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Sustainable Environment – a Prerequisite for Sustainable Investment: A Study on Listed Manufacturing Enterprises of Bangladesh

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Abstract:
Changing environment and the deterioration of the natural resources has triggered organizations to identify, understand and manage the issues of environmental sustainability. In addition to environmentally sound production methods, sustainability is also taken to mean that attention is paid to other important social and cultural goals. The study reveals that most of the respondents have been much more aware about "climate change" factor. The highest rate of importance assigned by the respondents has been towards "economic factor". This study investigates the effect of environmental sustainability on value of sample enterprises. The study recommends that environmental policy makers should revisit the blue print about environmental sustainability on environmental practices to provide supportive environmental investment that will enhance a better financial and operational performance in manufacturing enterprises of Bangladesh.

Keywords: *Environmental sustainability, production methods, climate change factor, economic factor, value of the manufacturing enterprise*

1. Statement of the Problem

In environmental terms, sustainability implies that an action can be continued indefinitely with little or manageable impact on the environment. Because the health of the environment is closely linked with the health of society in general. Sustainable practices ensure that the Earth's resources will be available for future generations to enjoy and that there will be an Earth to enjoy them on. Sustainability aims to balance the needs of human societies with the needs of the environment, preserving both for all creatures on Earth to make use of and enjoy. Sustainability promotes biodiversity the preservation of unique ecosystems, the health of the environment and a high quality of life.

The economy of Bangladesh is mainly based on agriculture. Around 50% of the total labor force of this country still employed in this sector. More than 70% of the population involved directly or indirectly in agricultural activities. In broad terms of sectoral contribution to GDP, the share of agriculture is now less than 20%. The service sectors have contributed about 52%. The remaining 28% is mostly accounted for by employment in the industrial sector. On environmental sustainability, Bangladesh has been using its own limited resources purposefully within the framework of Bangladesh Climate Change Strategy and Action Plan (BCCSAP) adopted in July 2009, Bangladesh Climate Change Trust Fund (BCCTF) financed from national budgetary allocations (US$300 million allocated over the past three years) and Bangladesh Climate Change Resilience Fund (BCCRF) financed through contributions of Development Partners (so far about US$170 million received) as well as other relevant policies, programs and Acts. (*Rio+ 20: National Report on Sustainable Development, 2012*).Environmental sustainability and climate change resilience are key elements of Bangladesh's inclusive socioeconomic development strategy, actions promoting adoption of low carbon emission lifestyles, output processes and practices accordingly figure high in national policy priorities (*Rahman, Bangladesh Bank, 2014).*

Bangladesh is a disaster-prone country. Due to its hydrological and geo-morphological realities, its location at the bottom of three major river systems - the Ganges, the Brahmaputra and the Meghna (GBM) - and being bound on the south by the Bay of Bengal. Given the evolving climate change, the country has begun to be visited by extreme climatic events more frequently. These climatic events cause adverse socio-economic consequences for the affected people and, therefore, are a major concern for national socio-economic progress. Bangladesh is committed to its home stakeholders for evolving a "green development" concept that promotes a "green economy" and provides "green jobs" in the future.

In the context of environmental sustainability, the industrial sector has a major role to play, especially through efficient waste management and eco-system management. Though, this is mandatory by law but in practice, this is far from law, thereby compliance remains largely disregarded. Untreated chemical wastes, which often contain heavy metals, are discharged into rivers, canals, lakes, wetlands and even agricultural lands, severely degrading them and causing health risks to people. Therefore, environmental sustainability is a crying need of the day to survive with existing population as well as to save our upcoming generation in the context of Bangladesh. In such situations, the current study on Sustainable Environment - A Prerequisite for Sustainable Investment is highly essential especially in the cases of corporate manufacturing enterprises of Bangladesh.

Sustainable environmental practices are needed in order to support smart growth. Our region competes in a global context, where individuals have an increasing ability to live in whatever region offers the highest standard of living and best natural environment. Sustainable environmental practices will help to sustainable investment in every part of the country.

1.1. Objectives of the Study

The main objective of this study is to critically analyze the role of sustainable environment in sustainable investment in the selected corporate manufacturing firms of Bangladesh. In order to achieve the main objective, the study contains the following specific objectives.

