DETERMINANTS AND OUTCOMES OF GREEN BANKING ADOPTION OF PAKISTAN'S BANK BRANCHES: THE MODERATING ROLE OF GREEN CAPABILITY

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by

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AVE	Average Variance Extracted
BPRP	Bank's Policy Related Practice
CB-SEM	Covariance Based – Structural Equation Modeling
CER	Corporate Environmental Responsibility
CMV	Common Method Variance
CO^2	Carbon Dioxide
CR	Composite Reliability
CRP	Customer Related Practice
DORP	Daily Operation Related Practice
ERMS	Environmental Risk Management System
ERP	Employee Related Practice
HTMT	Heterotrait - Monotrait Ratio
IFC	International Finance Corporation
IT	Information Technology
LEED	Leadership in Energy and Environmental Design
NRBV	Natural Resource Based View of the Firm
PLS-SEM	Partial Least Squares- Structural Equation Modeling
RBT	Resource-Based Theory
SBN	Sustainable Banking Network
SBP	State Bank of Pakistan
VIF	Variance Inflation Factor
WWF	World Wild Fund

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PENENTUAN DAN HASIL ADAPTASI PERBANKAN HIJAU DI CAWANGAN BANK PAKISTAN: PERANAN KEUPAYAAN HIJAU SEBAGAI PENYEDERHANA

ABSTRAK

Konsep Perbankan Hijau adalah perubahan paradigma dalam ideologi perniagaan bagi sesebuah bank. Perbankan Hijau memberi tumpuan kepada pengurangan kesan buruk terhadap persekitaran secara langsung dan tidak langsung yang timbul daripada operasi perniagaan bank. Sebilangan besar negara maju dan membangun telahpun mengadaptasi Perbankan Hijau ini. Pakistan merupakan sebuah negara membangun yang sedang menghadapi degradasi alam sekitar yang teruk dan kemerosotan sumber. Aktiviti perniagaan dari pelbagai industri yang boleh membahayakan alam sekitar adalah salah satu penyumbang utama kepada cabaran pencemaran ini. Namun, Pakistan masih berada di tahap awal penggunaan Perbankan Hijau. Sebaliknya, negara-negara jiran Pakistan seperti Bangladesh dan India telahpun mencapai kemajuan yang signifikan dalam hal penerapan Perbankan Hijau. Oleh itu, industri perbankan Pakistan perlu segera mengawal keadaan yang membimbangkan dengan meminimumkan kesan persekitaran langsung dan kemungkinan perlu mengurangkan pembiayaan kepada industri yang menyumbang kepada pencemaran ini. Berdasarkan Teori Institusi, kajian meneliti pengaruh tekanan pihak berkepentingan (Pengurusan Tertinggi, Pelanggan, Pesaing, dan Komuniti) dengan pengaruh 'Keupayaan Hijau' sebagai faktor penyederhana terhadap penggunaan Perbankan Hijau. Penyederhana ini berasal dari Teori Pandangan Berdasarkan Sumber Asli dari Firma. Kerangka kerja penyelidikan juga meneliti hasil (iaitu, Alam Sekitar, Operasi, Tidak Ketara dan Ekonomi) daripada pengadaptasian Perbankan Hijau.

Kerangka kerja penyelidikan dan hipotesis yang berkaitan telah disahkan secara empirikal menggunakan set data yang dihasilkan dari tinjauan terhadap 419 cawangan bank. Data dikumpulkan melalui soal selidik tinjauan yang diedarkan kepada pengurus cawangan melalui pos. Kajian ini menggunakan teknik persampelan rawak sederhana dari persampelan kebarangkalian. Partial Least Sqaures-Structural Equation Modeling (PLS-SEM) diadaptasi dengan menggunakan SMART PLS version 3.2.9 untuk analisis data. Keputusan analisis menunjukkan terdapat pengaruh positif yang signifikan terhadap tekanan pengurusan atasan, tekanan pesaing, dan tekanan pelanggan terhadap pengadaptasian Perbankan Hijau. Namun, tekanan masyarakat tidak berpengaruh signifikan terhadap pengadaptasian Perbankan Hijau. Pengaruh positif pengadaptasian Perbankan Hijau terhadap hasil persekitaran, operasi, tidak ketara, dan ekonomi juga disokong oleh analisis data. Faktor penyederhana, Keupayaan Hijau, didapati mempunyai pengaruh positif yang signifikan terhadap hubungan antara tekanan Pelanggan dan adaptasi Perbankan Hijau dan pesaing tekanan dan Perbankan Hijau adopsi. Sumbangan novel kajian ini adalah mengkaji peranan penyederhanaan keupayaan hijau, diperoleh daripada keupayaan pencegahan pencemaran NRBV Firma, pada hubungan antara tekanan pihak berkepentingan dan Penerimaan Perbankan Hijau. Penemuan ini mampu memberikan implikasi yang signifikan bagi pengawal selia, pembuat polisi, dan industri perbankan dalam hal pengadaptasian Perbankan Hijau.

