which emit less polluting substance also contributes to form "Energy Efficiency" factor.

The fourth factor "Product Benefits" is concerned with offering eco-friendly products like green mortgages, green home equity, green commercial building loan, green car loan, green credit cards etc. Customer's growing interest in green products provides banks a signal conveying that customers are equally concerned about environment. Moreover, bundled package options of green products and speed of transaction through internet banking also mold up this factor.

The fifth composite factor "Integration and personalization" stirs up customer's expectation toward a coordinated green banking approach and customized marketing. Green banking can offer personalized green loan such as home owners may expect loans as per their personal needs to upgrade green infrastructure in their premises. Moreover, coordination and integration among branches and banks activities will provide clear message about green initiatives which will reduce customer's confusion.

7. Implications

The study has disclosed some important implications which have substantial applicability and absolute validity in real life. Especially, the research results will be beneficial for marketing managers who are intend to restructure the banking system through an integrated climate-saving approach keeping customers' expectation in mind.

The study reveals customers' expectation that banks will provide proper information about green banking financial products and services in all touch points like website, financial reports, call center and other client service advisors. So banks should have an integrated communication system to provide coordinated information and message about green loans, mortgages, credit card and other services to provide clients green image of banks.

The study also provides an insight that banks should hold spirit of ethics by disclosing financial reports and green banking reports in front of different stakeholders. Another important aspect regarding customers' expectation is- if the bank executes green guidelines, it will cause lower expenses for that bank. This Lower expense can be rewarded in the form of higher rate of return, better deposit rate, lower account cost. Banks can show the sign of their green improvement through meeting economic factor related demand of customers.

Another significant research outcome is- bank's energy efficient related efforts should be visible in front of customers. Setting up solar power panel, using energy saving bulbs, less paper related works, using sensory taps to reduce water consumption, hygienic office ambience-all these efforts should be make perceptible. At bottom, banks should render a clear message that they are taking customers' expectation regarding green concerns into account and thus their endeavor to save the environment will be successful.

8. Conclusion

Customers are known as lifeblood for any business. Every organization's responsibility is to satisfy customer needs to meet their expectation and only then, organizations will be able to build strong customer base. Today's customers are more reactive on environmental issues and for this, banks should perform in a proactive way to pinpoint their expectations on environmental initiatives. The study is an effort to intensify customers' expectations with bank's green strategies to ensure sustainable development and conservation of environment. Customer interest is growing in eco-friendly goods and services. So it is bank's responsibility to help them by providing enough product related information. Moreover, changes in daily operations should be brought regarding environment related issues so that they become easily discernible to customers. Overall, banks should adopt strategies to represent itself as "Green Bank" in customers' eyes. However, the paper is subjected to some limitations. The study is conducted on a small size of sample comparing to the large number of bank customers in whole country. Researchers have conducted the study on some selected banks. So when findings will be generalized in similar types of studies cautions should be taken. The research has identified 23 variables but more variables could be added with the help of priori knowledge. Finally, data is collected from some particular

areas in Dhaka city. Results could be different if more areas would be covered. Future researchers should take these constraints into consideration. Further research can be undertaken in "Green Banking policy adopted by foreign banks" because foreign banks are practicing green banking on a serious note. Advanced research study in this arena from perspective of Bangladesh will help to build a better understanding about green banking strategy.

APENDIX A

The following constructs, obtained from literature review, were used for quantitative analysis. Based on these constructs, the whole study is designed to reach final decision.

A.1. Green financial products and services

1. The bank offers Eco-friendly products and services (green mortgages, green home equity, green commercial building loan, green car loan, green credit cards etc.
2. The bank offers bundled package options.
3. Financial product terms are easy to understand and have enough information.
4. Offered products are complimentary to my lifestyle, interest and personal goal.

A.2. Internet Banking

1. My bank offers me high speed of transaction
2. I would like to say my bank maintains a balanced integration between branches and internet.
3. Information is available in the bank's website.
4. I have a good experience with my bank in case of personalized communication.
5. The bank offers convenience and flexibility of using 24/7 services.

A.3. Commitment to energy savings

1. The bank has extensive habit of paper consumption.
2. I have noticed that the bank uses energy savings bulbs.
3. I would like to say the bank uses solar energy and conscious about using natural resources.
4. The bank didn't bring the issue into customer's attention that it uses recycled water and paper where feasible.

A.4. Economic factors

1. I am pleased because the bank offers better deposit risk
2. I have a good experience in case of maintaining account because the bank has lower maintenance fees than any other bank.
3. I am pleased to mention that the transaction cost of the account is low.

A5. Compliance with environmental and ethical regulation

1. I know that the bank has an audit team and executing bodies for implementing rules and regulation.
2. I fear that the bank maintains high degree of ethical standards.
3. The bank has mentionable contribution to environment oriented responsibilities for society such as campaign for tree plantation, distributing free seedlings etc.

