ISSN 2350-8795 (Print)
The Journal of Nepalese Business Studies Vol. XVI No. 1 December 2023 ISSN 2676-1238 (Online)
(A Peer-Reviewed, Open Access Journal)

Impact of Environmental, Social and Governance Factors on Investment Decision of Investors in Nepal

Bibek Karmacharya*

DOI: https://doi.org/10.3126/jnbs.v16i1.62377

Received on 27 June 2023 *Accepted on 3 November 2023*

ABSTRACT

In recent years, there has been a growing emphasis on the impact of Environmental, Social, and Governance (ESG) factors in investment decision-making. This study explores the relationship between ESG factors and investment decisions, focusing on 392 individual investors in Pokhara, Nepal. A survey-based research design was employed, analyzing data through Confirmatory Factor Analysis and path analysis. The results indicated a significant positive impact of social and governance variables on investment decisions, whereas environmental factors showed no significant influence. Investor awareness was found to moderate the relationship between governance factors and investment decisions, emphasizing its importance. The independent variables explained approximately 69 percent of the variation in investment decisions. The study's findings underscore the significance of ESG factors in guiding investment decisions. This research offers valuable insights for brokerage houses and companies, facilitating the development of investment products tailored to individual investors' ESG preferences. These efforts contribute to promoting sustainable investment practices in Nepal.

Keywords: ESG factors, investment awareness, investment decision, structural equation modeling

1. INTRODUCTION

In the modern era, the investment scenario has seen a deep and transformative evolution, challenging predictable patterns of assessing corporate value. This remarkable shift, as underscored by scholarly works like Mehwish et al. (2022), signals a variation from the biased focus on financial performance metrics and proclaims a new era in which investors and companies have broadened their perspective to encompass environmental, social, and governance (ESG) factors. The fundamental inspection conducted by Almeyda and Darmansya (2019) has precisely dissected these dimensions, revealing that ESG criteria now serve as a critical lens through which investors assess a company's broader social impact and ethical foundations. This contemporary viewpoint highlights

* Mr. Karmacharya is an Assistant Professor at School of Business, Pokhara University.
Email: bibekkarme@gmail.com

a fundamental truth: a company's worth is no longer only referred to its balance sheets and profit margins but is essentially linked to its commitment to sustainable practices, social responsibility, and principled governance.

Environmental factors pertain to a company's impact on the natural environment, including its resource usage, emissions, waste, and energy efficiency. In today's world, businesses must be mindful of their carbon footprint, water usage, and the impact of their actions on natural habitats (Chouaibi et al., 2022). Social factors, on the other hand, relate to a company's impact on society, encompassing its relationships with employees, customers, suppliers, and local societies. Social responsibility has become a pivotal factor in investors' decision-making processes (Zhang & Liu, 2022). Investors now seek companies that prioritize diversity, inclusion, employee welfare, and have a positive impact on the communities they operate (Sultana et al., 2017). Governance factors include a company's management practices, board structure, and ethical standards, which are essential for a company's long-term sustainability and financial performance (Chouaibi et al., 2022).

Investors are gradually incorporating ESG factors into their investment decisions, acknowledging the significance of responsible practices and sustainability in the companies they invest in (Sultana et al., 2017). Both institutional investors, such as pension funds, and individual investors recognize ESG as a critical component of their investment strategies, aiming to align their investments with their values and principles. Companies that excel in ESG are seen as more sustainable, well-managed, and better equipped to handle market uncertainties and risks (Meher et al., 2020). However, the current scenario of ESG for Nepalese investors in the stock market is relatively new and less developed. Despite this, there is a rising appreciation of the importance of ESG factors, and Nepalese investors are progressively seeing these factors when making investment decisions. Nonetheless, the research on how ESG factors effect individual investors' decisions in Nepal is limited, and there is a crucial gap in the literature in this regard.

To fill the gap in the literature this research aims to investigate the extent to which ESG factors affect investment decisions with investor awareness as the moderating variable among individual investors in Nepal. To shed light on the impact of ESG factors on investment decisions of individual investors in Nepal with investor awareness as the moderating variable, this study addresses the following research questions) How do ESG factors impact the investment decisions of individual stock investors in Nepal? 2) What is the role of investor awareness as a moderating variable in the relationship between ESG factors and investment decisions of individual investors in Nepal?

2. LITERATURE REVIEW

ESG factors have garnered increasing importance among investors worldwide due to the growing awareness of environmental and social issues and their impact on companies' long-term financial performance (Sultana et al., 2017). Integrating ESG factors into investment decision-making enables investors to make informed choices that align with their values and promote sustainable business practices. The literature on ESG factors can be categorized into three main components: environmental factors, social factors, and governance factors.