DETERMINANTS AND OUTCOMES OF GREEN BANKING ADOPTION OF PAKISTAN'S BANK BRANCHES: THE MODERATING ROLE OF GREEN CAPABILITY

ABSTRACT

The concept of Green Banking is a paradigm shift in the business ideology of a bank. Green Banking Adoption focuses on the reduction of the direct and indirect adverse environmental impacts arising from a bank's business operation. A large number of developed and developing countries are adopting Green Banking. Pakistan is a developing country facing severe environmental degradation and resource degeneration. The environmentally hazardous business activities of various industries are one of the major sources of these challenges. Pakistan is in the initial stage of Green Banking Adoption. Meanwhile, the neighbouring developing countries of Pakistan like Bangladesh and India have made significant progress in terms of Green Banking Adoption. Therefore, the Pakistan banking industry urgently needs to control the alarming situation by minimizing its own adverse environmental impacts and increase the eco-friendly financing to industries. Based on the Institutional theory, the study examines the influence of stakeholders' (top management, customer, competitor and community) pressure on Green Banking Adoption. It also examines the moderating effect of 'green capability' on the relationship between stakeholders' pressures and Green Banking Adoption. The moderator is derived from pollution prevention capability of Natural Resource-Based View of the Firm. The research framework also examines the outcomes, i.e., (environmental, operational, intangible and economic) of Green Banking Adoption. The research framework and its associated hypotheses were empirically verified using a data set generated from a survey of 419 bank branches.

Data was gathered through a survey questionnaire distributed to branch managers through courier mail. A simple random sampling technique under probability sampling was used. Partial Least Sqaures-Structural Equation Modeling (PLS-SEM) was adopted by using SMART PLS version 3.2.9 for data analysis. The analysis revealed significant positive influences of top management pressure, competitor pressure, and customer pressure on Green Banking Adoption. However, community pressure has no influence on Green Banking Adoption. The positive influence of Green Banking Adoption on environmental, operational, intangible, and economic outcomes is also supported by the data analysis. The moderator, green capability, has a positive influence on the relationship between customer pressure and Green Banking Adoption and competitor pressure and Green Banking Adoption. The novel contribution of this study is examining the moderating role of green capability, derived from pollution prevention capability of NRBV of the Firm, on the relationship between stakeholders' pressure and Green Banking Adoption. The findings of this study have significant implications for the regulators, policy makers, and banking industry in terms of Green Banking Adoption.

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter presents a background of the study leading towards the explanation of the study's problem statement. It also states the research objectives and questions based upon the problem statement. The next sections highlight the theoretical, methodological and practical significance of the study. Lastly, the chapter contains the definitions of the key variables in the study.

1.2 Background of the Study

Global climate change is causing a significant reduction in food production, increase in sea levels and natural resource depletion. The main causes of the ecological deterioration have been identified as human activities, including unsustainable industrialization, deforestation and environmentally damaging agricultural practices (Botzen et al., 2021; Goyal & Joshi, 2011; Rehman et al., 2021; Shaumya & Arulrajah, 2017). In the early 1980s, many researchers, world leaders, and policymakers started realizing the damage to the self-renewal capacity of the world through the adverse impacts of these human activities. The realization that earth can lose the characteristics of a habitable planet for humans, was one of the building blocks of the modern-day 'Green Movement' (Atmaca et al., 2018; Haden et al., 2009; Li et al., 2020; SBP, 2015).

In 1983, the concept of sustainable development was formally defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p. 41). The business ideology of corporate sustainability is based on the environmental, social and economic dimensions (Iqbal et al., 2018; Iqbal & Ahmad, 2021; SBP, 2015). In the first decade of this century, the environmental dimension of sustainability started getting greater academic and corporate attention. Unlike corporate sustainability, it focused solely on the environmental aspects related to various business activities (Rasul & Abedin, 2021; Shaumya & Arulrajah, 2017).

Green growth, for the formation of green economies, was developed as a separate concept and started being adopted by a number of countries. The concept of a green economy was defined by the United Nations Environmental Program (UNEP) as "the financial activities that result in human improved well-being as well as social equity, which results in significantly reduced environmental risks and ecological scarcities" (Rehman et al., 2021, p. 2). It focuses on the natural resource and its consumption, natural asset base, environmental quality of life, policy responses towards environmental concerns and economic opportunities arising from green growth (SBP, 2015).

For any country to embrace the concept of green growth, the banking industry can adopt the principles of green management (Shailaja, 2021). Green management is defined as "practices that produce environmentally-friendly products and minimize the impact on the environment through green production, green research and development, and green marketing" (Haden et al., 2009, p. 1049). The economic performance and growth of a country are largely dependent on the country's banking system (Akomea-Frimpong et al., 2021; Khan & Szegedi, 2019). The banking industry has a significant

influence on the formation of various public policies in today's business environment (Khairunnessa et al., 2021; Wijethunga & Dayaratne, 2018). The banks can also influence the industries through the disbursement of loans. This makes the banks capable of playing an important role in safeguarding the natural environment from rapid industrialization and its hazardous effects (Goyal & Joshi, 2011; Mulla & Nobanee, 2020).

