



# **Role of Green Banking on Sustainable Human Resource Management: An Empirical Study on Private Banks of Bangladesh**

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## **Authors' contributions**

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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## **ABSTRACT**

Banking is considered as a fundamental element to carry on different modern economic activities both in developed and developing nations all over the world. In the case of emerging nations like Bangladesh, implementing sustainable development projects to provide maximum access to different sustainable financing commodities and to exist long time are difficult for various reasons. Without the better financial environment, it would be very difficult to implement any energy related projects domestically. The main objective of this paper is to explore how green banking institutions can provide assistance for achieving sustainable human resource management for banking institutions also sustainable development in Bangladesh effectively. Sustainable development is a constitutional obligation for Bangladesh and sustainable human resource management is the front-line frontier of sustainable development through sustainable Banking. Banking industry holds a unique position with regard to sustainable development because of their intermediation online banking function between depositors and borrowers. This paper examines the current initiatives taken by the regulatory authorities of banking industry in the context of Bangladesh. The study is

partially exploratory in nature and includes desk research on existing literature and content analysis to appropriately develop an understanding of the concepts and the role of banking industry towards sustainability in human resource management with special reference to Green Banking (GB) which helps to achieve e-Vacancy advertising, E-recruitment and selection, online based training and development, data warehouse to HR planning etc. The study revealed a positive response in implementing the sustainability issues in HRM by the banks in various capacities under the guidance of the Central Bank. The outcome of the paper is expected to unveil the position of the bank practitioners and policy makers about the sustainability concepts and current status sustainability initiatives taken by the regulatory authority in the banking industry of Bangladesh.

*Keywords: Green banking; sustainability; human resource management; banking sector.*

## 1. INTRODUCTION

Sustainability is combined of two words; Sustain and Ability. Sustainability includes social, economic, financial subsystems in which the need for the present are met without comprising the ability of future generation to make their own needs. It was the first international meeting on the idea of sustainability on a global scale. The efficiency of the banking system and financial markets represents a determinant factor for sustainable development. Green banking is the technological adaptation in banking activities to conduct paper less and real time banking activities. Green banking of commercial banks is playing an important role in sustainable Human resource development.

Human resource management does not automatically result in sustainability, but there is a strong interconnection between green banking and possibility to achieve human resource management sustainability. Most of the widely published perspectives on sustainability such as "Stakeholders Theory", and "Shared Value", mentioned the importance of people and employees for creating a sustainable organization. Green banking helps in achieving regulated workplace and goes beyond legislation by focusing on diversity, work-life-balance, training and employability etc. [1]. Kramer, [2] highlighted different approaches to sustainable human resources management and sustainable supply of employees by different HR activities that support Green HRM and HR practices that consider social and environmental outcomes in and of themselves. The definition provided by [2].

*Sustainable HRM could be defined as the planned or emerging HR strategies and practices intended to enable the achievement of financial, social and ecological goals while simultaneously reproducing the HR base over a long time.*

Banking industry holds a unique position with regard to sustainable development because of their intermediation function between depositors and borrowers. Sustainability is now increasingly recognized as central to the growth of emerging market economies. For the banking sector, this represents both a demand for greater social and environmental responsibility as well as a new landscape of business opportunity. Recently, the banks began to realize the major impact of the sustainable development over the way of ulterior development of the society and implicitly over the way of creating the banking value in the future. The role of banking industry in sustainable development is a crucial part for our human resource development. That's why the research question of the study is that how green banking can help to achieve sustainable human resource management [3].

In Bangladesh, with the tremendous increased need of time banks especially commercial banks play an important role in case of overall economic development of any country. Sustainable Human resource management enables an organization to reach its goals, while at the same time empowering its employees to maximize their own professional and personal potential and reach their goals in life. From this timely realization, commercial banks are relentlessly trying to develop innovative financial products and provide better services to their clients in order to ensure higher profitability as well as making salubrious society. Commercial banks, service based organization, need to find a sustainable way to manage human resource to get high profitable venture to satisfy its shareholders. Banks are already familiar with some of the sustainable products & services like green banking, CSR, Corporate Governance, awareness, environmental risk rating in the process of credit appraisal, diversified deposit & credit base for banks through the financial inclusion, technological advancement in the

banking operation, mobile banking service, agent banking etc. Banks can also improve their internal cost savings strategies in human resource management which can foster the sustainability. Banks can set up internal guidelines and human resource management systems to prevent losses due to sustainability issues in financing. When sufficient investors, consumers, and businesses want to invest in sustainability, banks can develop green banking products that meet their requirements [4] and help to reach sustainable human resource management goal. In this context, the development of green banking management system, based on sustainable principles represents one of the provocations of the system [5]. Environmental innovation, trade openness and quality institutions: an integrated investigation about environmental sustainability [6].

Sustainable Development managing environmental and social risk in business decisions, managing the bank's own environmental and social footprint, safeguarding Human Rights, promoting women's economic participation/empowerment, promoting green banking policy, practicing CSR, rising concern for global warming, SWOT analyzing, maintaining umbrella banking, promoting educational development, updating sustainable reporting, promoting financial inclusion of communities and groups with limited or no access to the formal financial sector, meeting the imperatives for good governance, transparency and accountability, supporting capacity building in the sector, promoting collaborative partnerships to accelerate sector progress and reporting to take stock of sector progress and attendant needs. For maintaining Sustainable development banks can implement and initiate ETP, school banking, awareness building etc. by the Bangladesh Bank in the light of their acceptance and commitment to environment and environment friendly projects. The proposed study on green banking is a modest attempt to shed light on the objective of reviewing policies and evaluation of performances of human resource management for sustainability in the context to Bangladesh. The scope of the study is limited to some particular issues of Corporate Social Responsibility, Sustainable Green Banking and Corporate Governance Process which the Central Bank pursued through its wide network of commercial banking system. The main objective of the study is to identify the role of banks achieving sustainable development and examine

its effects on human being as well as society. Moreover, to identify the influences that green banking holds towards the sustainability on human resource management in banking sector.

