

# Customer's Intention to Use Green Banking Products: Evidence from Sri Lanka

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**Abstract-** In recent years, both academics and banking professionals are paying more attention towards the green banking concept due to its significant influence on environment management in banking context. In Sri Lanka, People's bank adapted to the green banking practices in 2015 with YES savings accounts as the first state sector bank which introduced the green banking products to their customers. Even though there are so many convenient facilities and benefits available with green banking in People's Bank since 2015, the problem is that there is a less customers' intention to use these green banking products. Thus this study aims to investigate factors affecting for the customers' intention to use green banking products in people's Bank. Data were collected by distributing a structured questionnaire among the sample of 371 customers in People's bank in Kandy branch. Customers' purchase intention has been considered as the dependent variable and green product awareness, green product trust, green product image, green benefits, green perceived value and green product security & privacy have been considered as independent variables. The results indicate that there are significant positive effects of green product awareness, green product benefits, green perceived value and green product privacy & security on the customers' intention while there are significant negative effect of green product image and green product trust on the customers' intention to use green banking products in People's bank.

**Index Terms-** *Environmental Sustainability, : Green Brand Dimensions, Green Products, Purchase Intention*

## I. INTRODUCTION

he Green banking means "promoting environmentally friendly Tpractices and reducing carbon footprint from banking activities" (Schultz, 2010). Simply, green banking refers to the efforts taken by banks to encourage environmentally friendly investment and green banking essences are an active & smart way towards future sustainability. According to the 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." The ultimate objective of practicing green banking is to protect the natural environment, to make proper use of organizational resources, to reduce paper work, to get the cost and efficiency of time (Chen & Chang, 2012).

If companies want to take on green initiatives, they have to apply the model of green banking into all aspects of banking activities (Ottman, 2008). Because the society is more ready to buy eco-friendly products with enough dependable information, corporation have to provide trustworthy information for their customer in order to develop their green brand and enhance green knowledge (Peattie, 1992). It is troublesome for banks to convince their customers to purchase their items without giving adequate data to their clients. Bank must show more information about the green execution of their items to get their client's.

The idea of green banking was built up in 1980 at Triodos bank from Dutch which started environmental sustainability in the banking sector. The first green bank was commenced its operations in Mt. Dora, Florida, United States in 2009. After that the banks everywhere throughout the world, for example, banks in Bangladesh, India, and so on are persuaded to continue with green banking practices.

In Sri Lanka, banking sector is begun to rehearse the green banking concept in 2013. This valuable concept is firstly introduced by one of private sector bank in Sri Lanka, the commercial bank PLC (Shaumya, 2016). Among the 25 licensed commercial banks and 7 licensed specialization banks in Sri Lanka (People's Bank, 2015), only few domestic commercial banks are formally initiated green banking concept including private sector banks such as Commercial bank PLC, Hatton National Bank, Sampath Bank PLC, and Seylan Bank PLC limited.

People's Bank has recently announced the launch of Sri Lanka's first ecological-friendly savings product for youth under the name of "YES". They launched the green banking concept parallel to their 54<sup>th</sup> anniversary celebration (People's Bank, 2015).The "YES" account has made a large part of the youth to promote savings across Sri Lanka, now it is designed to offer paperless banking services. So, this account is expected to encourage the younger generation to preserve the environment with minimal use of paper, which can lead the route for a more sustainable future in the coming time. Under the concept of "YES with green", the account holders will no longer receive any correspondence through the paper, but will be encouraged to receive all their banking services electronically in it, including the bank e-statement, debit and credit card increasing the use of mobile banking and internet banking involves taking advantage of the banking services themselves and other means of paperless communication (Daily FT, 2018). People's Bank is hopeful to popularize the topic to change its banking services and reach the

electronic form, marking the bank's commitment towards operation as an environment-friendly organization

People's Bank has initiated a paradigm shift to its traditional banking model through the introduction of green banking concept. Currently the bank provides internet and mobile based banking facilities that reduce environmental impacts and all credit applications are screened for environmental impacts where such impact assessments are required by law. The Bank is also developing green products that will be delivered entirely on an electronic, paperless platform. The bank hopes to gradually transfer the entire banking process into a secure, electronic platform. (People's Bank, 2015)

As now there are numerous green banking products available in the People's Bank, with the Young Executive Savings (YES) account. Among them, green accounts with E-Statements, Green loans, green deposits, Green debit and credit cards, Mobile banking and Internet Banking facilities are available to the clients. People's Bank Internet Banking entrance will enhance with present day innovation & administration effectiveness. This is one of the real saving money directs in future. According to the literature reviews, most of the past research articles highlighted that there is a less customer awareness and purchase on Green Banking product and they recommended that there is an urgent need of identify the factors affecting for customers' intention to use green products.

Although few research works have been done on green banking dimension and no studies have looked at all these together and no instrument has been developed to measure green banking in Sri Lanka (Shaumya, 2016). There are few empirical studies embraced in Sri Lankan setting in regard to green banking products and clients' intention. With a specific end goal to satisfy this hole, this investigation will be led theoretically and empirically in People's Bank Sri Lanka. Hence the the main objective of this research is to examine green brand dimensions & customer intention to use green product.

