FACTORS AFFECTING BANKERS' BEHAVIORAL INTENTIONS TO ADOPT GREEN BANKING IN PAKISTAN: AN EMPIRICAL STUDY

[1]Dr. Warda Najeeb Jamal, [2]Dr. Owais Shafique, [3]Dr. Shakeel Sarwar, [4]Ms. Maryam Khan

[1-4] *School of Business, Management and Administrative Sciences, The Islamia University of Bahawalpur, Pakistan.*

[1]*Email: warda.najeeb@iub.edu.pk*

[2]*Corresponding Email: owais.shafique@iub.edu.pk*

[3]*Email: shakeel.sarwar@iub.edu.pk*

[4]*Email: maryamkhan742@hotmail.com*

ARTICLE INFO	ABSTRACT
	It is evident from the historical facts and scientific studies that human beings are the major reason behind the rising global temperatures due to their detrimental act of releasing greenhouse (or heat-trapping) gases for meeting their increasing demands of energy for domestic and industrial usage. As a result, since the start of the industrial revolution, average global temperature has been increased by one degree Celsius. Hence, there is a growing realization of undertaking extraordinary endeavors for a sustainable environment management around the globe and the organizations have started to invest efforts on minimizing their carbon footprints and considering their environmental impact. In the financial sector, banks can play a pivotal role in reducing the unfavorable environmental impact by introducing Green banking. However, despite the State Bank of Pakistan's (SBP) Green banking adoption guidelines, no bank has adopted Green banking completely. This attracts research on identifying the factors that influence bankers' behavioral intentions to adopt Green banking (BIAGB). Hence, the current study aims to highlight the most influential factors which influence bankers' BIAGB. With regard to this, the data was collected from 300 respondents on a structured questionnaire based on a 7 point Likert scale. The findings indicate that potential for profitability (PP), Management Commitment and Support (MCS), and Corporate Social Responsibility / Image Improvement (CSR) contribute in predicting bankers' BIAGB. On the basis of these findings, the study implies that with such knowledge of bankers' BIAGB, banks can adopt Green banking practices (GBP) more swiftly than ever before.

1. INTRODUCTION

Over a number of years, global warming and climate change have had a significant impact on human life with regard to diminishing health conditions, food production, use of land, availability of water resources and environment. Similarly, environmental degradation and climate change have resulted into inevitable qualms for global financial stability (Bangladesh Bank, 2011). Hence, the issue of global warming attracts an elevated attention from the global community. For example, in the consideration of not only the drastic changes in the weather patterns which have increased the greenhouse gases and affected the quality of breathable air but also the demands of the global community, the businesses around the world have started to participate in the cause of protecting the planet (Bangladesh Bank, 2011). In particular, there have been a *growing* concern regarding the *human activities'* impact on the *environment* during the last decades (Nica & Potcovaru, 2014). This increasing concern regarding human activities has given a rise to the implementation of new strategies to execute and evaluate business pursuits. Some steps have been taken by the Governments of different countries and international institutes to construct tools for measuring the change of their actions on environment. These actions are aimed at switching to climate-resilient and low-carbon economy (McCahery & Vermeulen, 2014). However, the transition cost of switching from high carbon emission to low carbon emission economy is the main hindrance in achieving these aims (Popescu, 2014). Although carbon tax and carbon trading are considered among some of the best options to achieve these aims, the evolution and endorsement of environmental friendly investment, such as Green investment, is crucial as well (Doval & Negulescu, 2014).

Green investment is basically the expenses an organization makes for creating the positive impact on environment. It includes investments on projects which prevent the contribution of harmful effects on environment, and maintain and restore the natural capital, such as bio food, bio fuels, renewable energy, forests, etc. (Doval & Negulescu, 2014). Both Green investment and banking are quite new concepts and designed to accelerate the growth of sustainable markets. Therefore, majority of the countries around the world have begun to participate with regard to the implementation of these concepts. Nevertheless, Green banking is adopted according to the individual country's specific market opportunities, market risks, resource legacy and sustainability goals (Vikas et al., 2017). This means that even though majority of the countries are on the same page when it comes to the realization and acceptance of the Green banking idea, the extent of their involvement for implementing the Green banking initiatives may vary.