During the beginning of the global green movement, the banking industry was considered an environmentally neutral industry (Silva, 2019). Currently, it has been realized that banks are also playing a role in global climate changes and environmental degradation. Banks are adversely impacting the environment both directly and indirectly (Kilic & Kuzey, 2019; Meena, 2013; Shaumya & Arulrajah, 2017; Tu & Dung, 2017). The direct environmental impact of banks is through their daily business operations, which involve the use of large amounts of energy and other vital resources like paper. Banks are also creating indirect adverse environmental impacts through financing the polluting industries. Globally, the banking sector is one of the major sources of financing industries such as steel, paper, cement, chemicals, fertilizers, power, textiles, etc., which are causing a large amount of CO^2 emission (Afridi et al., 2021; Afroz, 2017; Ahmed, 2012; Alshebami, 2021; Bihari, 2011; Goyal & Joshi, 2011; Julia et al., 2016).

In the past few decades, the stakeholders' pressure on banks to adopt environmentally friendly practices has increased. A more targeted and specific approach towards the management of the adverse direct and indirect environmental impact of the banking industry was developed in the form of Green Banking (Herath & Herath, 2019). The concept of Green Banking was developed as a paradigm shift for the banking industry. Green Banking is differentiated from Sustainable Banking

due to its narrower and targeted approach solely towards the environmental issues related to the banking industry (Julia et al., 2016; Masukujjaman et al., 2016; Stankeviciene & Nikonorova, 2014). Sustainable banking takes a broader approach by focusing on social and governance aspects as well. Green Banking's evolution followed sustainable banking and solely focused on the environmental or ecological aspects (Mendez & Houghton, 2020; Shafique & Khan, 2020).

The global banking sector has started to realize its responsibility and accountability towards resource degradation and pollution generation. As a result, a remedial and control strategy in the form of Green Banking was developed (Doshi & Sule, 2018; Kaeufer, 2010; Silva, 2019). A formal definition of Green Banking is still evolving (Bouteraa et al., 2020; Park & Kim, 2020; Tu & Dung, 2017). The International Finance Corporation (IFC) has defined Green Banking as "a blend of bank's own direct environmental impact reduction, managing environmental risks in banks' decision-making processes and supporting businesses and industries that have a positive impact on the environment". It includes the avoidance of negative environmental impact and the achievement of positive impact in core financing activities (Ahuja, 2015; SBN-IFC, 2015). Past studies reveal a positive impact of Green Banking Adoption on the bank's environmental and economic performance (Shaumya & Arulrajah, 2017).

Currently, many countries have undertaken various Green Banking Adoption initiatives in the form of either regulatory or voluntary policies or frameworks (SBN-IFC, 2020b). Pakistan, a developing country facing severe environmental challenges (Abas et al., 2017), is in the nascent stage of Green Banking Adoption. The State Bank of Pakistan (SBP) issued Green Banking Guidelines on the 9th of October, 2017 (SBP, 2017). The regulatory body has not issued any other policy, framework, or guideline

to facilitate Green Banking Adoption in the country. Majority of the banks are at the initial stage of Green Banking Adoption, hindered by the lack of industry best practices and regulatory guidelines or support (Javeria et al., 2019a; Rehman et al., 2021; Shafique & Khan, 2020).

The country has been greatly impacted by severe climate change due to environmental degradation and resource degeneration (David & Shameem, 2017; Hamid et al., 2018). Pakistan is among the top countries most severely impacted by climate change in South Asia. The carbon dioxide (CO^2) emissions in Pakistan are greater than in the least developed countries in the region. The Greenhouse Gas (GHG) emissions are increasing at a rate of 6% annually and are expected to continue increasing due to the environmentally hazardous industries (Abas et al., 2017; Afridi et al., 2021; Hamid et al., 2018; Randhawa, 2017). It is also struggling with a severe electricity shortage due to rapidly decreasing energy resources and increasing population (Khan et al., 2016; Nizam et al., 2020; Valasai et al., 2017).

Pakistan is currently lagging behind significantly in terms of Green Banking Adoption relative to the global banking scenario and especially in comparison to the contextually similar developing countries, such as India and Bangladesh (Hussain, 2020; Javeria et al., 2019b; Khan & Szegedi, 2019; Shafique et al., 2020; Shafique & Khan, 2020). Before 1947, the three countries were part of the sub-continent, thereby sharing similar geographic regions. The countries are struggling with similar environmental and social challenges (Khan & Szegedi, 2019). However, a difference can be observed with respect to the remedial action undertaken to mitigate the threats being faced by the countries.

In South Asia, Bangladesh is considered the leader in Green Banking Adoption and India is also in a more advanced stage of Green Banking Adoption as compared to Pakistan (Javeria et al., 2019a). India and Bangladesh have taken an active stance towards Green Banking Adoption. In India, many banks have formulated their Green Banking policy, with the Central Bank of India leading the way through a number of Green initiatives (Ahuja, 2015; Mahajan, 2021; Shailaja, 2021; Shetty & Unnikrishnan, 2017). In 2010, the central bank of India launched a 'Green Banking Counter' to create Green Banking awareness among stakeholders. It issued the 'Green Banking Best Practices' in 2013 and also launched green bonds in 2015 for facilitating alternative energy adoption via green financing (Mumtaz & Smith, 2019).