## 11 LITRATURE REVIEW

"Green banking defined as promoting environmentally friendly practices and reducing carbon footprint from banking activities" (Schultz, 2010). Institute for Development & Research in Banking & Technology (2013) states that "green banking is an umbrella term referring to practices & guidelines that make banks sustainable in economic, environment & social dimensions". Simply the ultimate objective of green banking concept is efficiently carry out banking activities through the use of new technology and infrastructure facilities with the minimal impact on the environment. "Green banking is a part of green initiative

taken by stakeholders to save environment" (Ritu, 2014). In order to protect environment while providing standard services to its customers, banks must aware about the all type of implications on environment, before financing any kind of project. According to (Shakil, Azam, & Raju, 2014), green banking means eco-friendly

overall reduction of external carbon emission and internal carbon footprint. Banks can reduce their carbon footprints by adopting the measures such as paperless banking, energy consciousness,

using mass transportation, green building, go online, save paper, use of solar and wind energy (Chaurasia, 2014). According to (IBA, 2014), green bank is like a normal bank, which considers all the social and environmental/ecological factors with an aim to protect the environment and conserve natural resources. It is also known as ethical bank or sustainable bank. taken by stakeholders to save environment" (Ritu, 2014). In order to protect environment while providing standard services to its customers, banks must aware about the all type of implications on environment, before financing any kind of project.

According to (Shakil, Azam, & Raju, 2014), green banking means eco-friendly or environment friendly banking to stop environmental degradation to make this planet more habitable & it helps to overall reduction of external carbon emission and internal carbon footprint. Banks can reduce their carbon footprints by adopting the measures such as paperless banking, energy consciousness, using mass transportation, green building, go online, save paper, use of solar and wind energy (Chaurasia, 2014). According to (IBA, 2014), green bank is like a normal bank, which considers all the social and environmental/ecological factors with an aim to protect the environment and conserve natural resources. It is also known as ethical bank or sustainable bank.

According to (Malu, Agrawal, & Jajoo, 2014), banks can play an important role in reducing the carbon footprint in the society. In the past, reducing poverty, inequality and unemployment in the society was defined as economic development. But the concept of economic development had changed to sustainable development which means development that meets the needs of the present without compromising the ability of future generation to meet their own needs. Sustainability of banks can take two forms, in firstly banks can change their routine operations through recycling programs, paperless banking, using energy efficient resources, and support for community events for reducing population and so on and in secondly, they can adopt lending and investment strategies to promote environmentally responsible projects and can also develop green products to ensure the sustainability in their core business.

### Green Product awareness

Green product awareness is defined as "The ability for a buyer to recognize and to recall that a brand is environmental friendly" (Tseng & Hung, 2013). Increasing awareness amongst customers on environmental threats caused by electronic products has pushed companies to incorporate eco-friendly attributes in their products to fulfill consumers green expectations (Ng, 2013). (Ottaman, 2008) Indicated that there is a strong positive effect & correlation of green awareness & brand preference. (Chen Y. , 2012) Stated that awareness about products create positive perception about the product & decrease the perceived risk of green products. Therefore, companies that offer environmentally sustainable products enhance green perceived value of their brands. Bankers need to focus on environmental issues & ensure that only financing for environmental-friendly projects. Institutions and industries which are financed by the banks must have waste recycling facilities and proper waste management and that should be systematically implemented. Also, those industries should not release any kind of chemicals that could harm the environment. To make this process successfully, it is necessary

to improve the awareness of customers. Seminars and meetings can be organized for this purpose. They can also protect the environment by implementing tree plantation and cleanliness activities in urban area. It will help to maintain and improve our way of living as well as environmental sustainability (Rahman & Perves, 2016).

### **Green Product Trust**

“Green trust is a willingness to depend on a product or service based on the belief or expectation resulting from its credibility, benevolence & ability about environmental performance” (Chen Y. S., 2010). Hard and Saunders stated that “Trust is a level of the confidence that another party would behave as expected”. (Ganesan, 1994), posited that “Trust is an extent of the willingness to depend on another partner base on the expectation resulting from the partner’s ability reliability & benevolence”. (Lee, Park, & Han, 2011) Stated that customer trust is a fundamental determinant of long-term consumer behavior. Hence, customers’ purchase intentions are affected by trust (Harris & Goode, 2010). If buyers have had a trust experience with seller, they would possess a higher level of purchase intentions (Van der Heijden, Verhagen, & Creemers, 2003). Most of the previous researches have showed that, consumer trust would positively influence consumer purchase intentions (Schlosser, White, & Lloyd, 2006). (Lee, Park, & Han, 2011) Indicated that consumer trust positively affects customers purchase intentions.