1. To identify the factors affecting environmental sustainability in the selected manufacturing firms of Bangladesh.
2. To examine the awareness of the top level executives, in one hand and on-executives badly affected by environmental factors on the other hand, regarding environmental sustainability in Bangladesh.
3. To identify the indicators of sustainable investment in the context of the manufacturing firms of Bangladesh.
4. To analyze the importance of environmental sustainability factors in case of the manufacturing firms of Bangladesh.
5. To examine the impact of sustainable environment on value of the firm.

2. Literature Review

A number of researchers had conducted research studies on environmental issues in different manners. The reviews of the past studies are essential for building up basis as well as hypothesis on any research study. The following studies are reviewed in this regard.

UCL(2011-2021), White paper was published and established a framework to tackle the environmental impacts of the Institution's operations (e.g. carbon emissions, water use, waste generated, materials procured and consumed, impact on biodiversity, travel and transport) in the context of supporting and enhancing the Institution's core academic activities. Indeed, it is arguably the work that is undertaken by UCL's academic community, which has the greatest impact on sustainability (for example, by addressing issues of global health, poverty and equality, and sustainable living).

HafijUllah et al (2013) revealed that on an average sample companies disclosed 8.53 (15.23%) of the expected information in their annual reports and environmental disclosure volume and total asset of the companies are significantly correlated. The study opined that companies of Bangladesh are disclosing very inadequate environmental information in their annual reports. This study is expected to play an important role in creating consciousness among the users and preparers in disclosing more environmental information in annual reports.

In the light of preceding studies, it is observed that a few studies have been conducted as regards of sustainable environment related to sustainable investment. Thus, it can be said that a major research gap is seen on this issue in the context of Bangladesh. However, we hope this present study is an endeavor to fill existing research gap to some extent.

Dipakde et al 2012 in their study expressed that **e**nvironment is a broad concept encompassing the whole range of diverse surroundings in which they perceive, experience and react to events and changes. It includes the land, water, vegetation, air and the whole gamut of the social order. It also includes the physical and ecological environment. It concerns people's ability to adapt both physically and mentally to the continuing changes in environment. In its natural condition, the environment of any region is in a state of dynamic equilibrium.

Sarkis et al (2012) found out the important factors and a decision framework incorporating economic, environmental and social aspects within a built environment context sets the stage whose overall objective is to aid a decision maker in selecting the sub-contractors that can most sustainably contribute to a construction project. In their evaluation of the built environment they introduce an extension to the ecological modernization theory at the organization level which they term sustainability modernization theory.

Australian Govt. (2012), Environmental Sustainability Policy, Department of Human Services reported that the Environmental Sustainability Policy is a comprehensive policy that designed to improve performance and mitigate risk for high risk environmental aspects identified in the risk assessment. Whereas, the department's Environmental Policy Statement is a high level commitment to stakeholders that the department complies with its legal obligations, strives to minimize pollution, and applies a systematic environmental management approach.

Montero et al (2012) in their study revealed the effects of environmental performance on the generation of firm value from Dow Jones Sustainability Index Europe. The expected results, taking into account our hypotheses, should show a positive relationship between the generation of value and the environmental performance.

Vijfvinkel et al (2011) focused on the relationship between environmental sustainability and the financial performance of SMEs in terms of profit development and revenue development. They used a unique dataset of 337 Dutch and Chinese firms. The results suggest a significant positive association between environmental sustainability and firm performance.

Roy (2008*)* in his research paper mentioned that the International Institute for Sustainable Development contributes to sustainable development by advancing policy recommendations on international trade and investment, economic policy, climate change, measurement and assessment, and natural resources management.

Grierson (2008) in his study found that in order to achieve sustainability, there are mandatory minimum levels of performance across 7 key issues: Water efficiency, Surface water management, Site waste management, Household waste management, Use of materials, Lifetime homes and Energy efficiency.

Kuniko Fujita and Richard Child Hill (2007) focused on Tokyo Metropolitan Government (TMG) programs to reduce waste and especially greenhouse gases. They also examine how TMG's environmental efforts have been shaped by local politics and by the

city's relations with the central state. Tokyo's environmental efforts are impressive but they still fall far short of ecological sustainability.

ShafiulAlam et al (2007) in their study examined that the relationship between per capita income (GDP) and carbon emissions (CO_2) in Bangladesh during the period 1971-2006. It is found that income and carbon emissions are co-integrated in the long run. To supplement the findings of co-integration analysis, this paper assessed that the causal relationship using Granger causality test and funds strong evidence of unilateral causality running between income and carbon emissions (CO_2) in the long run.