As far as Pakistan is concerned, in order to establish a Green banking system in the country for obtaining a climate-resilient economy, following Pakistan Environment Protection Act - 2007 (PEPA), the guidelines on Green banking were introduced by the State Bank of Pakistan (SBP) in 2017. These guidelines were expected to be implemented within 12 months of their initiation, and their implementation progress was required to be monitored on regular basis (State Bank of Pakistan, 2017b). In this regard, standard reporting procedures for all the operating banks in Pakistan were established by coordinating with them. Unfortunately, the Green banking guidelines have not been implemented by the banks yet, despite being given a year for implementation by the SBP. The reason for this failure may rests on not rationalizing the scope and scale of Green banking guidelines properly at the time of their initiation which may have kept the banking sector bemused. For example, these guidelines merely provide an overview of the actions (or guiding principles) that are expected to be abided by the banks, but not the detail regarding every procedure and initiative which may be necessary for them to follow in their pursuits of fulfilling the implementation of Green banking. Hence, these guidelines may need to be further developed as more than just the broad guiding principles.

Currently, the purpose of Green Banking Guidelines (GBG) is to increase the invincibility of the banks with regard to the risks arising from the climate change, enable the banks to fulfill their environmental protection responsibilities, and provide finances to the businesses for making the economy resource-efficient and climate-resilient. However, as previously indicated, these guidelines are the initial steps among a series of prospective interferences which may possibly lead to a sustainable economic environment for the banking sector in the country. The essentials of the guidelines on environmental responsibilities fall under three categories: (a) Environmental Risk Management Guidelines, (b) Green Business Facilitation (GBF), and (c) Guidelines on Own Impact Reduction (State Bank of Pakistan, 2017a). The underlying idea behind these three categories lies on the conviction that Green banking paves the way for new profitable business opportunities in the form of investments into the areas which lead to efficient use of resources and alternative ways of energy generation. Hence, following this conviction, the banks need to equip themselves with necessary knowledge, resources and capacity in order to capture their due share in this emerging business expedition of Green banking.

Moreover, Green banking is not just limited to reduce the credit risks of the clients through the proper management of the environmental risks faced by them. The feature of Environmental Risk Management in Green banking also systematically provides the necessary insights to the banks so that they can invest into the distinguished products and markets, such as carbon markets, green mortgages, energy efficient products and services, and so forth. Therefore, the banks not only aspire to facilitate economic activities by providing secure financial facilities and advisory services to their clients, but also by leading businesses to environmental friendly strategies, sustainable operations and efficient allocation of financial resources, banks can serve as a powerful agent of change. For example, with regard to environmental friendly strategies, the banks need to be well positioned, in order to reduce their impact on environment, through the efficient management of energy consumption and other resources. The banks may use the impact reduction strategies as a way of marketing their green image and attracting more clients from the environmentally conscious segments of the market and society. In this regard, many developed countries have already utilized affordable and well accessible infrastructure for Green banking. On the other hand, developing countries are far behind in terms of not only the availability and quality, but also the affordability, of such infrastructure (Ghobakhloo et al., 2011).

One important consideration about Green banking is the motivation of its users. It is very hard to implement Green banking practices without its users being fully motivated to embrace them, and, as a result, the organizations may not be able to attain the optimal benefits from them (Al-Smadi, 2012). Therefore, it is imperative to identify the variables which influence the adoption of Green banking practices (GBP) (Al-Smadi, 2012). Given that, the current study is an effort of uncovering the factors responsible for influencing the bankers' intentions to adopt GBP. The findings of this study may prove to be invaluable for the banks in Pakistan with regard to their adoption of Green banking practices. The study will also offer an insight to the State Bank of Pakistan for ameliorating its policies and

regulations regarding Green banking implementation (Shafique & Khan, 2020). Precisely, the current study will determine that whether Potential for Profitability (PP), Management Commitment and Support (MCS), and Corporate Social Responsibility / Image Improvement (CSR) influence the bankers' behavioral intentions to adopt Green banking (BIAGB) or not.