### **Green Product Image**

Green brand image is defined as “as a whole range of impressions, conceptions and apprehensions towards a brand in the customers’ memory which is correlated to the sustainability and eco-friendly concerns” (Chen Y. S., 2009). The green brand image is a subset of the overall brand image. It is plausible that distribute environmentally friendly products, the current quality perception in the consumer mind can positively influence the growth of brand image. (Cretu, 2007) Stated the brand image as the mental views of the consumer, which refers to a specific brand that is related to the products produced by a company. (Ko, Hwang, & Kim, 2012) indicated that, the results of green marketing significantly affected to the creating a positive brand image for green products and their study verified that consumer intentions to use green banking products, generally identify in collection with product excellence and views of company social responsibility. It is understood that the green brand image has a positive effect on the choice of the brand. In other words, the reputation of the company is significantly affected by positive image of the brand and the reputation of the company increase the intention of customers to use green products. (Mourad & Ahmed, 2012). (Juwaheer & Pudaruth, 2012) Argued that the appropriate marketing strategy to

## **III METHODS AND METERIALS**

### **Population of the study**

According to (Sekaran & Bougie, 2009) Population refers to the entire group of people, events or things of interest that the researcher wishes to investigate. Currently, Green banking products are only available with the YES savings accounts in the People’s Bank. Therefore total “YES saving account holders” of the Kandy branch of People’s Bank (Research site) will be taken as the population of the research.

### **Sample of the study**

The sample population is a subset of the entire population, and inferential statistics is to generalize from the sample to the population (Cooper & Schindler, 2008). Among the population of total YES savings account holders, sample is calculated by using the Rao soft Sample Size Calculator (with the confidence level 95% and margin of error 5%). Researcher also used the Morgan table to calculate the sample (Krejcie & Morgan, 1970). According to those result, the 381 of YES savings account holders of the branch considered as the sample of this research.

### **Data Sources**

In this research, researcher has used both primary and secondary data for gathered information regarding customers’ intention to use green banking products. In this research, Primary data were collected from the questionnaire. A questionnaire is a set of printed or written questions with a choice of answers. All questions in the questionnaire were developed on the basis of objectives of the research project.

### **Operationalization of Variables**

The present research is mainly a correlation type of study where it examined the relationship between one dependent variable with several independent variables at a time. The dependent variable of study is purchase intention of customers about green banking products. Green brand dimensions, which the help of related literature. Those are green product awareness, trust, image, benefit, security & privacy, perceived value. Thus this study undertakes six independent variables. Dependent variable will be measured mainly with two constructs while selected independent variable to reflect green brand dimensions (awareness, trust, image, benefit, security & privacy, perceived value) will be measured several constructs.

**Purchase Intention:** “The probability & willingness of a person to give green preference to products having eco-friendly features over the traditional products in their purchase considerations”. (Ali & Ahmad, 2012)

**Green Product Awareness:** “The ability for a buyer to recognize and to recall that a brand is environmental friendly” (Tseng & Hung, 2013)

**Green Product Image:** “Whole range of impressions, conceptions and apprehensions towards a brand in the customers’ memory which is correlated to the sustainability and eco-friendly concerns” (Chen Y. S., 2012)

**Green Product Trust:** “Willingness to depend on a product or service based on the belief or expectation resulting from its

credibility, benevolence & ability about environmental performance” (Chen Y. S., 2010)

**Green Product Benefit:** Usefulness or overall benefit is understood when a new service offers more value in terms of economic benefits, comfort and satisfaction compared to the present services (Rogers, 1983)

**Green Perceived Value:** “general evaluation of the net benefit of a service or product based on the judgment of a customer’s” (Bolton & James, 1991)

**Green Product Security & Privacy:** “Privacy is the willingness of consumers to share information over the internet that allows purchases to be concluded. However, it is clearly that consumer concern with privacy of information is having an impact on the consumer Internet market and that for electronic commerce to reach its full potential, this concern still needs to be addressed” (Green, Yang, & Judge, 1998)

“Security is the Circumstance, condition, or event with the potential to cause economic hardship to data or network resources in the form of destructions, disclosure, modification of data, denial of service & fraud, waste and abuse” (Kalakota & Whinston, 1996)