## 1.1 Background of the Study

There has a little research on the intersection between human resource and sustainability. J. Pfeffer, [7] highlighted research on different perspectives of sustainability on Google scholar searches where he found "53000 for 'environmental sustainability' 12900 for 'social sustainability' and 569 for 'human sustainability'". In 2018 J. Pfeffer found that Google scholar results in 525,000 entries (10 times more) for "environmental sustainability"; 93,700 entries (7 times more) for "social sustainability" and only 3'160 entries (about 5.5 times more) for "human sustainability". The results also pointed out "Sustainable Human Resources Management" with 834 results and "employee sustainability" with only 361 results. Organizations' HR department Supports environmental sustainability initiatives by training and orientation, rather than a specific concern about the people or social component itself, and how HRM can be used to further employees' sustainable development. That is why the study is formulated to find out the contributing factors of sustainable human resource management and develop policy to achieve such factors in the banking environment.

The concept of sustainable development was established between 1972 and 1992 through the series of summits and other conferences. In 1972, sustainability concept was first presented at the United Nations Conference on the Human Environment which was held in Stockholm. Historically banks have been viewed solely as financial institutions, which should concern themselves with all things financial. This public view has allowed banks significant leeway with concern to ethical standards. Banks stated that area new challenges that sustainability presents is that such inspection would require interference in the activities of clients. However, with changing social demands and as more is known about the effects that banks can have through their lending policies, banks have begun to feel pressure from the general public, NGOs, governments and the like to go beyond conventional business management. For example, in the mid-1990s the Cooperative Bank asked, customers what their thoughts were on ethical banking; 84% responded that it was a good idea. In fact, the

co-operative bank was formed in response to the growing consumer base looking for ethically oriented banks. The association between sustainability and HRM might not be self-evident as it presents a new ways of investigating issues in HRM which can raise contradictions and paradoxes within the organization. Green banking provides opportunity to reach sustainability in managing human resources because of low involvement of people and high integration technology in conducting banking and human resource management activities in banks. Sustainable Development concept has been developed by the modern banking approaches. Being part of society, a bank has to work for society's people. They have to think about the society as well as our environment because as part of society banking institutions must work for the environment's wellbeing and society's progressions. Banks across the globe have received the considerable amount of pressure from its diverse stakeholders including shareholders, investors, media, NGOs and customers [8], to carry out business in a responsible and ethical manner. As a result, increased consciousness's with regards to sustainability issues for financial institutions have been observed across the globe during the last decade. Researchers [5] contend that socially irresponsible operation can have a negative impact on share prices and brand reputation of a bank and more customers now-a-days increasingly inquire on the bank's social responsibility position. In effect, socially responsible investors (see Carbon Disclosure Project on its own website: [www.cdpproject.net](http://www.cdpproject.net)) collectively have voiced concern on corporations to take into account contemporary global issues such as corporate responsibility on climate change in recent years. Similarly, the other powerful stakeholders that have significantly shaped the issues and brought these to public sentiment are the state regulatory bodies, media's, NGOs in addressing social responsibility issues in banking sector [9,10] and these stakeholders' strong engagement have the likely impact to be a main driver to revolutionize in CSR and CSR reporting practice, green banking, umbrella banking, CG, awareness practices.

Reputation and branding have become the top reason for many banks to integrate sustainability, the benefits outweighed the costs, social and environmental risk management improved the quality of a bank's portfolio and lowered insurance liabilities and compensation claims.

The importance of risk management, social issues, environmental problems and moral problems for the performance of banks and other financial institutions has greatly influences sustainability. Studies generally indicate that the banks follow the rules in Western European countries and take initiative for their sustainable HR development. They gave three indicators of society, environment and economy almost the same value. This paper reviewed literature on sustainability and HRM, and then seek to integrate these two concepts by focusing on the opportunities for implementing sustainability in HR development.

## 2. LITERATURE REVIEW

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. According to [8] "consumers' associations with sustainability tend to be literal –words that come to mind are recycling, natural and preservation. Sustainability is a people issue affecting a company's culture and behavior. It affects recruitment; how companies engage and retain employees, and how they retain employees. The challenges of Sustainable Human resource management are that social and environmental outcomes, and not financial performance should be supported HR. By calculating the return on investment (ROI) and other HR metrics for sustainability initiatives, organizations can make the business case for incorporating sustainability practices into an organization's philosophy and practice. Sustainable human resource management changes the focus from maximizing the profit you can generate using your employees' to maximize the potential of people component of an organization; from a short-term to a long-term orientation to performance. It is important to focus on the development function of HRM which is a key area to further sustainability in HRM. There are many aspects of HRD where managers can improve the sustainability of the people component of their organizations, we will focus on training, career planning and performance management.