Bangladesh, a lesser developed country than Pakistan, had formulated the Green Banking policy in 2011. Under this policy, all the banks in Bangladesh have developed their Green Banking policy and disclosure mechanisms. Bangladesh is considered the pioneer in Green Banking Adoption in the South-Asian region. During the year 2020, the total amount of green finance disbursed by the Bangladesh banking industry was approximately US$ 2,737.84 million (Julia et al., 2016; Khairunnessa et al., 2021; Kulsum & Huda, 2018; Park & Kim, 2020; Rifat et al., 2016; Samina & Hossain, 2019).

The Table 1.1 depicts the similarities between the three neighbouring countries and their differences in Green Banking Adoption. It shows that Green Banking Adoption in Pakistan is still in the nascent stage in terms of the degree of maturity as compared to other developing countries such as Bangladesh and India. However, Pakistan has been termed as a priority country by the IFC with respect to Green Banking Adoption (IFC, 2018a; SBN-IFC, 2019).

Table 1.1: Comparison between Pakistan, India and Bangladesh

Areas of comparison	Pakistan	India	Bangladesh	Source
Geographic region	South Asia	South Asia	South Asia	World Bank, (2020)
Ranking according to World population	**6th**	2nd	8th	UN, (2020)
World Bank classification	Lower-Middle Income	Lower-Middle Income	Lower-Middle Income	World Bank, (2017)
Green Banking Adoption initiation	Issued Green Banking Guidelines in October **2017**.	Issued Green Banking Best Practices in **2013**.	Issued Regulatory framework in **2011**.	SBN-IFC, (2015); SBP, (2015, 2017)

The SBP has highlighted the importance of developing awareness and knowledge within the Pakistan banking industry for facilitating Green Banking Adoption (SBP, 2017). Similarly, the Bangladesh Bank has focused on the importance of developing green capability for Green Banking Adoption by mandating banks to develop training programs for the bank staff to educate them about various environmental regulations and the Green Banking policy and practices being undertaken to reduce the bank's carbon footprint (Iqbal et al., 2021). Based on the above discussion, the next section discusses the problem being addressed in this study.

1.3 Problem Statement

Currently, the Pakistan banking industry is facing a low level of Green Banking Adoption (Aazim, 2017; IFC, 2018a; Jafar et al., 2021; Javeria et al., 2019a; Majeed & Anjum, 2020; Mumtaz & Smith, 2019; Qureshi & Hussain, 2020; Rehman et al., 2021; SBN-IFC, 2015; SBP, 2017; Shafique et al., 2020). Pakistan became a member of Sustainable Banking Network (SBN) in 2015, but according to the Green Banking "Global Progress Report 2018", SBP issued "the Green Banking policy in October

2017, after the cut-off date of June 2017" given to it by SBN (SBN-IFC, 2018, p. xii). The concept of Green Banking Adoption was not present in the Pakistan banking industry before the issuance of the Green Banking Guidelines by the SBP in the year 2017 (Khan & Szegedi, 2019; Qureshi & Hussain, 2020).

Even after the issuance of the Green Banking Guidelines by the SBP in 2017, the Pakistan banking industry has not been able to move forward in Green Banking Adoption. In the Green Banking Guidelines, the SBP had committed to the issuance of a framework for moving forward in the adoption of Green Banking after a period of one year but have not yet issued any further guidance to the Pakistan banking sector even after a period of four years. Majority of the banks in Pakistan are still at the nascent stage of Green Banking Adoption (Javeria et al., 2019a; SBP, 2017; Shafique & Khan, 2020). Majority of the banks are still at the nascent stage of formulating Green Banking policy (Mumtaz & Smith, 2019). The SBP has not yet issued any follow-up Green Banking policy or framework to facilitate the adoption in Pakistan banking industry (Rehman et al., 2021; SBN-IFC, 2021a). A low level of Green Banking Adoption in a country is observed through the escalating direct and indirect adverse environmental impacts of the banking sector (Khairunnessa et al., 2021).

Thus, the low level of Green Banking Adoption in Pakistan can be observed through the direct adverse environmental impact of the banking industry's daily business operations. The banking industry in Pakistan is one of the largest users of electricity and paper owing to the vast network of branches and back offices (Jafar et al., 2021; Mumtaz & Smith, 2019; SBP, 2017). Out of the total of 14,603 bank branches currently operating in Pakistan (SBP, 2019a, 2019b), only six bank branches have obtained the Leadership in Energy and Environmental Design (LEED) green building certification (GBIG, 2021). Similarly, only three banks in Pakistan have

adopted an Environmental Management System (EMS), in a few branches, for reducing the daily carbon footprint arising from the banking operations (JS Bank, 2021; Khushhali Microfinance Bank, 2021; MCB, 2020; WWF Pakistan, 2021a). This depicts a low level of Green Banking Adoption and a high level of direct adverse environmental impact of the bank branches in Pakistan.