Mokaddem et al (2005) in their study attempted to focus on some of the issues and problems related to poverty and sustainable development in Bangladesh from the perspective of environmental protection and ecological balance. It has been argued that poverty alleviation and environmental protection are in harmony to reinforce sustainable development. This paper is an attempt to analyze the development scenario that aims at reducing poverty.

Narula et al (2003) in their study made a brief evaluation of the trends in the internationalization of innovative activities. They provided taxonomy of R&D internationalization strategies and discuss the main relevant theoretical and empirical issues, before discussing the centripetal and centrifugal forces underlying the nature and evolution of cross border innovation. They addressed the issue of international technology partnering as a key strategy that is complementary to the internationalization of innovative activities through internal means, before raising important policy dimensions and directions for future research that derive from these debates.

Fien et al (1996) in their study have expressed that the crisis of sustainability, the fit between humanity and its habitat, is manifest in varying ways and degrees everywhere on earth. It is not only a permanent feature on the public agenda; for all practical purposes it is the agenda. No other issue of politics, economics and public policy will remain unaffected by the crisis of resources, population, climate change, species extinction, acid rain, deforestation, ozone depletion, and soil loss. Sustainability is about the terms and conditions of human survival, and yet we still educate at all levels as if such crisis existed.

3. Methodology of the Study

3.1. Research Goal

In this survey my aim to present the relationships between several variables including Sustainable Environment–A Prerequisite for Sustainable Investment. To test the propositions, a field survey using questionnaire was conducted.

3.2. Sample and Data Collection

For the pilot study, a survey was conducted to obtain quantitative data for statistical testing of the hypotheses. In the research, authors have selected some manufacturing industries enlisted under Dhaka Stock Exchange. Out of these total 145 manufacturing firms, merely 20 firms representing 13.80 percent were selected from the various sectors during 2010-2015 for the study purpose. The primary data are collected from the original sources of data; whereas the secondary data are gather from the annual reports of the sample firms.

There have been applied the following statistical tools and techniques to quantify, analyze and evaluate the data through: **Models, Mean** (Weighted Average), Percentage, Table, Figure, **Pearson Correlation** and **Regression** with **ANOVA** with the help of **SPSS** (Statistical Program for Social Science) etc.

It can be said that value of the firm (VF) is a function of cost of goods sold (CGS), sales revenue (SR), net income (NI), return on investment (ROI), return on equity (ROE), dividend payout (DP) and net asset (NA). In order to test the null hypothesis, the following model has been developed by using Ordinary Least Square (OLS) method.

$$\textbf{Model: } VF = \beta_0 + \beta_1 SR + \beta_2 NI + \beta_3 ROI + \beta_4 ROE + \beta_5 DP + \beta_6 NA + \ldots\ldots\ldots\ldots + e$$

4. Analyses and Results

4.1. Identifying Factors Affecting Environmental Sustainability

Corporate managers and government leaders need to identify the factors that present challenges to environmental sustainability. There are various sources of environmental pollution, such as vehicles, industries, pesticides, deforestation etc. These include air pollution by vehicles and industries, water pollution by industrial waste and residential sewage, soil pollution by dumping of garbage, radiation pollution by leakage from nuclear plants, noise pollution by vehicles in heavily populated areas or by supersonic air jets and heavy engineering units. Most of the pollutions are caused by manufacturing mills and industries.

4.2. Examining Awareness of the Executives of Manufacturing Firms

It is needless to say that the importance of sustainable environment is universal in our daily life to survive in the world. Bangladesh has an agro-based economy with a plenty of natural resources. The economy has been continuously moving from agricultural base to industrial base. Bangladesh is threatened by both natural hazards and anthropogenic mismanagement and over-exploitation ***(Rahman et al 1994)***.The industrial sector in Bangladesh is still relatively small. The important sectors are Textiles, leather (tanneries), Food, sugar, beverages and tobacco, Chemicals, petroleum and fertilizer; iron and steel, distilleries ,Rubber and plastics, Paper and pulp, jute, cement factories, Pharmaceutical, insecticide, petroleum refinery, paint and ink formulation and printing, battery manufacturing, coal mining etc. They all are to some extent polluting the environment of Bangladesh through their manufacturing process. For

example, the industry effluents cause air pollution, pharmaceutical and allied industries creating chemical hazards affecting human health, plastic and rubber industries are causing land polluted and consequently land fertility is decreasing.