[11] wrote a book, "Sustainable Banking – The Greening of Finance" with ground breaking impact on banking activity in the context of sustainable development. In order to understand the banks towards sustainability, authors identified four stages of banking: defensive, preventive, offensive and sustainable banking;

they also highlighted important differences between regions, countries and banks with regard to sustainable banking. The book covers the perspectives and case studies on how various changes in the financial sector directs banks to move along with the direction of sustainability. The authors approach five central themes in their book: the policies of banks, transparency and communication, environmental investment funds, environmental risks and their consequences for banks' products, and the role of governments, NGOs and multilateral banks. [12] found four key findings: (a) banks are discussing the opportunity to trade climate change in their annual report, (b) many banks calculated their greenhouse gas emissions; (c) demand for climate-friendly financial products and services are increasing, and (d) investment banks support a trading system of emissions and play a leading role in introducing new risk management products. In other side results indicate that monetary policies contribute to long-term sustainable investments.

[13] finds that banking sector in Bangladesh responds relatively late in case of sustainability reporting. There is this common perception among the bankers that banks are in general relatively environment-friendly entities, in terms of emissions and pollution. But, given the bank's detail analysis of safety of their investor's and depositor's money, the banks are surprisingly slow to analyze the environmental footprint of their clients. A stated reason behind this was such that in doing sustainability reporting and including their clients in it meant "interference" in the clients' activities. [14], from January to March 2005, fifty international corporate social responsibility finance thought leaders were interviewed for CSR's future opinion and stability of money and investment. According to the report, they mostly believe that the moral consumer market will increase and will be driven by product awareness, assessment and social and environmental degradation. Human resource management benefits derived from CSR are an important way to improve financial performance [15]. The effect of income inequality and energy consumption on environmental degradation: the role of institutions and financial development in 180 countries of the world. Environmental Science and Pollution Research. There has no industry standard that sums up all the responsibilities of HR, [16] explain that,

*"Human resource management practices include analyzing and designing work, determining*

*human resource needs (selection), teaching employees how to perform their jobs and preparing them for the future (training and development), rewarding employees (compensation), evaluating their performance (performance management), and creating a positive work environment (employee relations)."*

The results of the sustainable assessment of six UK banks by [17] indicated that majority of the banks had reached the preventive banking phase in Jeucken's model while only two banks had reached the higher phase of offensive banking. In Spain, it was shown that in the presence of a positive valuation of social responsibility practices by consumers, a firm may obtain a better strategic position, along with higher margin, demand, and profit, an empirical analysis confirmed that consumers significantly value other features apart from price in making deposit and mortgage decisions, particularly a financial institution's social responsibility [18].

The sustainable HRM resides squarely in the people component. It affects an organization's culture and behavior which affects the messaging that organizations use in recruiting, how companies engage and retain employees. For sustainable development, banks can implement and initiate green banking. The authors reviewed and compared the green loan policy by the Bangladesh Bank in the light of their acceptance and commitment to environment and environment friendly projects. Global reporting initiative's indicators support that organizations that invest in sustainability leads to positive results which includes 1) improved employee morale 2) efficient business process 3) strong public images 4) employee loyalty, and 5) increased brand recognition. Studies generally indicate that the banks follow the rules in Western European countries and take initiative for their sustainable development. They gave three indicators of society, environment and economy almost the same value. The RARE organization research shows that most of the European banks did not measure the performance of indirect aspect (customer and financial products). [13] highlighted cost savings, safety and satisfaction of customer in mobile banking which is a part of green banking to enhance loyalty and well-being. This will help to reach sustainability in banking activities like HRM of banks. The Central Bank of Nigeria (CBN) is set to implement the Nigerian Sustainable Banking Principles (NSBP) and the accompanying three sector guidelines on

Agriculture, Power, Oil and Gas were introduced in July 2012. Remote working also facilitates sustainable human resource management as workers enjoys facilities like safety, security, e-advertisement, e-recruitment and selection, training and development [19] which are some preconditions to achieve sustainable human resource development.

By incorporating sustainability into an organization's culture and strategy, organizational stakeholders are more likely to accept and adopt initiatives. The study of [10] pointed the importance of trust to an American financial institution although it would be a mistake to attribute the success of Canandaigua National Bank & Trust, which is a community bank in New York, wholly to its policies of corporate social responsibility. In the growing economy of Brazil some points for improvement were identified: (a) to reinforce the awareness of employees and other stakeholders on the subject of sustainability, (b) to upgrade the tools used by institutions, (c) to improve the transparency in disclosing socio-environmental information [20]. While the adoption of CSR reporting is linked to higher reputation indices, it is not necessarily adopted as a strategy by members of the Australian banking industry to address questions of legitimacy (Bartlett, 2005). Sustainable HRM's changes the focus from maximizing the profit you can generate using employees, to maximize the potential of the people component of an organization; from a short term to long-term orientation to performance. It is also important to focus on development function of HRM to accelerate green banking activities helping to achieve sustainable Human resource management. The area of HRD includes opportunities such as employee training, career development, performance management and development, coaching, mentoring, succession planning, key employee identification, tuition assistant and organizational development [3]. As per the green banking concern, the bank should go green and play a pro-active role to consider environmental and ecological aspects as a part of their lending principle, which would force industries to go for mandated investment for environmental management and to use appropriate technologies along with management systems [21]. [22] stated that Indian banking is gradually coming to realize that there is need from a shift from the 'profit, profit and profit motive to 'planet, people and profit'.