2. LITERATURE REVIEW

Average global temperature may rise by 4 to 6 degrees Celsius due to the extensive use of fossil fuels which would be appalling for human health and biodiversity (Sachs et al., 2019). Climate change is indeed the greatest threat faced by the world today (Sachs et al., 2019). Hence, climate change and sustainability have grabbed considerable attention, internationally (Zhang et al., 2019). Governments, around the world, have already initiated steps to limit their carbon emissions as an effort to move towards sustainable and balanced economy - an economy which is free from the harmful impacts of the environment (Ahmad et al., 2013). In 1992, the United *Nations* Framework Convention on Climate Change (UNFCCC) organized an Earth Summit at Rio de Janeiro. In the summit, it was globally recognized that the situation of an increased use of fossils fuels requires an immediate action plan in order to eschew its detrimental effects on the environment. The basic goal of the summit was to work together globally on the matter of alleviating the greenhouse gas accumulation in the atmosphere (Hannah, 2015). Following this summit, the Kyoto Protocol (KP) was adopted in 1997 at the third UNFCCC's conference of the parties (COP) (UNFCCC, 1998). The KP operationalizes the UNFCCC by obligating the developed countries, particularly the industrialized economies, to limit their greenhouse gases' emissions in accordance with the agreed targets of the individual countries (Hannah, 2015).

According to UN (1998), greenhouse gases consist of methane (CH_4), nitrous oxide (N_2O), carbon dioxide (CO_2), sulphur hexafluoride (SF_6), hydro fluorocarbons (HFCs), and per fluorocarbons (PFCs). The ratified countries of the KP are bound to reduce these harmful emissions within their territories. Around 70% of the total greenhouse gases' emissions come from CO_2. CH_4 contributes about 20% while N_2O comprises 9% of the total greenhouse gases' emissions. In addition, half of CO_2 and CH_4 emissions are resulted from industrial and agriculture sectors (The World Bank, 2011). The first commitment period of the KP was for five years (from 2008 till 2012). After the completion of this period, it was extended, as a second commitment period, for eight years (from 2013 till 2020). In 2010, 194 countries established Green Climate Fund (GCF). GCF had aimed to provide financial support to the developing countries so that they were able to mitigate their greenhouse gases' emissions and adapt themselves in the context of climate change. All these happenings led to the operationalization of the term, 'Green Finance', which had initially attained the popularity from the International Finance Corporation's Global Progress Reports (Zhang et al., 2019).

The climate finance, which involves the flow of *funds* from the developed to the developing countries in order to help them reduce their emissions, had increased from 52 billion USD in 2013 to 62 billion USD in 2014, as claimed by the Organization for Economic Cooperation and Development's (OECD) release on climate finance (OECD, 2015). On the other hand, there have been reservations regarding the effectiveness of GCF. For example, the factors which influence the ever-changing support of GCF's sponsoring Governments for the developing economies have not been determined, and so leading to obscurities regarding the fulfillment of GCF's 2020 targets (Markandya et al., 2015). Nevertheless, it is important to recognize that environment is not merely the sole concern of the Governments of the developed economies, but the Governments, across the world, along with their various stakeholders and partners from diverse establishments, such as financial organizations, particularly banks, are interested to play a pivotal role in developing links between economic development and environmental protection. In recent times, the financial institutions, around the globe, are rapidly pursuing to implement their policies regarding the conservation of nature and environment, support of underprivileged segments of societies, and improvement of individuals' quality of living, by delivering high quality goods and services to the masses (Sahoo & Nayak, 2007). With regard to this, the most successful institutions in the market are apparently those who have attained sustainability through the implementation of Green finance ideologies into their products, services and processes (Arnsperger, 2014). Hence, Green finance market is becoming more popular than ever before.