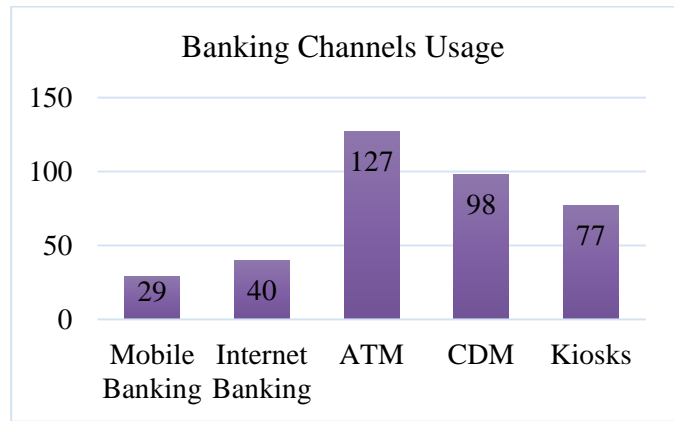
**Method of Data Analysis**

Structural Equation Modeling (SEM) techniques provide us with excellent tools for initial evaluation the differences of validity and reliability in measuring instruments among the wide selection of population groups (Raines-Eudy, 2000). As it implies, SEM is a powerful quantitative data analysis technique used for analyze theoretical relationships in structural models containing latent or/and unobserved variables and also it combines regression models and factor analysis (Meyers, Gamst, & Guarino, 2013) (Tabachnick & Fidell, 1996). Mainly two types of models can be analyzed using SEM: a measurement model and a structural model. The measurement model evaluates the range at which the approximate relations between the variables are reflected in the relationship between the observed variables. The structural model measures the extent of the relationship among latent constructs as well as the relationship among other measured variables.

There are two approaches to estimate the relationships in a structural equation model (SEM): Covariance-based SEM (CB-SEM), PLS-SEM (PLS path modeling) / VB-SEM (Henseler, Ringle, & Sarstedt, 2005). Results of this study were analyzed using PLS-SEM model based on the theoretical model developed using related literature. Partial Least Squares (PLS) modeling approach is aimed at estimating a specific set of hypothesized relationships on maximizing the explained variance of the dependent latent constructs (Hair, Ringle, & Sarstedt, 2011). PLS simulation of the model is carried out by calculating and evaluating various parameters which include item loading, reliability, and validity tests.

**IV RESULTS AND DISCUSSION**

Table 1: Graphical representation of banking channels



According to the Figure 01 Banking Channels usage, it is clearly evident that the majority of the account holders (34%) are doing transactions through the ATMs and 26% customers use CDM machines. Furthermore, 21% from the total sample use kiosks machines for bill payments. 8% and 11% of customers use mobile and internet banking for their money transfer activities.

**Usage of Green Banking Features**

Table 02: Usage of green banking features

	Frequency	Percent	Cumulative Percent
Green E-Statements	58	21.56	21.56
Green Loans	3	1.12	22.68
Green Credit & Debit cards	11	4.09	26.77
Green Mobile & Internet	92	34.20	60.97
Green bill payments	105	39.03	100.0
Total	269	100.0	

Source: Sample survey, 2018

According to the Table 2 usage of green banking features, out of the 269 Yes account holders, most of them (39%) are using green bill payment facility. 34% of customers are using green mobile & Internet while others use green E-statements, Green loans and Green Credit & Debit cards in 22%, 1% and 4% respectively.

**Frequency of Green Banking Usage**

Table 03: Frequency of green banking usage

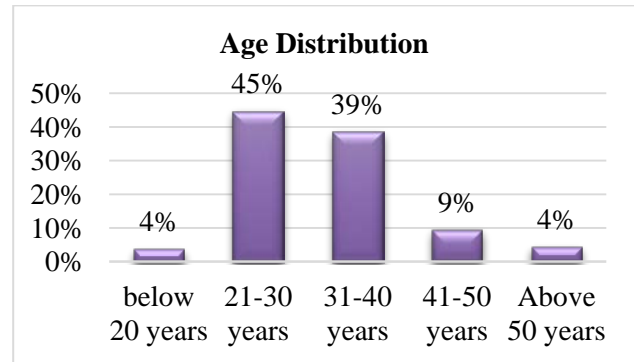
	Frequency	Percent	Cumulative Percent
Always	49	18.21	18.21



Usually	192	71.38	89.59
Rarely	28	10.41	100.0
Total	269	100.0	

Source: Sample survey, 2018

The above table shows the frequency of green banking usage, Out of the 269 account holders, most of them (71%), usually use green banking services while 18% of the customers use green banking services for their daily transactions which means, they always use green banking services. 11% of them rarely use green banking



Source: Sample survey, 2018

### Satisfaction with Green Banking offers

Figure 4.10: Graphical representation of satisfaction with green banking offers

### Reasons to use Green Banking

Table 4: Reasons to use Green Banking

	Frequency	Percent	Cumulative Percent
Save time & cost	67	24.91	24.91
24 hours availability	89	33.09	58.0
Online accessibility	71	26.39	84.39
Security & privacy	4	1.49	85.88
Convenience to use	23	8.55	94.43
Environment friendly	14	5.20	99.63
Curiosity	1	0.37	100.0
Total	269	100.0	

Source: Sample survey, 2018

Table 4 Implied that reasons to use green banking products. Out of the 269 account holders, 33% use green banking because it saves time & cost and 25% use it because of 24 hours availability. Because of online accessibility, 26% of them have been adopted to use those green products. Other reasons to use green banking are security and privacy, convenience to use and curiosity.

create a positive brand image is the initial step towards a company's success to attract more customers & create loyal customers for the company's products. Based on social cognitive theory, individuals act in a highly acceptable manner in society & tend to be choosing the products that are best known. It means that the brand's reputation & image to be a good reason for the buying activities, decisions and behaviors of the people.