A manager with fixed annual budget for green human resource development may be concerned about allocating their human resource development by identifying green banking activities. Traditional banking activities focus on lots of paper work and coordination of activities while green banking activities focus on low involvement of people and automated coordination of activities helping to achieve human resource management sustainability. [23] observes that the sustainability reporting scenario is still in primary stage. He conducts areas are Indian commercial banks on the basis of the state of their sustainability reporting. He concludes that in Indian sustainability reporting is in nascent age. There is lack of policy support and guidelines. Although many of the corporations are coming forward include sustainability in their reporting practices, trying to follow the GRI guideline, most of them lack consistency and comparability. This commendable initiative needs proper legislative support.

[20] conducted a study on green banking to examine the commitment towards the global initiatives by the Bangladeshi banks and draw a conclusion that Bangladesh is far behind their counterparts from the developed countries. However, the general picture presents a transition to green banking in a consistent manner for most banks. By taking care of its infrastructure development and accelerating its existing green movements, banks can ensure sustainability for itself and greener world for communities. [13] studied on green baking and it is found to be a mere attempt to describe the green banking initiatives taken by the central Bank of Bangladesh. Another study by [24] concludes that the concept of green banking is relatively new in Bangladesh and yet to get momentum, but in the developing countries it is passing through a mature stage, although not yet a satisfactory stage at all.

## 2.1 Theoretical Framework

Sustainable development of banks is using money with conscious thought about its environmental, cultural and social impacts. It is also known as social, alternative civics or ethical banking. This approach is based on certain principles that not only consider profit but also economical social benefit for their sustainability. The main purpose of banks in sustainable development is to maintain financial and social stability and also attract customer to them.

Bangladesh bank has been pursuing policy and instructions in all possible areas of sustainable banking for banks and non-financial institutions to ensure sustainable development practices. Sustainable banking mainly focuses on some broad categories, mainly 1) Green banking, 2) financial institutions, 3) Corporate Social Responsibility (CSR). Bangladesh Banking sector is in a new era of the sustainable reporting the finding has significance implication on the corporate level as well as policy makers of the country to think about sustainable development for the future emergence of the country economy. In the economic system, the banking sector invests capital to other economic sectors such as manufacturing, logistics and consuming etc., which will produce the indirect impacts on environment by producing wastes (unless recycling, it has detrimental impact on environment), social and economic development (by efficient use of resources, otherwise averse to economy). Meanwhile, resources/energy consumed by the financial enterprises will have direct environmental impacts, which can be minimized by reducing energy consumption, conservation of water, procurement of green supplies etc. Comparatively indirect impacts are much more significant than direct ones for the financial sector to pursue the sustainability. Therefore, it is easy to understand the grave role of banking sectors in sustainable development. For example, once commercial banks provide a loan for a polluting project (like tannery industry in Hazibag, Dhaka), they might suffer environmental risk and consequently lose money due to increasingly stringent environmental regulations. On the contrary, if banks could strengthen their environmental risk management that will help to improve their environmental performance and ensures profit. Interestingly, at the higher level, the driving forces, like market opportunities from cleaner production and renewable energy, competitive advantages from new products etc. will urge banks to carry out the strategy of green financing with corporate social responsibility (CSR), which will achieve win-win positions for banks, while benefiting the environment and society.

Sustainable Development Goals (SDG) is greatly related to sustainable development of banking. Banks mainly follows the factors which are included in the SDG. In continuation of the stride of Millennium Development Goals (MDGs), to finish neediness, to spare the earth and to warrant human improvement the Sustainable Development Goals (SDGs) have been

structured comprising of 17 (seventeen) objectives while including new territories, for example, a worldwide temperature alteration, money related uniqueness, modernization, urbanization, and great administration towards actualizing the above feasible improvement objectives. Bangladesh Bank goes about as scaffold for checking correspondence and coordination among concerned government organizations to actualize the financing approaches of feasible improvement. While assessing the yearly reports of various business banks of Bangladesh, the accompanying maintainability exhibitions have been discovered general among them.

Green banking defined as promote environmental-friendly practice and reducing carbon footprint from banking activities. Green Banking covers a wide region of banking exercises that have positive effect on society and ecological insurance lastly leads towards reasonable banking. Along these lines, every one of the exercises that spread principled financial exercises like vitality effective financing and motivating forces, green charge cards, green credits, green investment accounts, green financial records, green currency advertise accounts, green versatile banking accounts, web-based banking, remote store, squander the board, rooftop planting and green financing go under the umbrella of maintainable banking for by and large practical advancement. To foster green banking practices in the country, banks formulated the 'Green Banking Policy and Strategy framework' and 'Environmental Risk Management Guidelines' in a consultative manner. Many banks are now financing environmentally friendly projects as per the guide line. Green banking includes different activities of banks which are Online banking, paying bills online, Remote deposit/ bKash, Ucash etc., Online fund transfers, E statements, Automated clearing house, Online Credit Information Bureau (CIB) facilities, Enterprise Data Warehouse (EDW) for an electronic data bank, E-tendering system, E-Recruitment, E-commerce (At present 2 banks are offering the services), Green Accounts (ATM Service), Green Financing, Power Savings Equipment's, Green Debit Cards/ Credit Cards, Save Paper, Mobile Banking, Agent Banking etc. Green Banking requires thorough due diligence under Environmental Risk Management (ERM) Guidelines. Energy efficiency has received significant attention of Bangladesh Bank in recent years. All banks and financial institutions, local and foreign owned,

private and public sector, have engaged enthusiastically in the thrust initiatives. Thus, the study proposes the following hypothesis to investigate the impact of green banking on sustainable Human resource management in banking industry.