Green finance market includes those financial products, services and market oriented mechanisms which assist in controlling pollutions and emissions, maintaining ecosystems, and protecting enterprises from unexpected changes in the nature. One example of such market oriented mechanisms is emission trading while environmental funds, insurance-linked securities, weather and catastrophic-linked derivatives, various ecological options, etc. are some of the examples of such financial products and services (Wang & Zhi, 2016).

It has been observed in the previous studies that there is a positive relationship between environment and financial performance as they have recognized that lack of environmental considerations by the businesses, especially banks, lead them to suffer high financial risk (Blacconiere & Patten, 1994; Hamilton, 1995). Jeucken and Bouma (1999) contended that banks may not be able to achieve sustainable development for two main reasons: (1) the banks' common practice of setting short-term payback periods is quite contradictory to their long-term investments for sustainable development, and (2) the investments made by the banks in the consideration of minimizing environmental side-effects may usually have lower rate of returns in the short-run which may be daunting for them and possibly lead them to lose the track. Additionally, in the context of traditional banking, the acquisition of sufficient funding opportunities for sustainable investment and development is quite a challenging venture. The possible solution is revising not only the price and cost structures but also the regulatory and legal frameworks of the profit-driven banks in such a way that only Green financing and investment prospects are cultivated by them (Arnsperger, 2014).

Moreover, there is a need to take some necessary measures, such as (a) reinforcement of the awareness campaign for the employees and stakeholders regarding sustainability, (b) development of tools used by the institutions, and (c) maintenance of the transparency in disclosing the socio-environmental information (Lins et al., 2008). For example, the number of specific tools cannot be merely limited to online banking, mobile banking, green credit cards, green credit and investment, carbon credit business, green mortgages, green deposit accounts, roof gardening, waste management, etc. (Dharwal & Agarwal, 2013), but more of such tools and initiatives are needed to be regulated. Banks and other financial institutions are disposed to the financial, environmental and social risks due to the potential actions and operations undertaken by their clients. Generally, the primary responsibility of displaying compliance with the environmental laws and regulations, in order to reduce environmental risks, is placed upon the borrowers. However, in order to prevent the undue financial losses, banks and other financial institutions should be encouraged to utilize appropriate mechanisms for identifying, assessing and mitigating the environmental risks (State Bank of Pakistan, 2017a).

Therefore, progressing with Green financing in Pakistan can be a difficult process as it is unlike conventional methods and requires a lucrative legal vision (Ghosh et al., 2018). As previously stated, the State Bank of Pakistan had issued Green banking guidelines, particularly regarding risk management, own impact reduction and business facilitation with the goals of reducing the potential losses of the banks and financial institutions and improving their performance by means of managing the environmental vulnerability of their business portfolios, but these guidelines have passed the implementation deadline. Thus, it is substantiated that Green financing can be a difficult process to be implemented in Pakistan. Moreover, along with Potential for Profitability (PP) and Corporate Social Responsibility / Image Improvement (CSR), Management Commitment and Support (MCS) is considered as one of the important factors which affect the users' intentions to adopt Green banking service. This has been proven by a number of studies, such as a study on enterprise system (Ramdani et al., 2009), a study on internet acceptance (Ifinedo, 2011), a study on Ecommerce (Chatterjee et al., 2002), and so forth. MCS refers to the enthusiasm, encouragement, involvement and motivation provided by the management of the banks towards the acceptance and adoption of GBP by their employees and customers alike. It is widely acknowledged that providing a higher level of the customer service and maintaining a better quality of communication with the distant customers are some of the major factors which lead the banks to promptly adopt GBP (Ghobakhloo et al., 2011).