### Respondent's Age

Figure 5: Graphical representation of the respondents' Age Distribution

Respondent's age was grouped into five age categories. The participants were asked to indicate their age category by keeping a next to the relevant option provided when analyzing the results, a dummy variables was adopted (below 20 years =1, 21-30 years=2, 31-40 years=3, and 41-50 years=4 and above 50 years=5). The age distribution of the population is shown in figure 05. As can be seen from the figure above, 45% of the sample population are between the ages of 21-30, which would suggest that most people who are engaged with green banking initiatives are in young age. It is clear that the willingness of the younger generation to involve in this is high (more than 50% of the total sample). 39% of the total sample represents from the 31-40 age category and 9% represents the 41-50 age category. 2% of the total sample were below 20 years. Above 50 age category include 1% of the total sample and it is the minimum responded age category. So these people can recognize as middle age people who willing to transaction with the bank and their ideas are mostly represent in this sample.

### Occupation level of banking customers

Respondents were categories into seven groups and asked them to mark their occupation level in relevant option. In here, researcher has used dummy variables to analyze the results.

Table 6: Age distribution of the respondents

Occupation			
	Frequency	Percent	Cumulative Percent
GVT-EMPLOYEE	131	35.3	35.3
PVT EMPLOYEE	97	26.1	61.5
BUSINESSMAN	31	8.4	69.8
SELF-EMPLOYEE	14	3.8	73.6
STUDENT	81	21.8	95.4
HOUSE-WIFE	12	3.2	98.7
OTHER	5	1.3	100.0
Total	371	100.0	

Source: Sample survey, 2018

Figure 4.4 shows the graphical representation of the respondents who engaged with bank transactions while the table 4.1 shows the percentage of them. It is clearly evident that, majority of the account holders are employed in public sector and private sector. These are 35% and 26% respectively. The low percentage (1%) were taken by customers those have not business, private or public employment profession, were earn either normal or low

usage of the bank service. The contribution of females higher than males. Considering the sample in occupation level, majority of the respondents were female who engaged with public sector. Student category consists with the 22% of the total sample.

**Table 4.8: Validity and Reliability constructs of first order analysis**

	Construct	Indicator reliability		Internal Consistency Reliability		Convergent Validity
		Loadings	t-statistic	Composite reliability	Cronbach's alpha	AVE
1.	<b>Green Product Awareness</b>			0.980435	0.976715	0.877436
	GPA1	0.926441	142.393729			
	GPA2	0.942640	163.422654			
	GPA3	0.932400	147.220722			
	GPA4	0.942754	180.565632			
	GPA5	0.940659	125.095715			
	GPA6	0.938339	161.399533			
2.	<b>Green Product Trust</b>			0.970972	0.962552	0.904520
	GPT1	0.939989	178.050109			
	GPT2	0.944739	233.526687			
	GPT3	0.924394	136.635450			
	GPT4	0.900769	105.538966			
	GPT5	0.952894	224.870194			
3.	<b>Green Product Image</b>			0.966305	0.956346	0.851574
	GPI1	0.923894	80.767037			
	GPI2	0.920623	115.800991			
	GPI3	0.894984	80.126403			
	GPI4	0.930422	124.437910			
	GPI5	0.943432	151.037136			
4.	<b>Green Product Benefit</b>			0.982710	0.978882	0.886183
	GPB1	0.962796	235.082947			
	GPB2	0.947772	192.868306			
	GPB3	0.945355	196.682975			
	GPB4	0.948360	252.696412			
	GPB5	0.951570	193.556612			
	GPB6	0.950423	202.370548			
5.	<b>Green Perceived Value</b>			0.974133	0.966788	0.870001
	GPV1	0.943162	176.779188			
	GPV2	0.954598	192.500297			
	GPV3	0.929240	151.813546			
	GPV4	0.934577	114.424557			
	GPV5	0.936091	155.389202			
6.	<b>Green Product Security &amp; Privacy</b>			0.958932	0.935687	0.882800
	GPSP1	0.955105	202.965359			
	GPSP2	0.952450	270.880854			
	GPSP3	0.916057	115.988143			
7.	<b>Purchase Intention</b>			0.968096	0.958757	0.858560

	PI1	0.933996	152.703112			
	PI2	0.943557	195.200895			
	PI3	0.923635	144.210494			
	PI4	0.928395	138.864873			
	PI5	0.902849	111.983519			

analysis. It shows a high

**Measurement Model Fitness (Outer Model)**

**Assessing reliability and validity of Reflective variables**

In here, Indicator reliability (Outer loadings, T-statistics) and Internal consistency reliability (Composite reliability, Cronbach’s alpha) was examined between indicators questionnaire items on reliability of constructs and, below validity of constructs Convergent validity (AVE) and Discriminant validity (Fornell-Lacker criterion) was considered. According to the above table it’s clear that all generated outer loading values of the questionnaire items are above 0.7 which posits that altogether constructs under the analysis have indicator reliability and none of the items were omitted from the model) which means constructs are completely significance at On the other hand, t-stat values of the constructs preview higher values (all are above 2.58) which means constructs are completely significance at 99% significance level. Since, both the tests conclude that the model has a higher reliability in constructs. Concerning the Internal consistency reliability Cronbach’s Alpha (CA) and Composite reliability (CR) was computed and was greater than 0.9 showing an excellent internal consistency of all indicators which reflect the independent variables, under the

association between the items and the questionnaire is consistently reliable.