Environmental factors are critical components of ESG investing that assess a company's impact on the natural environment (Senadheera et al., 2021). Studies from different countries have shown that investors consider environmental issues as influential factors when deciding where to

invest. For instance, Indian investors prioritize environmental issues, while shareholders in Japan and superannuation fund members in Australia also care about a company's environmental policies. Conversely, companies with poor environmental practices or policies are less likely to attract investments, as seen in studies conducted in France (Kurtishi-Kastrati, 2013). This leads to the foremost hypothesis of the study:

H1: There is a significant positive impact of environmental factors on the investment decisions of individual stock investors in Nepal.

Social factors in ESG pertain to a company's influence on society and its stakeholders (Huang, 2019). These factors encompass workplace safety, human rights, labor standards, diversity, health, and access to medicine, among others. Studies in developed countries have shown that social factors play a dominant role in ESG consideration for investors. However, it remains unclear whether investors in developing countries like Nepal consider social factors in their investment decisions. Research in Australia indicates that social factors are favored over environmental and governance issues, emphasizing the importance of community-employee relations, worker and product safety, and human rights. Thus, the second hypothesis is formulated:

H2: There is a significant positive impact of social factors on the investment decisions of individual stock investors in Nepal.

Governance factors in ESG evaluate a company's management and oversight practices, together with board composition, executive compensation, shareholder rights, and transparency (Odell & Ali, 2016). Robust corporate governance practices are vital for investors, who tend to avoid companies with weak governance and prefer those with good governance. Notably, corporate scandals like Enron and Tyco have heightened investor demand for better governance practices (Zwaan et al., 2015). Therefore, the third hypothesis is proposed:

H3: There is a significant positive impact of governance factors on the investment decisions of individual stock investors in Nepal.

Investment decision-making involves assessing various opportunities and selecting specific stocks or portfolios (Singh, 2012). Investors analyze investment options using fundamental and technical analysis, as well as their judgment. ESG investing has gained importance, considering non-financial dimensions like environmental, social, and governance practices. Challenges in incorporating ESG factors include the lack of standardized and consistent data, as well as misunderstandings that sustainable investments sacrifice financial returns. Contrarily, studies indicate that companies with strong ESG performance can outperform competitors in the long run (Kotsantonis et al., 2016).

The ESG dimension's importance in investment decisions is recognized, with investors examining firms' performance on ESG issues in addition to financial returns (Naveed et al., 2020). The level of investor awareness can moderate the impact of ESG factors on investment decision-making. Investors with higher awareness of ESG factors are more likely to consider them in their decisions and have a deeper understanding of their impact on financial performance and risk. On the other hand, investors with lower awareness may not give ESG factors as much weight, leading to suboptimal investment decisions that do not fully consider ESG considerations (Boffo & Patalano, 2020). The moderating effect hypothesis for the study can be stated as follows:

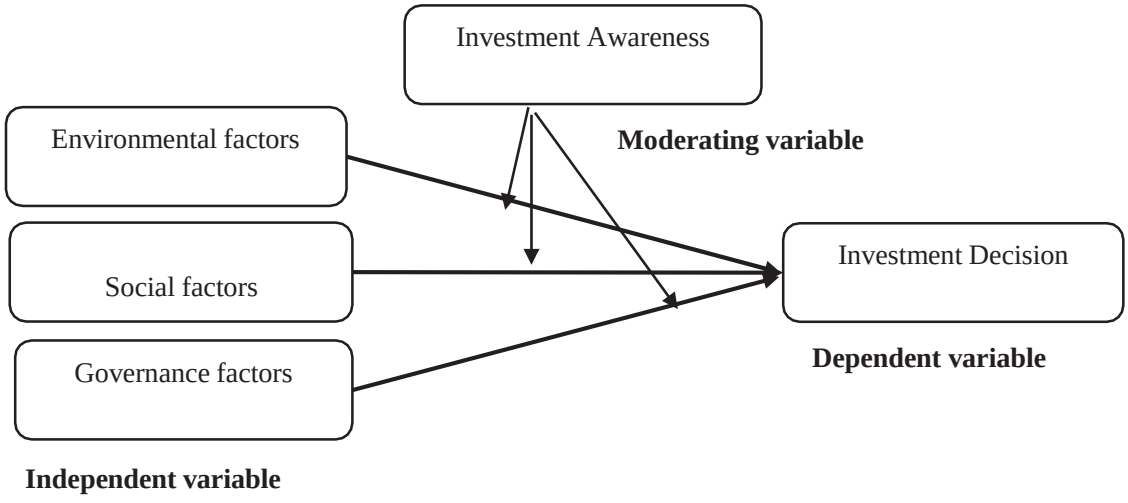
H4: Investment awareness moderates the relationship between ESG factors (environmental factors, social factors, and governance factors) and the investment decisions of individual stock investors in Nepal.