A low level of Green Banking Adoption in Pakistan is also observed through the continuously escalating financing to polluting industries by the banks. Lack of green financing or continuously increasing financing to polluting industries depicts the low level of Green Banking Adoption in Pakistan. The Table 1.2 shows that financing of the Pakistan banking sector to polluting industries, such as textile, chemicals, manufacturing, construction, mining, paper, textile and shipbreaking has significantly increased in 2021 as compared to 2020 (SBP, 2021b). These sectors are the major sources of industrial pollution in Pakistan (Akhtar, 2019). This trend has continued to follow the same pattern even after the issuance of the Green Banking Guidelines, encouraging green financing, by the SBP in 2017 (Afridi et al., 2021).

This problem requires the identification of the determinants of Green Banking Adoption that can facilitate the Pakistan banking industry to eco-friendly practices. Organization's stakeholder can influence and direct organization's policies and practices towards green management adoption (Ahmad et al., 2020; Amran et al., 2015). Globally, the stakeholders' pressure towards Green Banking Adoption is gradually increasing (Dewi & Dewi, 2017; Sarma & Roy, 2020). This study has examined the influence of stakeholders' pressure, as determinants, to solve the problem of low level of Green Banking Adoption. In the case of developing countries, where Green Banking Adoption is in the initial phase, it may lead to various outcomes in the form of positive consequences (Shetty & Unnikrishnan, 2017).

Table 1.2: Environmentally Hazardous Financing by Pakistan Banking Industry

Industry	30 June 2020 (Pakistan Rupees in Million)	30 June 2021 (Pakistan Rupees in Million)	Increase in Percentage (%) (Approximately)
Manufacturing of tobacco products	851	3,271	284.37
Coal based power generation	40,127	81,075	102.05
Ship breaking	14,935	23,997	60.68
Construction	129,561	154,443	19.20
Leather manufacturing	32,202	37,030	14.99
Manufacturing of paper & paper products	45,135	51,490	14.08
Manufacturing of coke & refined petroleum products	99,430	113,211	13.86
Manufacturing of wood & wood products	5,070	5,770	13.81
Forestry & logging	77	87	12.99
Manufacturing of rubber & plastic products	46,595	52,084	11.78
Manufacturing of chemical & chemical products	275,855	289,749	5.04
Textile manufacturing	1,088,409	1,114,671	2.41
Coal Mining	36,645	36,832	0.51

Source: (SBP, 2021b)

Past studies have found that eco-friendly business practices will result in various outcomes and a need has been identified to examine the various outcomes of Green Banking Adoption (Ibe-enwo et al., 2019; Park & Kim, 2020; Sarma & Roy, 2020; Zabawa & Kozyra, 2020). Limited awareness regarding the outcomes of Green Banking Adoption exists among the bank staff (Qureshi & Hussain, 2020; Shafique & Khan, 2020; Zaeem & Zaeem, 2019). This study has examined the influence of Green Banking Adoption on environmental, operational, intangible and economic outcomes.

In a survey conducted by the IFC on Pakistan banking industry, the low level of stakeholder's awareness and engagement was identified as one of the main obstacles in Green Banking Adoption. The presence of green capability among the bank staff can play a facilitative role in solving the problem of low level of Green Banking Adoption being faced by the Pakistan banking industry (SBN-IFC, 2015; SBP, 2015,

2017). Previous research has shown that green capability plays a vital role in the adoption of green management practices, in the presence of stakeholders' pressure (Munodawafa & Johl, 2021). Thus, this study has made the contribution of examining the moderating role of green capability on the relationship between stakeholders' pressure and Green Banking Adoption.

1.4 Research Objectives

The main research objective of this study is to examine the determinants influencing Green Banking Adoption and the relationship between Green Banking Adoption and its outcomes. It also examines the role of green capability on the relationship between stakeholders' pressure and Green Banking Adoption. The following research objectives are proposed for this study:-

1. To examine the influence of stakeholders' (top management, customer, competitor and community) pressure towards Green Banking Adoption.

2. To examine the moderating effect of green capability between stakeholders' (top management, customer, competitor and community) pressure and Green Banking Adoption.

3. To examine the influence of Green Banking Adoption on bank branch's outcomes (environmental, operational, intangible and economic).

1.5 Research Questions

Based on this study's research objectives and problem statement, the following research questions are stated:-

1. Does the stakeholders' (top management, customer, competitor and community) pressure influence Green Banking Adoption?

2. Is the relationship between stakeholders' (top management, customer, competitor and community) pressure and Green Banking Adoption moderated by green capability?

3. Does Green Banking Adoption influence bank branch's outcomes (environmental, operational, intangible and economic)?

1.6 Significance of the Study

Green Banking Adoption is gaining momentum all over the world due to increased stakeholders' pressure (Amir, 2021; Bouteraa, 2020; Kunhibava et al., 2019; Miah et al., 2021). It can be a source of competitive advantage for the banks, especially in developing countries (Ahuja, 2015). In today's world, the natural environment has developed as a dynamic and key strategic issue for every organization. At the organizational level, the managers are realizing the role of the natural environment in the survival of the business. This salience of the natural environment causes it to be a primary stakeholder for banks (Chew et al., 2016; Goyal & Joshi, 2011; Pleasant et al., 2014). The banking sector plays an important role in both the economic and ecological development of a country. This places greater responsibility on the banking sector regarding the control of environmental and resource degradation (Maheswari et al.,

2017; Meena, 2013). The proposed research aims to contribute towards the adoption of Green Banking in Pakistan.