**Test of Validity**

Validity primarily measures whether the constructs are adequately represented by the items in the defined model. Concerning validity, study undergo with two validity tests; Convergent validity and Discriminant validity. Convergent validity refers to the acquaintance with which a measure relates to (or converges on) the construct. To calculate convergent validity, each indicator’s Average Variance Extracted (AVE) is evaluated. Therefore, accordance with the table 6.1 AVE measures of the indicators denote values greater than 0.7 that they all are above the recommended value of 0.5 where the first order analysis postulate that there is a convergent validity in the model. When it comes to the second test of validity which is Discriminant validity; which refers the extent to which a measure does not measure other constructs a different procedure has to be follow. To test this requirement (Fornell & Larker, 1981) has suggests the square root of AVE in each latent variable can be used in order to establish discriminant validity. To do that, a table which contains manually calculated square roots of AVE can be used as follows.

Table 4.9: Fornell-Larcker criterion analysis for checking Discriminant validity

	GPA	GPB	GPI	GPSP	GPT	GPV	PI
GPA	<b>0.936716</b>						
GPB	0.977031	<b>0.951063</b>					
GPI	0.953798	0.958504	<b>0.922808</b>				
GPSP	0.936394	0.941075	0.940834	<b>0.941373</b>			
GPT	0.978869	0.971942	0.958825	0.935504	<b>0.932738</b>		
GPV	0.969810	0.980139	0.956954	0.953941	0.961441	<b>0.939574</b>	
PI	0.957959	0.970083	0.942579	0.957139	0.946238	0.967729	<b>0.926585</b>

Source: Sample survey, 2018

In summary when it comes to the overall assessment of the measurement model, the validity and reliability of the measurement model were evaluated using the internal consistency reliability, indicator reliability, convergent validity and the discriminant validity. As in the methodology section, a measurement model has satisfactory internal consistency reliability when the CR or CA’s of each construct exceeds the threshold value of 0.7. The results thus indicate that the items used have satisfactory internal consistency reliability. Next, the

indicator reliability of the measurement model is measured by looking at the item loadings. From the validity guidelines, it is said to have satisfactory indicator reliability when each item’s loading is at least 0.7, and this is significant at least at the level of 0.05. Based on the PLS-SEM analysis, all items have exhibited loadings exceeding 0.7 respectively. Thus, it can be said that all the items have exceeded 0.7 in this study demonstrated satisfactory indicator reliability. The measurement model’s convergent validity was assessed by the value of the AVE which

have exceeded the recommended threshold value of 0.5. In this study, the discriminant validity is assessed by using the (Fornell & Larcker, 1981) criterion. Based on the discriminant validity, the

bolded elements represent the square roots of the AVE and the non-bolded values represent the inter-correlation values between the constructs.

#### 4.7 Structural Model Fitness (Inner Model)

The second phase of the model testing, tested the theorized causation of the structural model, which was in the direction of the key constructs. Structural model primarily assesses hypothesized causal relationship between exogenous (independent) and endogenous (dependent) latent variables. This assessment will be done based on the five step guidelines which was suggested by (Hair, Ringle, & Sarstedt, 2011) in order to examine the inner model of a study using on PLS-SEM as below. Besides the measure proposed by Hair et al. (2014) study will evaluate the chi-square value to measure the goodness of fit the model in addition to R<sup>2</sup> measurement.

##### 4.7.1 Assessment of Collinearity

Multicollinearity is a high degree of correlation (linear dependency) among several independent variables. It commonly occurs when a large number of independent variables are incorporated in a model. It is because some of them may measure the same concepts or phenomena. This can be detected by examining tolerance and the Variance Inflation Factor (VIF) that they are the two-major collinearity diagnostic factors that can help to identify multicollinearity in a model. As recommended if the tolerance values of the model > 0.2 have no collinearity problems. However, there is no formal VIF value for determining the existence of multicollinearity in a model. Generally, values of VIF that exceed 10 are often regarded as representing higher multicollinearity, over 5 regarded with moderate effect and over 3 regarded with lower collinearity effects.

Table 4.10: VIF values of the model

Coefficients			
Model		Collinearity Statistics	
		Tolerance	VIF
1	GPA	0.028	35.149
	GPB	0.025	39.892
	GPI	0.059	16.892
	GPSP	0.080	12.509
	GPT	0.033	30.554
	GPV	0.029	34.759

a. Dependent Variable: PI

Source: Sample survey, 2018

In accordance to the above table which denotes VIF measures of the model. When concerning the relationships among

independent variables and dependent variable. It shows that Green product Awareness (GPA), Green Product Benefit (GPB), Green Product Image (GPI), Green Product Trust (GPT), Green Product Security & Privacy (GPSP) and Green Perceived Value (GPV) represents higher collinearity effects. In here, All VIF values are higher than 10 & tolerance values are lower than 0.2, so it indicates there is multi-collinearity issue in the model. In other words, when we consider the relationships between dependent (Purchase Intention) and independent variables. All independent variables represents a higher multi-collinearity effects with PI as well.