In addition, there are numerous other constituents which affect the bankers' intentions to implement Green banking. An important benefit which can be derived from the adoption of Green banking is cost saving (Heim & Zenklusen, 2005). However, studies have uncovered only some instances where the adoption of Green banking or environmental management system has led to reduce the risks for the banks, and increased their environmental stewardship and operating profits (Jeucken, 2010). This not only depicts the mismanagement of Green banking endeavors but also the requirement of more studies in this area. Indeed, in times to come, market will reward those organizations and sectors which use their raw materials and energy resources more efficiently than others and disapprove the less efficient ones. Additionally, increased awareness of environmental pollution will push the investors in the stock markets to move away from those sectors and organizations which pollute the environment and do not control their carbon emissions (Goldar & Banga, 2007; Gupta, 2016). Surely, the adoption of Green banking rationalizes the use of paper by allowing the users to preferably make all their transactions through internet banking, phone banking, SMS banking and ATMs. As previously mentioned, another major contributing factor of Green banking is the improvement of banks' image. In today's world, customers are very much concerned about the environment, and so they want some visible attempts regarding environmental protection form the banks. Banks' failure to fulfill their environmental responsibilities results into the impairment of their image which may be costly to repair (Ahmad et al., 2013). Hence, it is important to study their behavioral intentions. Behavioral intentions mean the strength of potential users' plans to support or make the usage decision in their minds (Davis, 1989).

No doubts, the banks are increasingly moving towards Green banking, globally. Therefore, this study aims to disclose the factors which influence bankers' intention to adopt GBP in Pakistan. What factors affect the BIAGB, potential for profitability (PP), management commitment and support (MCS) to protect the environment, or corporate social responsibility / image improvement (CSR)? It is mainly the answer to this question which the current study has examined, particularly in the context of Pakistani banks.

2.1 Hypothesis

Hypothesis 1: Potential for Profitability (PP) significantly affects bankers' BIAGB.

Hypothesis 2: Management Commitment and Support (MCS) significantly affects bankers' BIAGB.

Hypothesis 3: Corporate Social Responsibility / Image Improvement (CSR) significantly affect bankers' BIAGB.

2.2 Theoretical Framework

Figure 1 illustrates the theoretical framework of this study while Table 1 reveals the sources of this theoretical framework. In Figure 1, MCS, PP and CSR are the Independent Variables (IVs) whereas Bankers' BIAGB is the Dependent Variable (DV).
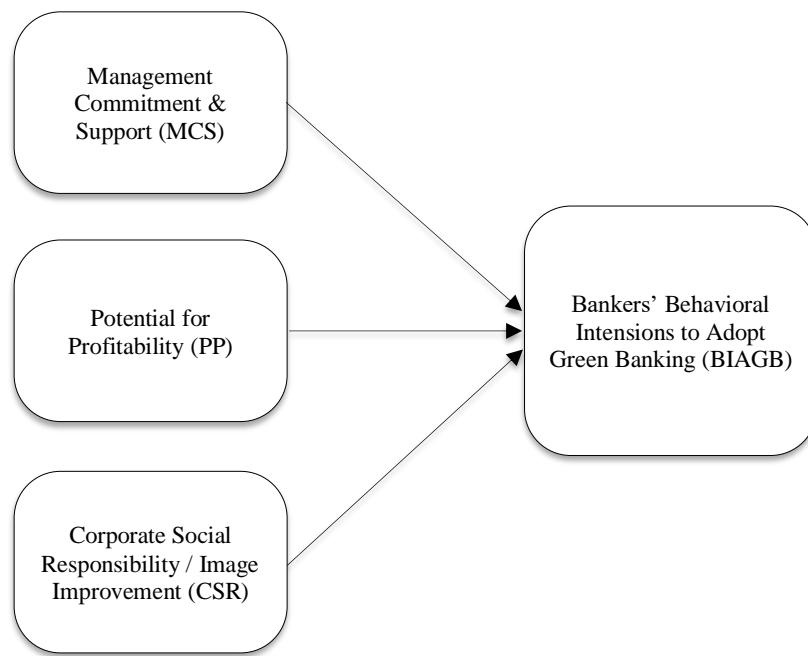
Fig. 1. Theoretical Framework