1.6.1 Theoretical Significance

Academic research about Green Banking Adoption is still in the initial stage in both developed and developing countries (Bouteraa et al., 2021; Oyegunle & Weber, 2015; Rehman et al., 2021; Sarma & Roy, 2020; Shaumya & Arulrajah, 2017). Currently, limited empirical research exists on the banking industry of Pakistan, especially in the area of Green Banking (Rehman et al., 2021). A need has been identified by Mumtaz and Smith, (2019) to conduct empirical studies in the area of Green Banking Adoption.

Research has identified a need for theory integration in the field of green management practice adoption. A number of studies have identified the need to examine the role of determinants while investigating the adoption of green practices (Bae, 2017; Bernauer et al., 2006; Hart, 1995; X. X. Huang et al., 2016; Kammerer, 2009). Research reveals that the study of stakeholders' pressure while analyzing the moderating impact of capability is not only important for organizations but also provides understanding and vision for the policy and decision-makers (Sarkis et al., 2010). Limited research exists on examining the moderating roles of various important variables in green management adoption (Cao & Chen, 2019; Micheli et al., 2020).

This study proposes to expand the application of two theories, i.e., Institutional theory and Natural Resource-Based View (NRBV) of the Firm, in the area of Green Banking Adoption. The research framework contributes theoretically by empirically examining the moderating role of green capability on the relationship between

stakeholders' pressure and Green Banking Adoption. The importance of stakeholders' pressure has been identified as a critical success factor for Green Banking Adoption in developing countries (SBN-IFC, 2015). Furthermore, research supports the influence of green capability on green practice adoption (Albertini, 2021; Shaharudin et al., 2019).

This study will contribute significantly to the academic field of Green Banking Adoption through theory integration. This study will analyze the influence of stakeholders' pressure on Green Banking Adoption. It also integrates the Institutional theory and NRBV of the Firm for examining Green Banking Adoption in the Pakistan banking sector. The novelty and theoretical contribution of this study are examining the moderating role of green capability, derived from pollution prevention capability of NRBV of the Firm, on the relationship between stakeholders' pressure and Green Banking Adoption.

Currently, no study has examined the moderating influence of green capability on the relationship between stakeholders' pressure and Green Banking Adoption. According to Memon et al., (2019, p. iii), the use of a moderator that is grounded on a theoretical basis and supported through literature "mark a substantial contribution to the existing body of knowledge". Moderators can be derived from various constructs used in different fields as antecedents with a constructive theoretical explanation. This study contributes by proposing a moderator from the pollution prevention capability of NRBV of the Firm. A moderator may be a "contextual factor found relevant across different fields of study" (Memon et al., 2019, p. iii). This holds true for this study since one of the most significant gaps identified by the IFC with respect to Green Banking Adoption in Pakistan was the lack of awareness, knowledge and information

flow among the concerned stakeholders. A low level of green capability has been identified as a barrier towards Green Banking Adoption in Pakistan (IFC, 2015b).

The construct of green capability has also been emphasized by the SBP in the Green Banking Guidelines, as having the potential to influence a bank branch's ability to adopt Green Banking (SBP, 2015, 2017). The IFC held a meeting with the SBP on 29th August 2018, regarding Green Banking Adoption in which IFC's senior manager for Pakistan also emphasized the need to develop green capability in the Pakistan banking industry, by stating "Our aim is to leverage our global experience to assist Pakistan's State Bank build the capacity of the banking sector in Green Banking practices" (IFC, 2018a).

The proposed research framework also contributes to the application of the NRBV of Firm and its integration with Institutional theory. Furthermore, the study also extends the research framework by examining the outcomes from Green Banking Adoption. The integration of four outcomes (environmental, operational, intangible and economic) of Green Banking Adoption to the Institutional theory and NRBV of the Firm will contribute to the development of a more holistic research framework. Previous research has also identified the need to study the outcomes of Green Banking Adoption (Shaumya & Arulrajah, 2017).

1.6.2 Methodological Significance

In this study, Green Banking Adoption has been operationalized as a higher-order construct consisting of four lower-order constructs, i.e., Employee Related Practice, Daily Operation Related Practice, Customer Related Practice, and Bank's Policy Related Practice. Higher-order constructs allow for a more in-depth

conceptualization of constructs. This study analyzes Green Banking Adoption at both abstract level (higher-order or second-order) and more concrete sub-dimensions (lower-order or first-order) (Sarstedt et al., 2019). The study provides significant methodological contributions in the form of a disjoint two-stage analysis with a moderator variable. Comprehensive statistical analysis was conducted by carrying out measurement model analysis at both stages to ensure the construct and item reliability and validity. Moderator analysis was also carried out through a two-stage approach. Limited empirical studies exist in the area of Green Banking Adoption and especially operationalized as a higher-order construct.