The main environmental issues and problems of Bangladesh are population growth, natural hazards, environment pollutions, agricultural lands, water etc. With the increase of population the total consumption is increasing. As such, more and more industries are established. Due to the lack of regulations, these industries are to some extent polluting the environment of the country by producing waste materials. Most of the manufacturing firms produce wastes. There is an impact on total environment through the entire cycle of raw materials exploration, extraction, transformation into products, energy consumption, waste generation and even the use and the final disposal by consumers. Wastes also adversely affect the ecological balance not only in the industrialized nations but also in most underdeveloped and developing countries as well. Unfortunately, Bangladesh is one of the overpopulated countries in the world. The industrial development is far away from the desired level without taking environmental considerations. Therefore, the situation shows that there is a crying need of environmental protection by the initiators of the manufacturing firms in Bangladesh.

At this portion, it is essential to examine the awareness of the respondents in respect of the factors affecting sustainable environment in their firms. The table 01 presents the pictures in this regards.

Total Respondents, N=60										
SL	**Specific Factors**	**HA**	**A**	**SA**	**N**	**SUA**	**UA**	**HUA**	**WAM**	**Rank**
1	Energy Use and CO2 emissions	26	19	11	4	0	0	0	6.11	2
2	Waste Creation	24	18	12	6	0	0	0	6.00	3
3	Urbanization &Industrialization	16	24	8	12	0	0	0	5.73	5
4	Greenhouse Gases Emissions	9	15	12	13	11	0	0	4.96	8
5	Chlorofluorocarbons(CFC)	6	14	18	12	10	0	0	4.90	10.5
6	Noise & Sound	20	22	12	6	0	0	0	5.93	4
7	Light & Thermal	10	15	18	11	6	0	0	5.20	7
8	Visual pollution	8	12	16	14	10	0	0	4.90	10.5
9	Destruction of biodiversity	7	13	15	20	5	0	0	4.95	9
10	Destruction of nuclear	5	15	8	25	7	0	0	4.76	13
11	Climate Change	28	32	0	0	0	0	0	6.46	1
12	Ecosystem & Population	13	17	10	15	5	0	0	5.30	6
13	Solar radiation	6	10	14	25	5	0	0	4.78	12
14	Temperature variation	3	15	12	20	5	5	0	4.60	15
15	Water, Air and Soil Issues	8	12	10	15	10	5	0	4.63	14

Table 1: Awareness of the Executives Regarding Factors Affecting Sustainable Environment
Source: Opinion survey
Note: HA = Highly Aware, A = Aware, SA = Somewhat Aware,
N = Neutral, SUA = Somewhat Unaware, UA = Unaware, HUA = Highly Unaware.

The **table-1** portrays that in respect of awareness of the top level personnel of the corporate manufacturing firms', climate change has been highly aware by the relevant respondents that has been ranked first position with 6.46 WAM followed by energy use and CO_2 with 6.11 WAM, waste creation with 6.00 WAM, noise and sound with 5.93 WAM, urbanization & industrialization with 5.73 WAM, ecosystem & pollution with 5.30 and so on. The table also reveals that all the factors special in the above table have been of much awareness to most of the respondents because WAM of none of the factors have been below 4.60 in the seven point scaling.

4.3. Identifying Indicators of Sustainable Investment

The following are the indicators that should consider during the short term or long term investments and these factors affecting sustainable investments(i) Political Factor (ii) Economic Factor (iii) Social and Cultural Factor (iv) Technological Factor (v) Environmental Factor (iv) Legal Factor (vii) Natural Factor (viii) Demographic Factor (ix) Environmental, Social and Corporate Issues (x) Ethical Issues

Factors	**Involved With**
Political	FDI , National & International trade, commerce and investment etc.
Economic	Interest rate, Tax rate, Exchange rate, Inflation rate, Unemployment rate,GDP growth rate etc.
Demographic	Number of population, Ageing of population, Language, Food habit, Source of Income etc.
Technological	Innovation, New product development, Information & Communication, Inter & Intra net etc.
Natural	Global warming, Disaster, Cyclone and Climate change etc.
Cultural	Social values, Perceptions, Preference, Belief & Attitude and Behavior etc.
Environmental	Agriculture, Pollutions, Ecosystem, Land degradation and Biodiversity etc.
Legal	Rules & Regulations, Bureaucracy and Regulatory etc.
Ethical Issues	Transparency, Accountability, Right & Wrong and Morality etc.
Environmental, Social and Corporate Issues	Sustainable development, Welfare , Humanitarian and CSR, etc