Table 1. Sources of Theoretical Framework

Variables	Sources
Management Commitment & Support (MCS)	(Chatterjee et al., 2002; Ifinedo, 2011; Ramdani et al., 2009)
Potential for Profitability (PP)	(Ahmad et al., 2013)
Corporate Social Responsibility / Image improvement (CSR)	(Ahmad et al., 2013)
Behavioral Intentions to Adopt Green Banking (BIAGB)	(Nath et al., 2014; Rifat et al., 2016)

3. METHODOLOGY

This is an empirical study based on the primary data which is collected through a structured questionnaire survey. The structured questionnaire was adapted from numerous studies, after their thorough examination, such as (Rifat et al., 2016; Nath et al., 2014; Aboelmaged and Gebba, 2013; F. Ahmad et al., 2013; Al-Smadi, 2012; Khanifar et al.,

2012; Ghobakhloo et al., 2011; Ifinedo, 2011; Ramdani et al., 2009; Baraghani, 2007; Pavlou and El Sawy, 2006; Lu et al., 2003; Chatterjee et al., 2002). The language used in the questionnaire survey was English, and all the questions were devised on a 7 point Likert scale (e.g., 1 represented 'Strongly Disagree' and 7 represented 'Strongly Agree') for measuring the factors affecting bankers' behavioral intensions to adopt Green banking practices. Moreover, Cluster sampling technique was employed for the data collection due to its cost-effectiveness. The determination of the sample size was a crucial aspect of the study. Hence, it was determined in the consideration of the time and resources available for the study. This consideration led to the sample size of 300 respondents which was adequate enough as Comrey (2013) claimed that 300 is a decent size for the sample of the population. In addition, the data collected through this sample was analyzed using the statistical software, SPSS.

4.   DATA ANALYSIS

4.1   Respondents' Profile

The profile of 300 respondents is presented in Table 2.

Table 2.   Profile of Respondents

Demographics	Frequency	Percentage
Gender: Male	215	71.7%
Gender: Female	85	29.7%
Total	300	100%
Age: 21-30	71	23.7%
Age: 31-40	118	39.3%
Age: Above 40	111	37%
Total	300	100
Qualification: Undergraduate	160	53.3%
Qualification: Post-Graduation	140	46.7%
Total	300	100

4.2   Data Normality

The normality of data was established through skewness and kurtosis. Normality of data can be established through numerous different measures as well. However, Meyers *et al.* (2006) recommended the use of skewness and kurtosis. Data is considered as normally distributed if the figures of skewness and kurtosis lie within the range of $\pm$ 1.0 and $\pm$ 3.00 respectively (Shafique, 2017). Thus, the current study's results revealed the normal distribution of the data.

4.3   Cronbach's Alpha / Reliability

Field (2013) maintained that Cronbach's Alpha serves as a superlative measure for testing the reliability of the data. In particular, it is suitable for the items measured through the Likert scale (Shafique, 2017). The Cronbach's Alpha score for all the variables in the study is 0.931 which is far above the minimum acceptable standard of 0.70. Hence, the inter-item consistency is well achieved in the study.

4.4   Multicollinearity / Collinearity Statistics

Table 3.   Multicollinearity / Collinearity Statistics

Independent Variables	Tolerance	Variance Inflation Factor (VIF)
PP	1	1
MCS	0.673	1.747
CSR	0.766	1.768

Multicollinearity is accessed through Tolerance and Variance Inflation Factor (VIF) (Shafique, 2017). With regard to Tolerance, a value closer to 1 indicates that the variable is more tolerant towards change. VIF is reciprocal of Tolerance. VIF value which is closer to 0 indicates less correlation among Independent variables. Therefore, it can be seen from Table 3 above that mulicollinearity has not been established in the study.