The study also has methodological significance due to the in-depth pretesting phase. Two rounds of expert reviews were conducted from both academic and industry experts in both Malaysia and Pakistan to ensure the questionnaire's validity and understandability. Furthermore, pilot testing was conducted on a sample of 114 bank branches. The pilot testing phase involved measurement model analysis through examining the outer loadings, Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach's Alpha (α). In order to comprehensively examine the influence of various types of stakeholders' pressure and the moderating effect of green capability, this study was conducted for the whole banking industry of Pakistan. Currently, only a limited number of empirical studies have been conducted on the whole banking industry of Pakistan (Tahir et al., 2016). The simple random sampling technique was applied under Probability sampling to ensure minimum sampling bias and greater representation of the population (Kumar, 2011). This will play an important role in generalizing the results of the study on the entire banking industry of Pakistan.

1.6.3 Practical Significance

The banking industry, through its role as a financial intermediary, holds a unique position in the country's economic system. It has the ability to influence the various economic sectors through its financing activities and may contribute to better environmental and economic performance (Ullah & Mia, 2020). The area of Green Banking Adoption holds importance to a number of stakeholders in an economy (Zabawa & Kozyra, 2020). This study has important implications for the policymakers of the country, specifically the financial sector's regulatory authority and the individual banks' management. As the most influential stakeholder, the SBP can derive decisive measures from this research to mitigate the direct and indirect adverse environmental impact of the banking sector. The institutional pressures identified in the research framework may influence the extent to which banks integrate Green Banking into their strategies in order to remain competitive. In addition, the moderator 'green capability' may significantly influence the relationship between the institutional pressures and Green Banking Adoption.

It can identify the salient determinants in the form of stakeholders' pressure that can play a facilitating role in Green Banking Adoption in the Pakistan banking industry. This research can be used by the banks as a tool for reviewing their Green Banking Adoption and the facilitating role of green capability. Analyzing the outcomes of Green Banking Adoption may prove beneficial for the banking industry. It may further assist the SBP in formulating effective stakeholders' engagement strategies. The current government of Pakistan has defined a 'Clean and Green' vision for the country and is focused on achieving environmental sustainability through various initiatives like planting ten billion trees throughout the country, developing ecotourism, providing green jobs and promoting green education (Ministry of Climate

Change, 2021; WWF Pakistan, 2021b). The adoption of Green Banking may provide a number of benefits to the banks and their stakeholders, cementing the relationship in the long term (Ibe-enwo et al., 2019).

This movement towards green economic development requires the adoption of Green Banking for financing the green industries (Khan & Szegedi, 2019). In addition to mitigating the adverse environmental impact, Green Banking Adoption may create opportunities for Pakistan's banking industry. According to Pakistan's Energy Minister, investment opportunities of approximately US$ 100 billion exist in the country. This included approximately US$ 45 billion in the power generation sector, US$ 20 billion in the electricity transmission sector and US$ 15 to 20 billion in the electricity distribution sector (Kiani, 2020). It is an enormous opportunity for Pakistan's banking sector's green financing portfolio in the form of renewable energy financing. This makes the research area very significant for the Pakistan banking sector. The SBP has encouraged the banks to invest in relatively untapped segments of environmentally compliant and resource-efficient businesses, which can increase their profitability and portfolio growth (SBP, 2017, 2020). A business opportunity of approximately US$ 3.4 trillion in terms of green buildings investment opportunity has been identified by the IFC in key emerging markets by 2025 (SBN-IFC, 2015).

According to a study conducted in Vietnam, 75% of the banking industry's top management identified Green Banking Adoption to be an important component in the medium and long-run development strategy of their banks (Tu & Dung, 2017). This study may play a facilitative role in the effective adoption of Green Banking, especially for developing countries that are in the initial phase of adoption. By providing facilitative information regarding Green Banking Adoption, the study may help not only the banking industry but also other industrial sectors in Pakistan. By adopting

green practices, Pakistan's industry may remain competitive in the international markets and increase its profitability and operating efficiency.

1.7 Definitions of Key Terms

The following definitions of the key variables in this study have been adapted for the purpose of conceptualization of the research constructs: -

1.7.1 Green Banking Adoption

Green Banking Adoption is defined as the inculcation of environmentally friendly management in bank branches through employee related practice, daily operation related practice, customer related practice, and bank's policy related practice (Shaumya & Arulrajah, 2016).

1.7.2 Top Management Pressure

Top management pressure is defined as the intention, commitment, support and planning towards Green Banking Adoption by the top management (Chan & Wong, 2006).

1.7.3 Customer Pressure

Customer pressure is defined as the customer policy statement, demand, encouragement and acknowledgment to adopt environmentally friendly services and products and reducing the adverse environmental impacts of banking operations (ElTayeb et al., 2010).

1.7.4 Competitor Pressure

Competitor pressure is the pressure created as a result of Green Banking Adoption by the competitors in order to gain multiple benefits including competitive advantage, favourable image in the industry and achievement of bank branch's objectives (Colwell & Joshi, 2011; Khalifa & Davison, 2006).

1.7.5 Community Pressure

Community pressure is the belief, concern, expectation and reaction from the community regarding Green Banking Adoption through conservation of the natural resources and environment in banking operations (Hsu et al., 2013).

1.7.6 Green Capability

Green capability is defined as capability that comprises of the bank branch's awareness, knowledge and training of Green Banking as well as procedures for acting on and reacting to green management issues (Huang et al., 2016a).