Table 2

4.4. Analyzing Importance of Environmental Sustainability Factors by the Executives

Environmental sustainability is the capacity of an ecosystem's natural resources to endure. It involves how biological systems remain varied and productive with the passing of time. Environmental sustainability is related to the human population's well being but is threatened by human activities such as deforestation, pollution and over-exploitation of natural resources. Environmental sustainability is important because, our food and water come from the environment. If we use too much of it, it will run out and if itruns out, there will be no way to produce furthermore. Therefore, followings are the reasons to be significant of sustainable environmental factors:

Total Respondents, N=60										
SL	**Specific Factors**	**MI**	**I**	**SWI**	**N**	**SWUI**	**UI**	**MUI**	**WAM**	**Rank**
1	Political Factor	12	18	15	10	5	0	0	5.36	8
2	Economic Factor	23	27	7	0	0	0	0	5.96	2
3	Social And Cultural Factor	16	20	15	5	4	0	0	5.71	5
4	Technological Factor	10	14	20	10	6	0	0	5.20	9
5	Environmental Factor	19	21	12	8	0	0	0	5.85	3
6	Legal Factor	17	13	22	8	0	0	0	5.62	6
7	Natural Factor	13	25	11	9	12	0	0	6.13	1
8	Demographic Factor	11	24	16	7	2	0	0	5.58	7
9	Environmental, Social and Corporate Issues	18	22	11	9	0	0	0	5.81	4
10	Ethical Issues	7	13	10	22	5	3	0	4.81	10

Table 3: Rate of Importance on Environmental Sustainability Factors by the Executives
Source: Opinion Survey
Note: MI = Most Important, I = Important, SWI = Somewhat Important,
N = Neutral, SWUI = Somewhat Un-Important, UI = Un-Important, MUI = Most Un-Important.

The table-3 shows that in case of the environmental sustainability factors, the natural factor has been ranked 1st position with weighted average mean 6.13 by the relevant respondents followed by economic factor with 5.96 WAM, environmental factor with 5.85 WAM, environmental, social and corporate issues with 5.81 WAM, social and cultural factor with 5.71 WAM and so on.

4.5. Analyzing Importance of Environmental Sustainability Factors by the Non-executives

It is also vital to know the rate of importance about environmental sustainability factors by the non-executives who usually reside near the industry areas namely entry level personnel. The following table shows the rate of importance towards environmental sustainability factors.

Total Respondents, N=60										
SL	**Specific Factors**	**MI**	**I**	**SWI**	**N**	**SWUI**	**UI**	**MUI**	**WAM**	**Rank**
1	Political Factor	10	15	20	10	5	0	0	5.25	6
2	Economic Factor	8	12	25	8	7	0	0	5.10	8
3	Social And Cultural Factor	12	16	20	5	7	0	0	5.35	5
4	Technological Factor	6	15	25	10	4	0	0	5.15	7
5	Environmental Factor	15	25	10	5	5	0	0	5.67	2
6	Legal Factor	5	15	15	10	5	10	0	4.25	10
7	Natural Factor	18	22	10	5	5	0	0	5.71	1
8	Demographic Factor	12	25	13	6	4	0	0	5.58	3
9	Environmental, Social and Corporate Issues	15	20	10	10	5	0	0	5.50	4
10	Ethical Issues	9	16	15	10	5	5	0	4.98	9

Table 4: Rate of Importance on Environmental Sustainability Factors by the Non-executives
Source: Field Survey

After examining over the opinions of the non-executives, it is revealed that most of the non-executives respondents have assigned the first rank to natural factor with WAM of 5.71 followed by environmental factor with WAM of 5.67, demographic factor with WAM of 5.58, environmental, social and corporate issues with WAM of 5.50, social and cultural factor with WAM of 5.35and so on. It is observed that the rates of importance between executives and non-executives are identical in case of natural factor only but in case of other factors, the rankings of importance differ.