A6. Eco-friendly technology

1. I have observed that bank uses Eco-friendly technology which has multi-functionality such as solar array, solar water heater, energy monitor etc.
2. The technologies that bank have adopted has less carbon emission.
3. The technology emits other polluting substance which are harmful for environment.
4. The bank use space and power efficient server.

REFERENCES

Alinvi, F. 2009. "Customers' Expectations of Banks Becoming Cashless-How could Banks meet customer's expectations when changing from cash services to deeper customer relationship?" Retrieved in July 20, 2016 from
www.diva-portal.org/smash/get/diva2:220556/FULLTEXT01.pdf

Ahmad, F., Zayed, N. M. and Harun, A. 2013. "Factors behind the Adoption of Green Banking by Bangladeshi Commercial Banks", *ASA University Review,* Vol. 7, No. 2, pp. 241-255.

Arnsperger, C 2014, "Social and Sustainable Banking and the Green Economy project Part I: A Hypothetical Diachronic Scenario", *Paper for the 2014 Annual Conference of the Society for the Advancement of SocioEconomics(SASE)*, Chicago, IL.

Ankit, S. 2011. "Factors Influencing Online Banking Customer Satisfaction and Their Importance in Improving Overall Retention Levels: An Indian Banking Perspective", *Information and Knowledge Management*, Vol. 1, No. 1, pp.45-54.

Biswas, N. 2011. "Sustainable Green Banking Approach: The Need of the Hour", *Business Spectrum,* Vol.1, No.1, pp.32-38.

Beard, R. 2013. "The complete guide to customer expectations", Retrieved in June 15, 2016 from http://blog.clientheartbeat.com/customer-expectations/

Bangladesh Bank 2016, *Quarterly Review Report on Green Banking Activities of Banks and Financial Institutions and green refinance activities of Bangladesh Bank*, January- March, 2016. Retrieved on June 25, 2016 from *https://www.*bangladesh-bank.*org/.../*greenbanking_*janmar*2016.*pdf* · PDF file

Claessens, J., Dem, V. and De Cock, D. 2002. "On the security of today's online electronic banking systems", *Computers & Security,* Vol. 21 No 3, pp. 253-265.

Dash, R. N. 2008. "Sustainable Green Banking: The Story of Triodos Bank". Cab Calling. October- December 2008, pp.26-29.

Field, A. 2005. "Factor analysis using SPSS", Retrieved in August 20, 2016 from file:///G:/SPSS/Factor%20analysis-%20University%20of%20Susex.pdf

Goldar, B.N. 2007. "Impact of Corporate Environmental Performance or Profitability and Market Value: A case Study of Indian Firms" Paper presented in National Conference 'Expanding Freedom: Towards Social and Economic Transformation in Globalized World' April 11-13, 2007, *Institute of Economic Growth*, Delhi.

Goldstuck, A. 2001. Special Report: *Online banking in South Africa.* Retrieved in June 20, 2016 from http://www.mediatoolbox.co.za

Green Banking Policy: IDLC FINANCE LIMITED (2014) Retrieved in July 22, 2016 from http://www.idlc.com/downloads/Green_Banking_Policy_final.pdf

Green, S. and Belle, J. 2003. "Customer Expectations of Internet Banking in South Africa", Retrieved in June 22, 2016 from https://www.researchgate.net/publication/251446751_Customer_Expectations_of_Internet_Banking_in_South_Africa

Green Wiki 2013, *Green Banking.* Retrieved in June 22, 2016 from http://green.wikia.com/wiki/Green_Banking

Horvathova, E. 2010. "Does environmental performance affect financial performance? A meta-analysis". *Ecological Economics,* Vol. 70, No. 1, pp. 5259.

Hossain, Z., Ahmed, M. and Nisha, N. 2015. "Consumer Attitudes and Perception towards Green Banking in Bangladesh" Retrieved in July 20, 2016 from file:///G:/Green%20Banking/Consumers%20attitude%20and%20perception.pdf

Hendrickson, A.R., Massey, P.D. and Cronan, T.P. 1993. "On the Test-Retest Reliability of Perceived Usefulness and Perceived Ease of Use Scales", *MIS Quarterly*, June, pp. 227-229.

Islam, S. I. and Das, P. C. 2013. "Green Banking Practices in Bangladesh", *IOSR Journal of Business and Management (IOSR-JBM),* Vol. 8, No. 3, p. 39.

Islam, M. T., Khan, A. I. and Afroz, F. 2013. "Green Banking in Bangladesh: Synchronous metamorphosis in banking action", *The international journal's: Research Journal of Economics & Business Studies,* Vol. 3, No 1, p. 53.