Hypothesis 1: Enterprise data warehouse positively results in sustainable human resource management.

Hypothesis 2: E-vacancy advertising system has positive impact on human resource management to achieve sustainability.

Hypothesis 3: E-recruitment and selection help to reach sustainability in human resource management.

Hypothesis 4: Online based training and development facilitates to achieve sustainable human resource management.

Hypothesis 5: Data warehouse to HR planning has positive impact on sustainable human resource management.

Hypothesis 6: Electronic transactions help banking institutions to achieve sustainability in HRM.

Hypothesis 7: E-statement deters banks from achieving sustainability in HRM.

Hypothesis 8: Automated clearing housing significantly affects sustainable human resource management.

### 3. METHODOLOGY

This report is based on both qualitative and quantitative research method where analysis was done based on data collection from the employers of 13 banks that Islami Bank Bangladesh Ltd., City Bank Ltd., AB Bank Ltd., IFIC Bank Ltd., Mercantile Bank Ltd., One Bank Ltd., United Commercial Bank Ltd., Social Islami Bank Ltd., Bank Asia Ltd., Brac Bank Ltd., Uttara Bank Ltd., Pubali Bank Ltd., and Dhaka Bank Ltd. This study is basically an exploratory study where it tried to find out the perception of employers regarding the planning taken by the bank for sustainable human resource development.

The research was carried out using convenience sampling. Direct sampling of individuals in the population was performed because it enabled cheap, quick access to information. We collect data by gathering answers from an online questionnaire designed in Google Docs sent to

the systematically selected respondents. The invitation to the online survey was conducted by social media and email due to their faster response which involve a group of 10 students from department of management information systems at Noakhali science and technology university. Questions used to measure other additional constructs are adapted from prior studies.

### 3.1 Population Parameters

Banks Management bodies are the main respondents for this study. The sample methods used include the systematic sampling and purposive sampling techniques. The systematic random technique was used to determine and select respondents from the sample frame for the study. In all forms of research, it would be ideal to test the entire population but, in most cases, the population just too huge that it is impossible to include every individual. This is the reason that I rely on convenience sample technique which is the most common of all the technique.

All the required primary data will be collected through direct interview and also through informal discussion. Primary data are collected through: open ended and close ended questions. Interview is conducted among the management bodies of the banks. For the purpose of this study questionnaire was used because it helped to collect data from different locations. A five-point opinion scale from strongly disagree = 1 to strongly agree = 5 with a set of statements is used in the questionnaire to collect data. The questionnaire is designed for the employers of various banks. Data are collected by conducting interviews with employers of various banks. Interviews have been used in the research because they represent a valuable and rich source of information in doing a case study. The interviews have been done in open, lively but focused manner with the intention of acquiring relevant information to enrich the findings of the study. This whole report is done by using Microsoft Word, Microsoft Excel and SPSS.

### 4. DATA ANALYSIS AND FINDINGS

The largest portion of respondents were 32-39 years of age (38%) and majority of the respondents were 40-48 years of old (85%). Among the total respondents, 62% were male



**Table 1. Demographic profile of the respondents**

Respondent	Categories	Frequency	Percentage
Gender	Male	62	62
	Female	38	38
Age	Under 31	6	6
	32-39	38	38
	40-48	85	85
	49-55	19	19
	55 and above	7	7
Sustainable HRP desirable/	Yes	98	98
	No	2	2
Occupational position	Lower level	12	12
	Mid-level	55	55
	Top level	33	33
	Other	8	12

and 38% were female. 98% of the total respondents were positive about sustainable HRP while only 2% of total respondents were negative regarding this issue. Around 55% of total respondents belonged to mid-level occupational level while the other 33%, 12% belonged to top level and lower-level occupational position respectively (Table 1).

**4.1 Reliability and Validity Analysis**

To verify the suitability of data and the measurement scales, a convergent validity test was performed to get assurance that different items of the study used to measure the constructs are in agreement. To assess the convergent validity, factor loadings, composite reliability and average variance extracted were used as indicators Hair et al. [25]. The loadings value for items exceeded .7 as per recommendations Hinson [26]. The Average Variance extracted (AVE) is between 0.647 and 0.810 where composite reliability (CR) is between 0.844 and 0.927. If Average variance extracted is more than 0.5 and composite reliability is higher than 0.7, then convergent validity of the construct is still adequate [27] The Cronbach’s Alpha values are more than 0.7 for all constructs, which support the value recommended by [26]. So, the model is good enough for the investigation purpose. Table 2 depicts the result of convergent validity.

The HTMT criteria was computed on the basis of the item correlations (Table 4) for each pair of constructs. The computation yields values below the threshold values  $HTMT_{.85}$ ,  $HTMT_{.90}$ ,  $HTMT_{inference}$ . So, the discriminant validity (Table 3) has been established Henseler et al., [27]. under three different heteromethod-heterotrait

(HTMT) validity determination criteria. The HTMT criteria displays discriminant validity of inter-construct correlations in which the construct is actually different from one another. It shows that any approach points to discriminant validity issues at comparatively high levels of inter-construct correlations as values are below the threshold values (Table 3) which are between (.022 and .624).

**4.2 Structural Model**

Structural equation model was used to examine the relationships among research constructs developed in the theoretical model during developing hypothesis. We proceeded with hypothesis testing assuming that the measurement model meets validity and reliability estimation. The predictive accuracy of the model was assessed in terms of the variance portion explained. The result of structural equation modelling is presented in Table 4.