##### 4.7.2 Assess the significance and relevance of the structural model relationships

In the second step of assessing the inner model, hypothesis suggested by the study was evaluated. Therefore, as discussed under chapter three hypothesis were listed down in order to in the table 6.5 with their path coefficients and t-statistics to clearly identify their significance of variables in the model as well the relationship between depend and independent variables.

Table 4.11: Path coefficients and significance among constructs

Hypothesis	Relationship	T statistics	Coefficient	Results
H1	GPA>PI	2.714798* *	0.176	Supported
H2	GPT>PI	2.881504* *	-0.179	supported
H3	GPI>PI	0.543211	-0.023	Not-Supported
H4	GPB>PI	7.875054* *	0.521	Supported
H5	GPV>PI	2.988954* *	0.134	Supported
H6	GPSP>PI	8.705094* *	0.364	Supported

\*\* Significance at 95% level  
 Source: Sample survey, 2018

This segment of this chapter addresses whether or not the data gathered and analyzed earlier in this chapter serves to prove or disprove the hypotheses as initially set out in chapter three. They are discussed briefly below.

*H1: The level of green brand awareness is associated positively with purchase intention of green banking products*



According to the above table it is evident that there is positive relationship between green product awareness and the purchase intention of green products recording a coefficient value of +0.176. Purchase intention completely depend on the green product awareness where this statement is proved by the level of significance between these variables that the t-stat value is accepted at 95% significance level. Therefore this hypothesis is accepted showing an increase of the level of awareness by one unit will increase the purchase intention of customers by 0.176.

When comparing with the findings of past researches related to the green banking, in generally there is a significant positive relationship between the green product awareness and the purchase intention. It can be proved by the findings of (Mourad & Ahmed, 2012), (Chen & Chang, 2012) indicate that awareness about products, especially green products, create positive perception about the products.

So this study proved that green product awareness positively effect on purchase intention. That means, the researcher has found that if there is an awareness among the customers on green banking, they accept green banking products because they want to take effort to move from traditional banking to green banking by adopting newest technology.

*H2: The level of green product trust is associated positively with purchase intention of green banking products*

This study is evident that relationship between green product trust and purchase intention to use green products is negative. However, this finding is very differ from (Lee, Park, & Han, 2011), (Harris & Goode, 2010) and (Schlosser, White, & Lloyd, 2006). In their researches, they found that green product trust is a determinant of purchase intention of customers and consumer behavior and trust is the major determinant of buyer seller relationship. This could be due to the lack of product trust on customers' mind especially technical errors dissatisfaction about bank employees. Therefore, bank should be implement strategies to create the trust about their brands on consumers' mind.

*H3: The level of green product image is associated positively with purchase intention of green banking products*

According to our study it is evident that there is negative relationship between green product image and the purchase intention of green products recording a coefficient value of -0.023. Purchase intention is not completely depend on the green product image where the level of significance between these variables that the t-stat value is not accepted at 95% significance level.

However, the finding of this research is differ from previous research. (Mourad & Ahmed, 2012); (Hartmann, 2011); (Juwaheer & Pudaruth, 2012) found that there is a significant positive relationship between green product image and purchase intention of customers. This could be due to the lack of clear brand image.

*H4: The level of green product benefit is associated positively with purchase intention of green banking products*

This study proved that green product benefits positively effect on customers' purchase intention with 0.521. (Bahl, 2012) is also identified that green banking reduces paperwork, creates awareness to business people, helps sanction of loans at comparatively less rates and maintains environmental standard of lending. Cost saving is one of the important benefits of green banking (Heim & Zenklusen, 2005). Green banking avoids as much paperwork as possible and relies on online/electronic transactions for processing so that we get green credit cards and green mortgages. Less paperwork means less cutting of trees (Singh & Singh, 2012).

(Deka, 2016) Concluded that green banking clearly has direct and positive impact on sustainability. Because doing these practices customers can save energy, fuel, paper, water, time as well as money. Significantly it results reducing the carbon footprint from their banking practices. Green banking practices are very convenient, easy and cost effective for the bank customers. It saves the customers trips to the bank. They need not to go to the bank for banking transaction; hence they can save time as well as money. It is a type of anytime-anywhere banking. Green banking practices are also beneficial to the banks because they cause less postage cost and also reduce the workload of the bank personnel.

So this study proved that green product benefit positively effect on purchase intention. That means, this hypothesis is accepted showing an increase of the level of green product benefits by one unit will increase the purchase intention of customers by 0.521.