Islam, T., Sharmeen, K. and Rahman, S. 2014. "Adopting Green: from the perspective of private commercial banks in Bangladesh", *Shanghai University of International Business and Economics,* pp. 1-6.

Institute of Development and Research in Banking Technology, 2013, Publications: IDRBT.
Retrieved in July 21, 2016 from http://www.idrbt.ac.in/publications/Frameworks/Green%20Banking%20Framework%20

Jani, A., S. 2012. "A study of Customer Perception on the use of E-Technology in the Retail Banking Sector: A Comparative study of Public Sector and Private Sector Banks", *Indian Journal of Marketing*, Vol: 42, No: 1, pp. 46-58.

Kaiser, H.F. 1974. "An index of factorial simplicity", *Psychometrika,* Vol. 39, pp. 31-36.

Malhotra, N. K. and Dash, S. 2010. *"Marketing Research- An applied orientation",* 6th edition, Prentice-Hall Inc., NJ.

McGraw, K. O. and Wong, S. P. 1996. "Forming Inferences about Some Intra class Correlation Coefficients", *Psychological Methods*, Vol. 1, pp. 30-46.

Meena, R. 2013. "Green Banking: As Initiative for Sustainable Development", *Global Journal of Management and Business Studies,* Vol. 3, No. 10, pp. 1181-1186.

Mudassar, A. 2013. "Impact of Carbon Emissions on Customer's Buying Behavior", *LAP Lambert Academic Publishing*, Germany.

Nasierowski, W.1997. "Rethinking Corporate Restructuring: A Comparison of the Four Central Approaches", *Technology Analysis & Strategic Management,* Vol. 9, No. 1, pp. 75-84.

Nabi, N. 2012. "Customer Expectations of Service Quality: A Study on Private Banks of Bangladesh", *World Review of Business Research,* Vol. 2. No. 4, pp. 172 – 186.

Parasuraman, A, Berry, L., L. and Zeithaml, V., A. 1991. "Understanding Customer Expectations of Service", Retrieved in June 22, 2016 from http://sloanreview.mit.edu/article/understanding-customer-expectations-of-service/

Rahman, A. 2016. "Launching ceremony of Green Banking for energy sustainable economy".

Seminar speech. Retrieved on June 25, 2016 from http://www.bb.org.bd/governor/speech/feb022013gse.pdf

Rahman, S., M. and Barua, S. 2016. "The design and adoption of green banking framework for environment protection: Lessons from Bangladesh", *Australian Journal of Sustainable Business and Society*, Vol. 2, No. 1, pp. 1-19

Singh, H. and Singh, B.P. 2012. "An Effective & Resourceful Contribution of Green Banking towards Sustainability", *International Journal of Advances in Engineering Science and Technology*, Vol. 1, No. 2, pp. 41-45.

Sharma, N., Sarika K. and R. Gopal "A study on customer's awareness on green banking initiatives in selected public and private sector banks with special reference to Mumbai", *IOSR Journal of Economics and Finance (IOSR-JEF), e-ISSN: 2321-5933, p-ISSN: 2321-5925,* Vol. 2, pp. 28-35.

Sabharwal, M. 2013. "The Use of Eco-Friendly Technology and Gree Methods to Bring Down the Carbon Footprint by Indian Banks", *Masters International Journal of Management Research and Development (MIJMRD),* Vol. 1, No. 1, pp. 76-85.

Tweed, K. 2013. "Can Home Energy Efficiency Gain Traction?" Retrieved in July 22, 2016 from http://www.greentechmedia.com/articles/read/Can-Home-Energy-Efficiency-Gain-Traction?utm_source=SmartGrid&utm_medium=Headline&utm_campaign=GTMDaily

UNEP Finance Initiative: Innovative financing for sustainability (2007). A document of the UNEP FI North American Taskforce. Retrieved in July 20, 2016 from http://www.unepfi.org/fileadmin/documents/ceo_briefing_green.pdf

Yadav, R. and Pathak, G.S. 2013. "Environmental, Sustainability through Green Banking: A Study on Private and Public Sector Banks in India", *OIDA International Journal of Sustainable Development,* Vol.6, No.8, pp. 37-48.

Zeithaml, V., A., Bitner, M., J., Gremler, D., D. and Pandit, A. 2013. "Services Marketing: Integrating customer focus across the firms", 6th edition, *Tata McGraw Hill Education Private Limited*, New Dellhi.

Zikmund, W., G., Babin, B., J., Carr, J., C. and Griffin, M. 2010. "Business Research Methods", 8th edition, SOUTH-WESTERN CENGAGE Learning, United States.

https://www.rabobank.com/en/about-rabobank/in-society/sustainability/for-individual-clients/index.html.