Theoretical Framework

Based on past empirical studies and the above hypothesis, the theoretical framework of the study is as follows

Figure 1

Theoretical Framework Showing the Relationship Between ESG Factors and Investment Decision



Adapted from: Sultana et. al., (2017).

3. RESEARCH METHODOLOGY

The research design for this study is descriptive and explanatory, aiming to explore and analyze the relationship between ESG factors and investment decision-making of individual stock investors in Nepal. The study adopts a survey utilizing a structured questionnaire administered to individual investors in the share market through brokerage houses in Pokhara. This design allows for data collection from a diverse group of individual investors and provides valuable insights into their investment decision-making process. By employing a survey-based research design, the study generates empirical evidence on the influence of ESG factors on investment decisions among individual investors in Nepal.

The population of interest for this study encompasses all individual investors who invest in the share market through brokerage houses in Pokhara, Nepal. The use of purposive sampling in this study was a sensible choice, as it enabled the researchers to target a specific group of individual investors in Nepal, aligning closely with the research objectives and ensuring the collection of

relevant data for a comprehensive understanding of the impact of ESG factors on investment decisions, with investor awareness as a moderating factor. The sample size is determined using a sample size estimation formula assuming the level of significance to be 5 percent and the error margin to be 5 percent, the desired sample is 384 (Barlett et al., 2001). The study has incorporated a slightly higher sample of 392 participants to increase the statistical power of the study and hence enhance the accuracy of the findings.

Data collection techniques primarily involve a structured questionnaire designed to collect data on investment decisions, perceptions of ESG factors, and attitudes towards sustainable and socially responsible investing. The study's independent variables are environment factors (7-items), social factors (8-items), and governance factors (9-items) factors (ESG) to govern the investor's preference for which elements received more value while investing in the company using a 5-Likert scale. The survey for ESG is referenced from the research by Sultana et al., (2018). The questionnaire used is prepared and altered under the ESG elements index from the valued Thomson Reuters (2013) and the United Nations Global Compact (UNGC, 2004). To measure the investment decision of the investors, 5-point Likert scale questionnaire is adapted from the Mayfield et al. (2008) which is a modified version of five-point Likert scale. To measure the investment awareness of investors, nominal scale was used with aware and unaware option. The operationalization of the variable used in the study is indicated in the appendix.

To ensure validity, the questionnaire is designed based on theoretical models from former studies, reflecting factors affecting investment decisions accurately. Validity is assessed using convergent validity, demonstrating the relationship between two measures intended to measure the same construct, and discriminant validity, showing that unrelated measures are indeed unrelated. Internal reliability is estimated using Cronbach's Alpha, and confirmatory factor analysis (CFA) is utilized to measure convergent validity. The study relies on reliable sources for references, such as scientific journals, books, or websites of professional bodies.

Data analysis techniques include descriptive statistics, CFA, and Path analysis. CFA allows for testing the accuracy of measured variables in representing constructs, while SEM explores the underlying structural relationships between independent and dependent variables. Moderation analysis is also conducted to examine how the relationship between ESG factors and investment decisions changes based on the moderating variable of investment awareness. This analysis provides insights into the role of investment awareness in investment decision-making among individual investors in Nepal.

4. RESULTS AND DISCUSSION

Respondent Profile

The demographic characteristics of stock investor visiting several brokerage houses in Pokhara valley is presented as gender, age, marital status, education qualification, working experience, monthly income and duration of investment. The evidence collected through the questionnaire regarding the demographic variables was recorded and analyzed in percent using SPSS. The summary of demographic characteristics of respondents has been presented in Table 1.

Table 1

Demographic Profile of Respondents

Demographic variables	Sub Categories	Frequency	Percent
Gender	Male	321	81.9
	Female	71	18.1
Age	Below 20 years	69	17.6
	Between 21and 30 years	138	35.2
	Between 31 and 40 years	98	25.0
	Between 41 and 50 years	66	16.8
	Above 50 years	21	5.4
Marital status	Married	98	25.0
	Unmarried	294	75.0
Education qualification	SEE	27	6.9
	Plus Two	72	18.4
	Bachelor	179	45.7
	Masters	110	28.1
	Others	4	1.0
Work experience	Below 3 years	165	42.1
	Between 3 and 5 years	84	21.4
	Between 6 and 10 years	67	17.1
	Above 10 years	76	19.4
Monthly income	Below Rs 10000	30	7.7
	Between Rs 10001 and 20000	112	28.6
	Between Rs 20001 and 30000	102	26.0
	Between 30001 and 40000	49	12.5
	Between 40001 and 50000	49	12.5
	Above Rs 50000	50	12.8
Duration of investment	Less than 1 year	91	23.2
	1-3 years	159	40.6
	4-5 years	61	15.6
	6-10 years	64	16.3
	Over 10 years	17	4.3

Source: Field Survey, 2023 and authors' calculation.