Table 4 displays the path coefficient, t-statistics, P-value, and status of each hypothesis proposed in the study. The results of hypothesis testing reveal that the enterprise data warehouse positively helps to achieve sustainable human resource management while Automated clearing housing has no positive impact on sustainability of human resource management. Besides, E-vacancy advertising systems, e-recruitment and selection, and online based training and development, in this study, proven to positively influence sustainable human resource management development. This study also reveals that the data warehouse to HR planning is positively influencing to reach sustainable human resource management as data warehouse preserves employees information

without using any paper for years and can be used at any time by users. Hypothesis 7 revealed that electronic transactions reduces the necessity of using paper and can be preserved for many years in the cloud which ensures sustainability of transactions information and thus helps to develop sustainable human resource

management while electronic statement has no influence to achieve sustainable human resource management. Path coefficient analysis and t-statistics examine the relationship between dependent and independent variables. From these results, H6 and H8 are rejected while rest of the hypothesis are supported.

**Table 2. Measurement validity**

Constructs	Items	Loadings	Cronbach's Alpha	CR	AVE
<b>Enterprise Data Warehouse</b>	EDW1	0.771	0.721	0.844	0.647
	EDW 2	0.822			
	EDW 3	0.801			
<b>E-vacancy Advertising systems</b>	EVAS1	0.788	0.828	0.885	0.745
	EVAS 2	0.877			
	EVAS 3	0.911			
<b>E-Recruitment and selection</b>	ERS 1	0.739	0.753	0.869	0.670
	ERS 2	0.835			
	ERS 3	0.763			
<b>Online based training and development</b>	OBTD1	0.723	0.743	0.823	0.660
	OBTD 2	0.780			
	OBTD 3	0.851			
<b>Data warehouse to HR planning</b>	DWHP1	0.823	0.753	0.859	0.670
	DWHP 2	0.847			
	DWHP 3	0.784			
<b>Electronic transactions</b>	ET1	0.868	0.795	0.879	0.728
	ET2	0.824			
	ET3	0.832			
<b>E-statement</b>	ES1	0.838	0.762	0.871	0.785
	ES2	0.934			
<b>Automated clearing house</b>	ACS1	0.783	0.715	0.836	0.635
	ACS2	0.814			
	ACS3	0.736			
<b>Sustainable HRM</b>	SHRM 1	0.871	0.882	0.927	0.810
	SHRM 2	0.934			
	SHRM 3	0.895			

**Table 3. Discriminant validity using HTMT criterion**

	SHRM	EDW	EVAS	ERS	OBTD	DWHP	ET	ES
<b>SHRM</b>	1							
<b>EDW</b>	0.395	1						
<b>EVAS</b>	0.034	0.346	1					
<b>ERS</b>	0.074	0.414	0.376	1				
<b>OBTD</b>	0.124	0.395	0.022	0.327	1			
<b>DWHP</b>	0.130	0.034	0.181	0.154	0.502	1		
<b>ET</b>	0.294	0.219	0.456	0.308	0.440	0.219	1	
<b>ES</b>	0.311	0.113	0.347	0.346	0.262	0.154	0.395	1
<b>ACS</b>	0.175	0.395	0.410	0.414	0.624	0.308	0.465	0.414

**Table 4. Result of hypothesis testing**

Hypothesis	Path	Path Coefficient	t statistics	p values	Decision
H1	EDW -> SHRM	0.200	3.070	0.001	Supported
H2	EVAS -> SHRM	0.296	3.974	0.000	Supported
H3	ERS -> SHRM	-0.279	4.325	0.000	Supported
H4	OBTD -> SHRM	0.207	3.411	0.000	Supported
H5	DWHP -> SHRM	-0.161	2.008	0.023	Supported
H6	ET -> SHRM	0.023	0.309	0.379	Not supported
H7	ES -> SHRM	-0.345	5.410	0.000	Supported
H8	ACS -> SHRM	-0.062	0.903	0.184	Not supported

*R Square: 0.345; Adjusted R Square: 0.337*

Moreover, the value of  $R^2$  is 0.345 (see Table 4) and the value of adjusted  $R^2$  is 0.337. Six hypotheses of the study were supported, while two hypotheses were rejected. Thus, H1 (t value = 3.070), H2 (t value = 3.974), H3 (t value = 4.325), H4 (t value = 3.411), H5 (t value = 2.008), and H7 (t value = 5.410) are supported.

## 5. DISCUSSION ON FINDINGS

Through questionnaire development and conversation with employers, there are some important factors that are revealed from the observation that Sustainable human resource management Development is supposed to be achieved by some factors in green banking activities. These factors are mentioned here:

- There is significance relationship between Sustainable human resource development and the role of enterprise data warehouse of Banks which provide real time information to take any decision my human resource management. In case of sustainable human resource development banks change their economic status and lessen the risk of unemployment adopting green banking activities.
- Employers are more or less satisfied with the policies taken by the banks. green work environment, occupational health, energy conservancy, empowerment and efficiency have greater positive effect on sustainable human resource development in the banking sectors. On the other hand, for retaining sustainable development and making the healthful working environment employers have to give extra time, energy and additional resources that means data warehouse helps to make human resource planning affectively in the sustainable human resource development process.