4.6. Influence of Sustainable Environment on Value of the Firm

It is needless to say that sustainable environment is a crucial aspect for developing, innovating and implementing of sustainable investment under global perspective. Sustainable environment and in turn sustainable investment produces impact on value of the firm. Such influence may be measured both qualitatively and quantitatively. The qualitative influence is based on the opinions of the executive respondents which have been selected for the study under 7 point Likert scaling.

Total Respondents, N=60									
Factors	**HI**	**I**	**SWI**	**N**	**SWUI**	**UI**	**HUI**	**WM**	**Rank**
Sales revenue	42	14	4	0	0	0	0	6.63	1
Net income	40	15	5	0	0	0	0	6.58	2
Return on investment	35	16	9	0	0	0	0	6.43	4
Return on equity	32	14	10	4	0	0	0	6.23	5
Dividend payout ratio	22	12	16	10	0	0	0	5.76	11.5
Net assets	24	16	12	8	0	0	0	5.93	7
Interest rate	20	18	10	12	0	0	0	5.76	11.5
Tax rate	28	15	13	4	0	0	0	6.11	6
Inflation rate	25	10	15	10	0	0	0	5.83	8.5
Addition to capital	18	22	12	8	0	0	0	5.83	8.5
Economic value added	16	26	8	10	0	0	0	5.80	10
Total investment	38	12	10	0	0	0	0	6.46	3

Table 5: Influences of Sustainable Environment on Value of the Firm
Source: Field Survey
Note: Weights = 1 for Highly Un influential, 2 for Un influential, 3 for Somewhat Un-influential, 0 for Neutral, 5 for Somewhat Influential, 6 for Influential, 7 for Highly Influential.

The table 5 shows that the sustainable environmental and investment factor namely sales revenue has been placed the first position with 6.63 WM by the relevant respondents followed by net income with 6.58 WM, total investment with 6.46 WM, return on investment with 6.43 WM, return on equity with 6.23 WM and so forth. All these data signify that in the opinions of the executive respondents, the sustainable environmental and investment factors mentioned in the above table have influenced to the value of the firm significantly.

At this phase, it is imperative to measure the influence of sustainable environmental and investment factors quantitatively on the value of the firm. To this end, at first, the relationship between value of the firm and each of the independent variables viz. sales revenue, net income, return on investment, return on equity, dividend payout and net asset needs to be examined.

The correlation table 6 indicates that r between VF and SR, VF & NI, VF & ROI, VF & ROE, VF & DP and VF & NA has been calculated as 0.975, 0.589, 0.235, 0.186, -0.247 and 0.790 respectively. The table 6 also supports that the values r in all the cases have been significant from 0.000 levels to 0.064 levels.

In order to measure the combined impacts of the selected independent variables on VF, the following regression model has been developed taking the un-standardized coefficients as shown in appendix 02:

Model: $VF = \beta_0 + \beta_1 SR + \beta_2 NI + \beta_3 ROI + \beta_4 ROE + \beta_5 DP + \beta_6 NA + \ldots\ldots\ldots\ldots + e$

$= 2596.619 + 1.177SR - 0.004NI + 77.829ROI - 0.143.102ROE - 35.702DP + 0.593NA + \ldots\ldots\ldots\ldots\ldots\ldots\ldots + e$

From the Model, it is evident that the coefficients of SR, ROI and NA tend to have positive impacts on value of the firm. On the other hand, the coefficients of NI, ROE and DP tend to have negative impacts on value of the firm. The model also reveals that except NI all the independent variables namely SR, ROI, ROE, DP and NA are statistically significant at 0.000, 0.043, 0.000, 0.000 and 0.000 percent levels respectively. The model summarizes that the multiple coefficients determinations here (r^2) influence the value of the firm to the extent of 98.70 percent. This signifies that the independent variables SR, NI, ROI, ROE, DP and NA have influenced the dependent variable VF almost hundred percent.

5. Conclusion and Policy Implementations

The current study has examined the awareness of top level executives of the selected firms as well as non-executives residing in an around the factory premises of the respective mills towards the major factors affecting sustainable environment, the rates of importance of these factors assigned by the respondents, indicators of sustainable investment and sustainable environment and impact of sustainable environment on sustainable investment in the sample firms. The study has revealed that the opinions of the executives and non-executives respondents have varied as regards their awareness towards factors of sustainable environment. As for example, most of the executive respondents have been more aware about the climate change factor whereas most of the non-executives have been much more aware of energy use and carbon emissions. The opinions of the executive and non-executive respondents have also varied as regards the rates of importance assigned by them like almost all the executive respondents have attached much more importance to the economic factor, while the non-executive respondents have endorsed environmental factor. The impacts of sustainable environment on value of the firm have been measured in this study both qualitatively and quantitatively. According to

qualitative measures, sales revenue has been the highly influential factor; whereas in terms of quantitative measures, it is observed that all the selected independent variables have influenced to the extent of 98.70 percent on value of the firm.