*H5: The level of green perceived value is associated positively with purchase intention of green banking products*

This study proved that there is positive relationship between green perceived value and purchase intention to use green products recording +0.134. Therefore this hypothesis is accepted showing an increase of the level of awareness by one unit will increase the purchase intention of customers by 0.134.

According to the (Doszhanov & Ahmad, 2015) they explored that there is significant positive relationship between green perceived value and purchase intention to use green products. Green products have great value both for individuals and for environment. Therefore, there is a good opportunity for organizations highlight the value of their products to enhance customers' intention to use environmental friendly products. Findings of this research support the findings of (Cheah & Phau, 2011), (Chen & Chang, 2012), (Steenkamp, 2006) and (Koller, Floh, & Zauner, 2011) indicated that green perceived value for customers' make positive perception about green banking products.

*H6: The level of green product security & privacy is associated positively with purchase intention of green banking products*

According to the above table it is evident that there is positive relationship between green product security & privacy and purchase intention of green products recording a coefficient value of +0.364. Purchase intention completely depend on the green product security & privacy where this statement is proved by the level of significance between these variables that the t-stat value is accepted at 99% significance level. Therefore this

hypothesis is accepted showing an increase of the level of security & privacy by one unit will increase the purchase intention of customers by 0.364.

#### 4.7.3 Assess the level of R<sup>2</sup> (Coefficient of determination)

Coefficient of determination or R square value explains to which extent a percentage variation of dependent variables is explained by independent variables. Simply, it tells us how well the regression model fits our data. This value generally varies between the scales of 0-100%.

Table 4.12: Measure of Goodness of fit

	R Square	Adjusted R Square
PI	0.96031	0.95966

Source: Sample survey, 2018

In this model both R square values of the dependent variable reported as 0.96031. Usually, higher the value of R<sup>2</sup> better the model fits with the observations. However, based on the results we can conclude that 96% variation of the purchase intention is been clearly explained by the independent variables of the study while remaining variations 4% of purchase intention goes unexplained in the model.

Sometimes the value of R<sup>2</sup> can be misleading when assessing the goodness-of-fit of a model where we can look for the value of adjusted R<sup>2</sup> at that time. The adjusted R-Squared compares the explanatory power of regression models that encompass different numbers of predictors. When the R<sup>2</sup> becomes meaningless in a model the value of the adjusted R<sup>2</sup> will be useful.

## V CONCLUSION AND RECOMMENDATION

### Findings

Objective of the study was to find the factors affecting for the customers' purchase intention to use green banking products. Therefore many factors of green banking dimensions were used to find the relationship on purchase intention. Research findings were summarized as follows;

- There is a significant positive effect of green product awareness on customers' purchase intention to use green banking products.
- There is a significant negative effect of green product trust on customers' purchase intention to use green banking products.
- There is a significant negative effect of green product image on customers' purchase intention to use green banking products.
- There is a significant positive effect of green product benefit on customers' purchase intention to use green banking products.
- There is a significant positive effect of green perceived value on customers' purchase intention to use green banking products.
- There is a significant positive effect of green product security & privacy on customers' purchase intention to use green banking products.

### Conclusion

Data presentation and data analysis results were used to make the findings. The conclusion were derived based on the above findings.

The objective of this study were identify the factors affecting for the customers' purchase intention to use green banking products. All the factors were qualitative and data were analyzed by using factor analysis and structural equation model. Most of the customers were female and have good income level. As well as they have good awareness about green banking and they were doing savings as their main transaction. Majority of them were highly satisfied with green banking.

The results of the study indicate that green product awareness, perceived value, benefit, security & privacy are positively associated with the customers; purchase intention about green banking. However trust, image are associated with purchase intention in negatively.

The study has implications for both bank management and academicians. By adopting an appropriate methodology and ensuring reliability and validity, the study has a sound basis for both theoretical and managerial implications. Empirically, this study explores the existing green banking practices in people's bank, Sri Lanka. The conceptual framework developed through this study provides an effective tool to measure green banking purchase intention.

### Recommendations

According to the research conclusions we can see that green product awareness, green product trust, image, benefit, security and privacy and green perceived value were significantly effect on the customers' intention to use green products in people's bank. Therefore following recommendations are vital to the increasing purchase intention of green products.

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## CONCLUSION

A conclusion section is not required. Although a conclusion may review the main points of the paper, do not replicate the abstract as the conclusion. A conclusion might elaborate on the importance of the work or suggest applications and extensions.

## APPENDIX

Appendixes, if needed, appear before the acknowledgment.

## ACKNOWLEDGMENT

The preferred spelling of the word “acknowledgment” in American English is without an “e” after the “g.” Use the singular heading even if you have many acknowledgments.

## Assess the significance and relevance of the structural model relationships

In the second step of assessing the inner model, hypothesis suggested by the study was evaluated. Therefore, as discussed under chapter three hypothesis were listed down in order to in the table 6.5 with their path coefficients and t-statistics to clearly identify their significance of variables in the model as well the relationship between depend and independent variables.

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