- If the policies are properly designed and the execution are organized, then employers can easily perform their task i.e. electronic transactions and be aware about the sustainability.
- Publics should be made aware about e-recruitment and selection that sustainable human resource management is misguided by the alluring amount profit but eventually incur loss. Sustainability is not only for presence security but also for making future safe. So, sustainable human resource development through green banking has positive impact on profitability and long run existence.
- The banks should be invested in Sustainable Development to create a strong, united and dedicated team who are able to respond quickly and efficiently to the needs and requirements of the organization for making congenial society for everyone through online based training and development.
- All banking policies can't be incorporated into automated systems to improve efficiency and reduce time that will result show process in providing services. Moreover, some green banking activities may not contribute to reach sustainable human resource management like automated clear housing and electronic statement.
- Moreover, Electronic vacancy advertising systems can be helpful in managing low cost management of vacancy position by reducing paper and ensuring reliability to achieve sustainability.

## 6. CONCLUSION

This study of focus on how CG, CSR and Green Banking, social and economic responsibility affect the private commercial banks to achieve

sustainable human resource management. In terms of sustainability, it has been identified that private commercial banks are gradually increasing sustainability or tend to be more sustain in the market as per the analysis result. Green banking practices have been increasing among the private commercial banks. That also means private commercial banks are more focused on maintaining the green banking practices. The sustainable human resource management outcome also consistent such as the above component but an inverse relation has been identified with the time. So, this study on concludes with the state that private commercial banks are receiving higher sustainability in human resource management and green banking also helps banks to get higher sustainability in HRM. Organizations can create as indicators that visualize their performance in terms of Corporate Governance, intellectual capital management and Corporate Social Responsibility. Users should be able to look at these and assess how well the company is fulfilling its objectives. There are no predefined set of measures and the set chosen can include indicators that measure effects, activities or the resource mix but to measure the sustainable business in it for material component of how value is created and communicated. The study is based on discussing the current sustainable banking practice in Bangladesh Bank as well as its future prospect in socio-economic development and sustainable development in our country. In the upcoming decades, the country wishes to achieve her desired development goals with the efficiency. Energy is a crucial constituent in this regard. Access to energy and how efficiently energy is being used will be determined the speed of the development. Bangladesh's financial sector is dominated by the banking sector. The dominance of the banking sector makes the financial sector vulnerable on the one hand, but highlights the crucial importance of the sector in resource mobilization and economic growth, on the other. The banking sector has achieved considerable success due to the reforms in the 1990s, 2000s and afterwards. However, the sector will have to prepare for the next generation of global regulatory framework and meet emerging clients' needs. In the coming days, the banking industry will have to achieve the ability to absorb shocks arising from financial and economic stress, improve risk management and governance, and strengthen banks transparency and disclosures. And if the sector has to play the larger role of contributing towards a stable and sound

macroeconomic situation, the banking sector has to go through the painful path of stricter policy and legal measures. The SDGs are unique in that they cover issues that affect us all. The SDG of the banking sector in Bangladesh reaffirm our international commitment to end poverty, permanently, everywhere. They are ambitious in making sure no one is left behind. More importantly, they involve us all to build a more sustainable, safer, more prosperous planet for all humanity.

## 7. RECOMMENDATIONS AND STUDY FOR FUTURE RESEARCH

It is a complex study and its complexity is also a major limitation. Since the independence, Bangladesh has walked a long way. The nation was once considered a bottomless basket but now considered as one of the most successful nation in terms of economic prosperity and socio-economic development. In the upcoming decades, the country wishes to achieve her desired development goals with efficiency. Energy is a crucial constituent in this regard. Access to energy and how efficiently energy is being used will determine the speed of the development. Now-a-days green banking for sustainable development has become the best practice across the world today. With a focus on sustainability, organizations can manage their environmental and social impacts while improving human resource stewardship and operational efficiency and letting it remain a critical component of employee, stakeholders and the relation with them for going the extra miles and the banks understand that the sector will play a critical role in achieving the Sustainable Development. Banks in Bangladesh are mapping business activities through sustainable & green banking process adopting sustainability in human resource management practices.

In the light of overall discussions and findings, comments and suggestions from the respondents in survey questionnaires the following recommendations are put forward for effectiveness of sustainable development and roles of banking sector.

- Standard authority, transparency, accountability should ensure to the independent directors. Number of independent directors should match with the efficiency level.
- Banks should identify and explore the possible improvements and provides

priority-based suggestions to improve corporate governance practices.

- It is recommended to encourage the financial institutions more in CSR by announcing different benefits like awards, removing the ceiling in CSR, inclusion in company law, progressive tax exemption rate etc. Government should encourage banks towards CSR acts by provides tax rebate and tax exemptions.
- Government needs to establish regulatory bodies that will monitor the social responsibility of corporate organizations, in order to oversees the compliance of CSR policies and prosecute organizations that are socially irresponsible also.
- Banks should create awareness for stakeholder communities for sustainable banking and also avoided human rights as well as other civil rights violation.
- Initiatives from Bangladesh Bank are needed to ensure proper green banking, decreasing global warming, analyzing SWOT. Also, for private commercial banks is to develop strategic and tactical initiatives that provide for voluntary disclosure of intellectual capital. These initiatives may initially be used for internal management purposes only.
- Banks should create awareness for stakeholder communities for sustainable banking and also avoided human rights as well as other civil rights violation.

These are all about recommendations provided based on survey and personal experiences from my research. By following these recommendations, the banking sector would be able to build up a strong platform of satisfied employees, employers and customers. Moreover, organizations can also be able to reduce its cost helping to retain workers of the organizations.