4.5 Regression Analysis

Table 4 represents the model summary and Table 5 shows the results of regression analysis which is exercised in this study. The regression analysis reveals that potential for profitability (PP), management commitment and support (MCS) and corporate social responsibility / image improvement (CSR) have significant positive relationship with bankers' BIAGB. Therefore, all the hypotheses are accepted, and it can be concluded that PP, MCS and CSR contribute around 25.5%, 23.1% and 13.3% to bankers' BIAGB respectively. Moreover, Table 6 presents the results of Anova analysis which divulge that all the hypotheses are accepted.

Table 4.   Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
PP	0.869	0.756	0.75	0.59643
MCS	0.833	0.694	0.691	0.66307
CSR	0.871	0.759	0.752	0.59346

Table 5.   Regression Analysis

Hypotheses	Model Variables	Beta ß	S.E.	T- Value	P- Value	Results
H1	PP ➜Bankers' BIAGB	0.255	0.065	5.103	0.000	Accepted
H2	MCS ➜Bankers' BIAGB	0.231	0.056	5.572	0.000	Accepted
H3	CSR ➜Bankers' BIAGB	0.133	0.052	3.43	0.001	Accepted

Table 6.   ANOVA Analysis

Hypotheses	Model Variables	df	MS Value	F Ratio	Level of Significance	Results
H1	PP ➜Bankers' BIAGB	1	251.658	432.853	0.000	Accepted
H2	MCS ➜Bankers' BIAGB	3	98.258	223.483	0.000	Accepted
H3	CSR ➜Bankers' BIAGB	5	63.247	171.096	0.000	Accepted

5.   DISCUSSION AND CONCLUSION

Green banking is a new concept in Pakistan. The State Bank of Pakistan had issued Green banking guidelines in 2017, but, so far, only few banks have effusively been able to adopt Green banking practices (GBP) in Pakistan. In this research, some factors (or variables) have been identified, from the previous literature, which attract the banks to adopt GBP. Thus, it is those identified variables which have been applied in the context of the banks in Pakistan for this study. All the Independent Variables (PP, MCS and CSR) presented in the theoretical framework (e.g., Figure 1) have exposed noteworthy association with the Dependent Variable (Bankers' BIAGB) in the study. So, it means that PP, MCS and CSR affect the banks or bankers' BIAGB practices in Pakistan. In other words, all the Independent Variables positively correlated with the Dependent Variable. For example, the Regression Analysis revealed that the Level of Significance for all the Independent Variables is less than 0.05, and so, PP, MCS and CSR, all these variables contribute in predicting the bankers' BIAGB practices in Pakistan.

Among all the factors under study, PP has been found as one of the most contributing factors in terms of predicting the bankers' BIAGB. For Example, the study reveals that PP contributed nearly 25% in predicting the

bankers' BIAGB. Similarly, the literature also suggests that financial benefits and profits work as motivating variables for the proper utilization of GBP (Ahmad et al., 2013). In addition, the literature demonstrates that delivering high level of customer service and better communication with the distant customers are some of the key contributing factors for the adoption of Green banking initiatives (Ghobakhloo et al., 2011). However, this study shows that along with PP, MCS also contributed a decent percentage (e.g., 23%) in predicting the bankers' BIAGB. Last but not least, CSR contributed only 13% in predicting the dependent variable (e.g., bankers' BIAGB). Even though this percentage is fairly sufficient to accept the hypothesis, it is quite unexpected as the literature suggests that the banks' failure to fulfill environmental responsibilities can be extensively damaging for their image, and may cost them immensely to repair it (Ahmad et al., 2013). Overall, the purpose to initiate this study was to bring into light the factors which influence bankers' BIAGB. As previously stated, the findings of the study suggest that all the identified Independent Variables have a significant impact on the bankers' BIAGB while the major contributing factors in this regard have turned out to be PP and MCS. Therefore, the findings of the current study imply the State Bank of Pakistan to formulate new and more effective regulations and policies, for the banks, with regard to GBP, so that they can be adopted (or implemented) by the banking sector of Pakistan more swiftly than ever before.

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