In the findings of this study the following recommendations maybe put forward for proper implementation:(i)The existing awareness of both the executives and non-executives of the selected firms need to be retained and if possible should be increased more. To this end, the seminars, symposium, workshop, conference and group discussion programs etc. should be arranged on sustainable environment on regular basis. (ii)The study has shown the highest impacts equivalent to 98.70 percent of the selected independent variables on value of the firm. As a result, the sustainable environmental factors as considered in the study need special attention concern respective firm's authorities. (iii) Moreover, the ministry of industry, ministry of environment and forest should formulate proper sustainable environmental policies so that the adverse impacts can be minimized to a great extent. In such a context, proper implementations of these policies need to be implemented by authorities of the respective corporate firms.(iv) The regulatory authorities namely ministry of industry and ministry of environment and forest should monitor the proper implementations of the environmental rules, regulation and policies on a regular basis. It is needless to be mentioned here that there is enough scope to undertake further research study on this vital issue to preserve the existing environment for the benefits of mankind, as a whole. A separate study on the impacts of sustainable environment on shareholders' wealth and relationship between sustainable environment and sustainable investment maybe conducted.

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Appendices

Appendix: **1**								
		VF	**SR**	**NI**	**ROI**	**ROE**	**DP**	**NA**
VF	Pearson Correlation	1	.975**	.589**	.235*	.186	-.247*	.790**
	Sig. (2-tailed)		.000	.000	.019	.064	.013	.000
	N	100	100	100	100	100	100	100
SR	Pearson Correlation	.975**	1	.600**	.346**	.327**	-.230*	.701**
	Sig. (2-tailed)	.000		.000	.000	.001	.021	.000
	N	100	100	100	100	100	100	100
NI	Pearson Correlation	.589**	.600**	1	.275**	.215*	-.123	.463**
	Sig. (2-tailed)	.000	.000		.006	.032	.221	.000
	N	100	100	100	100	100	100	100
ROI	Pearson Correlation	.235*	.346**	.275**	1	.803**	.065	.098
	Sig. (2-tailed)	.019	.000	.006		.000	.521	.333
	N	100	100	100	100	100	100	100
ROE	Pearson Correlation	.186	.327**	.215*	.803**	1	-.152	.069
	Sig. (2-tailed)	.064	.001	.032	.000		.130	.496
	N	100	100	100	100	100	100	100
DP	Pearson Correlation	-.247*	-.230*	-.123	.065	-.152	1	-.103
	Sig. (2-tailed)	.013	.021	.221	.521	.130		.309
	N	100	100	100	100	100	100	100
NA	Pearson Correlation	.790**	.701**	.463**	.098	.069	-.103	1
	Sig. (2-tailed)	.000	.000	.000	.333	.496	.309	
	N	100	100	100	100	100	100	100
**. Correlation is significant at the 0.01 level (2-tailed).								
*. Correlation is significant at the 0.05 level (2-tailed).								

Table 6: Correlations

Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	NA, ROE, DP, NI, SR, ROI[b]	.	Enter
a. Dependent Variable: VF			
b. All requested variables entered.			

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.994[a]	.987	.987	1527.3090851
a. Predictors: (Constant), NA, ROE, DP, NI, SR, ROI				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17078968530.585	6	2846494755.097	1220.272	.000[b]
	Residual	216938592.863	93	2332673.042		
	Total	17295907123.448	99			
a. Dependent Variable: VF						
b. Predictors: (Constant), NA, ROE, DP, NI, SR, ROI						
Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2596.619	384.075		6.761	.000
	SR	1.177	.027	.876	44.294	.000
	NI	-.004	.011	-.005	-.333	.740
	ROI	77.829	37.869	.044	2.055	.043
	ROE	-143.102	19.282	-.155	-7.421	.000
	DP	-35.702	8.569	-.054	-4.166	.000
	NA	.593	.056	.179	10.594	.000
a. Dependent Variable: VF						

Table 7: Regression Model