Despite, some limitations of the study, the findings of the study can also be used to other organizations to see the impact of green technology for sustainable human resource management like travels and tourism, insurance, and non-bank financial institutions etc.

## DISCLAIMER

The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not

intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

## CONSENT

As per international standard or university standard, Participants' written consent has been collected and preserved by the author(s).

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

## REFERENCES

1. Crane A, Matten D, Spence L. Corporate social responsibility: Readings and cases in a global context, 2nd edition, New York: Routledge; 2014.
2. Millat KM. Monitoring, evaluation and incentive mechanisms in support of sustainable banking regulatory frameworks a presentation given under the green banking and csr department, Bangladesh Bank, Dhaka; 2014.
3. Sobhani FA, Amran A, Zain uddin Y. Sustainability disclosure in annual reports and websites: A study of the banking industry in Bangladesh, *Journal of Cleaner Production*. 2012;23(1):75-85. University Press.
4. Jeucken M. Sustainability in Finance: Banking on the Planet", Eburon Academic Publishers, the Netherlands; 2004.
5. Parvez Roy Mihir, Sarker SA. Sustainability in Banking Industry: Which way to move?, *ASA University Review*. 2015;9(2).
6. Khan HUZ, Azizul Islam M, Kayeser Fatima J, Ahmed K. Corporate sustainability reporting of major commercial banks in line with GRI: Bangladesh evidence. *Social Responsibility Journal*. 2011;7(3):347-362.
7. Pfeffer J. Building sustainable organizations: The human factor. *Academy of Management Perspectives*. 2010; 24(1):34-45.
8. Bhattacharya CB, Sen S. Doing Better at Doing Good: When, Why, and How Consumers Respond to Corporate Social Initiatives, *California Management Review*. 2004;47(1):9-25.

9. Decker OS. Corporate social responsibility and structural change in financial services, *Managerial Auditing Journal*. 2004; 19(6):712-728.
10. Dutta P, Bose S. Corporate Social and Environmental Reporting on corporate websites: A study on listed companies of Bangladesh', *The Cost & Management*. 2007;35(4):31-49.
11. Khan MH, Islam MA, Fatima JK, Ahmed K. Corporate sustainability reporting of major commercial Banks in Line with GRI: Bangladesh Evidence, *Social Responsibility Journal*. 2011;7(3):347–362.
12. Thompson, Hilary. The Role of Financial Institutions in Encouraging" Improved Environmental Performance. In Rogers, - Michael-D., ed. *Business and the environment*. New York: St. Martin's Press; London: Macmillan Press. 1995;271-81.
13. Muhammad Abdus Salam, Trisha Saha, Md Habibur Rahman, Prantika Mutsuddi. Challenges to Mobile Banking Adaptation in COVID-19 Pandemic. *Journal of Business and Management Sciences*. 2021;9(3):101-113. DOI: 10.12691/jbms-9-3-2
14. Islam MS, Das PC. Green Banking Practices in Bangladesh", *IOSR Journal of Business and Management*. 2013;8(3):39-44.
15. Hayat Khan, Liu Weili. The effect of income inequality and energy consumption on environmental degradation: The role of institutions and financial development in 180 countries of the world. *Environ Sci Pollut Res*; 2021. Available:https://doi.org/10.1007/s11356-021-17278-9
16. Habibur Rahman M, M Mahbubur Rahman S. Impact of Remote Working on Human Resource Management: The Role of IT in the COVID-19 ERA; 2021.
17. Ameer R, Othman R. Sustainability practice and corporate financial performance: A study based on top global corporations. *Journal of Business Ethics*. 2012;108:61-79. DOI: 10.1007/ s10551-011-1063-y.
18. Masud MAK, Bae SM, Kim JD. Analysis of Environmental Accounting and Reporting Practice of Listed Banking Companies in Bangladesh, *Sustainability*. 2017;9(10): 1717.
19. Rahman MA, Kamruzzaman M. Sustainable Development of Commercial Banks in Bangladesh, *Bangla Vision Journal*. 2014;13(1):182-189.
20. Masukujjaman M, Akter S. Green Banking in Bangladesh: A Commitment towards the Global Initiatives, *Journal of Business and Technology*. 2013;VIII(1& 2):17-4.
21. Hayder MM. Green Banking and its Practice in Bangladesh; 2012. Available:http://www.scribd.com/doc/96449881/Green-Banking-and-Its-Practices-in-Bangladesh-ID- 07303125
22. BIBM. BIBM Activity Report 2013, Bangladesh Institute of Bank Management, Dhaka, Bangladesh; 2013.
23. Masud AK, Hossain MS. Corporate Social Responsibility Reporting Practice in Bangladesh: A Study of Selected Private Commercial Banks, *IOSR Journal of Business and Management*. 2012;6(2):42-47.
24. Heathfield SM. What is human resource development (HRD)?; 2016. Available:https://www.thebalance.com/what-is-human-resource-development-hrd-1918142
25. Hair Jr JF, Hult GTM, Ringle CM, Sarstedt M. A primer on partial least squares structural equation modeling (PLS-SEM). Sage Publications; 2013.
26. Hinson RE. Banking the poor: The role of mobiles. *Journal of Financial Services Marketing*. 2011;15(4):320-333.
27. Henseler J, Ringle CM, Sarstedt M. A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*. 2015; 43(1):115-135.

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