1.7.7 Environmental Outcomes

Environmental outcomes represent positive consequences of Green Banking Adoption on the natural environment including the improvement in the compliance of environmental standards, recycling activities, preservation of natural environment, reduction of carbon emission and decreased resource wastage at the bank's branch level (Rao, 2002).

1.7.8 Operational Outcomes

Operational outcomes are the benefits those reflect at the operational level of the bank's branch through Green Banking Adoption including improved customer service standards, daily operational efficiency, resource utilization, customer convenience and branch productivity (Naveh & Marcus, 2004).

1.7.9 Intangible Outcomes

Intangible outcomes represent conceptual or difficult to quantify benefits of Green Banking Adoption including improved bank's branch image in the eyes of the stakeholders, increased customer's satisfaction and loyalty, social commitment and enhanced marketing opportunities (Laosirihongthong et al., 2013; Rao, 2002).

1.7.10 Economic Outcomes

Economic outcomes are financial benefits those result from Green Banking Adoption including increased financial performance, market share, number of customers, reduced operating costs and decrease in non-performing loans of the bank's branch (Rao, 2002).

1.8 Organization of the Thesis

The thesis is organized into five chapters. This chapter presented the research background and the problem statement of the study. Three research objectives and three research questions were developed on the basis of the problem statement. It also discusses the significance of the research theoretically, methodologically, and practically. Lastly, the key variables of this study are operationalized on the basis of previous literature. Chapter Two reviews the literature on Green Banking. It draws

attention to the gap in the literature on Green Banking Adoption and develops the theoretical framework for the study. It also provides an overview of the Institutional theory and NRBV of the Firm. This chapter also articulates twelve hypotheses for the study.

Chapter Three discusses the methodology used to empirically examine the theoretical framework established in Chapter Two. The research methodology comprises an overview of the design and justifies the use of quantitative methods, discusses the scale items selected to measure the underlying constructs, describes the instrument used to collect the data, discusses the pre-testing and justifies the sampling technique. It also discusses the techniques used to analyze the collected data.

Chapter Four discusses the data analysis performed in the study. It contains the descriptive analysis and the socio-demographic profile of the respondents and the bank branches from which the data was collected. IBM SPSS and SMART PLS 3.2.9 were used for data analysis. The chapter explains the two-stage data analysis and the measurement model and structural model analysis performed in both stages. It furthermore explains the various results of the moderation analysis performed in this stud. The last chapter provides the discussion of the thesis data analysis in light of the theoretical assumption and the existing literature. It also explains the study's theoretical and practical implications for various stakeholders and concludes the study. Some areas of future research stemming from this study and the limitations of the study have also been highlighted.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature review on the history, definition and explanation of Green Banking. It further describes the global scenario of Green Banking Adoption and the need for this concept in Pakistan with respect to the current scenario of the Pakistan banking industry. The academic research gap existing in the area of Green Banking Adoption is briefly discussed. This is followed by the presentation of the theoretical background of the proposed study leading to the description of the proposed research framework and explanation of the connected variables. Lastly, the chapter discusses the hypotheses derived from the research framework.

2.2 History of Green Banking

The earliest evidence of different types of banking transactions was found in 2000 BC, making the banking sector one of the earliest forms of commercial activities documented in history (Goyal & Joshi, 2011; Jafar et al., 2021). From the beginning, this industry developed as an essential part of the capitalist system. A capitalist system is characterized by the use of private capital in the manufacturing and supply of products and services. Such an economic system creates the dominance of the private entities responsible for capital generation having the sole objective of profit maximization from business operations. In a capitalist system, the private banks influence almost all facets of a country's economy through the control on wealth generation and distribution. However, these banks are not held accountable to anyone

except the shareholders of the banks. This ideology defined profit generation and maximization as the first and only goal of the banking industry (Kurtkaya, 2016; Maghrabi & Tayachi, 2021).

The stakeholder approach emerged as an opposing ideology to the capitalist system. In the 1980s, this philosophy started gaining academic attention. According to this approach, an organization should not function solely for profit maximization and shareholder satisfaction; rather, it should benefit multiple stakeholders from the business operations (Clifton & Amran, 2011; Mazur et al., 2020). As per the theory, a stakeholder is defined as an individual or a group of individuals who are or can be influenced in the future by an organization's actions (Freeman, 2010).

An organization produces various externalities during the course of its business operations. Such externalities may result in the creation of certain adverse impacts on the organization's stakeholders (Dwyer et al., 2009; Yadiati et al., 2019). Due to this, organizations may face stakeholders' pressure to minimize any potential adverse impacts resulting from their business operations (Akomea-Frimpong et al., 2021; Baah et al., 2021). The Institutional theory is also congruent with the assumptions of the stakeholder approach. It proposes that organizations require social legitimacy for their survival which can only be achieved as a result of stakeholder engagement (Derakhshan et al., 2019; Sarkis et al., 2010).

The 20th century brought forward the realization of escalating degradation of the natural environment and resources. The majority of the stakeholders attributed these negative externalities to various business operations and started increasing pressure on organizations to reduce their various adverse environmental impacts (Bischoff, 2021). The concept of green management was developed and defined as