Table 1 offers a comprehensive synopsis of the demographic profile of the respondents. The first demographic variable is gender, which indicates that 81.9 percent of the respondents were male, while only 18.1 percent were female. This gender disparity might be due to the nature of the study, which could have attracted more male investor than females. The majority of the respondents

(35.2 percent) belonged to the age group of 21-30 years, followed by 25.0 percent between 31-40 years and 16.8 percent between 41-50 years. This indicated that majority of the investors investing in stock market is younger in age. The result of marital status displays that 75 percent of the respondents were unmarried, while 25 percent were married suggesting that unmarried investors are more risk taking and hence invest in stock market than their counterparts.

The majority of the respondents (45.7 percent) had a bachelor's degree, followed by 28.1 percent who had a master's degree. Only a small percentage of respondents had SEE (6.9 percent) and other qualifications (1.0 percent). The result of education qualification suggested that most of the investors are highly educated and used their knowledge while making investment in stock market. The result of working experience shows that 42.1 percent of the respondents had working experience of less than three years, followed by 19.4 percent who had experience of more than ten years. The result of monthly income shows that the majority of the respondents (28.6 percent) had a monthly income between Rs. 10,001-20,000.

Investor Awareness towards ESG Dimension

The investor awareness towards the ESG dimension is represented by Table 2. The table shows that most of the investor (84.4 percent) were aware of the ESG dimension i.e., environment, social and governance factors and the remaining 15.6 percent of the investor were unaware about the ESG dimension.

Table 2

Investor Awareness towards ESG Dimension

Investor awareness	Frequency	Percent
Aware	331	84.4
Unaware	61	15.6

Source: Field Survey, 2023 and authors' calculation

Reliability and Validity

Construct Reliability

Reliability is characterized by the degree of foundation and credibility of its conclusions. Cronbach's alpha and composite reliability were used to assess the scales' reliability. If the alpha and the CR are both more than 0.70, the construct is regarded as reliable (Simşek & Noyan, 2013). Based on actual evidence, all Cronbach's alpha values are greater than 0.70; the lowest value is 0.743 for environment factors and the highest value is 0.892 for social factors (Table 3). Additionally, the composite reliability of the model is greater than 0.70, with the social components having the highest reliability (0.927) and the environment elements having the lowest (0.786). Consequently, the reliability of the construct is clearly highlighted.

Table 3

Construct Reliability of Scale

Variables	Cronbach's Alpha	Composite reliability
Environment factors	0.743	0.786
Social factors	0.892	0.927
Governance factors	0.815	0.846
Investment decision	0.826	0.839

Source: Field Survey, 2023 and authors' calculation.

Construct Validity

The degree to which a concept is precisely quantified in a quantitative investigation is known as validity. Tables 4 and 5 display the concept validity scores for its two subcategories, convergent and discriminant validity. The model meets the suggested criterion of CR>0.70 and AVE>0.50, as indicated by the construct reliability table (Simşek & Noyan, 2013).

Table 4

Convergent and Discriminant Validity

Variables	Average variance extracted	Maximum shared variance
Environment factors	0.682	0.642
Social factors	0.701	0.653
Governance factors	0.738	0.698
Investment decision	0.725	0.681

Source: Field Survey, 2023 and authors' calculation.

Table 5

Square Root of AVE and Construct Correlation Analysis

Variables	Environment	Social	Governance	Investment decision
Environment	**0.826**			
Social	0.478	**0.837**		
Governance	0.522	0.495	**0.859**	
Investment decision	0.616	0.572	0.511	**0.851**

Source: Field Survey, 2023 and authors' calculation.

Furthermore, discriminant validity was confirmed by meeting the suggested criterion of MSV less than AVE and Square Root of AVE greater than Inter-construct correlation.

Common Method Bias using Latent Factor

Common method bias is a potential threat to the validity of research findings, which can arise when the measurement of constructs is affected by a single, common source of variance. Researchers can use a latent factor approach to detect and control for this bias by including a latent method factor in their analysis, which accounts for the common variance due to the method of measurement, and other latent factors that represent the constructs of interest. In this study common method bias using single common factor is checked by comparing standard regression weight of CFA model with and without common factor. The figure for common method bias using single common factor is given by Figure 2.

Figure 2

Common Method Bias using Single Common Factor

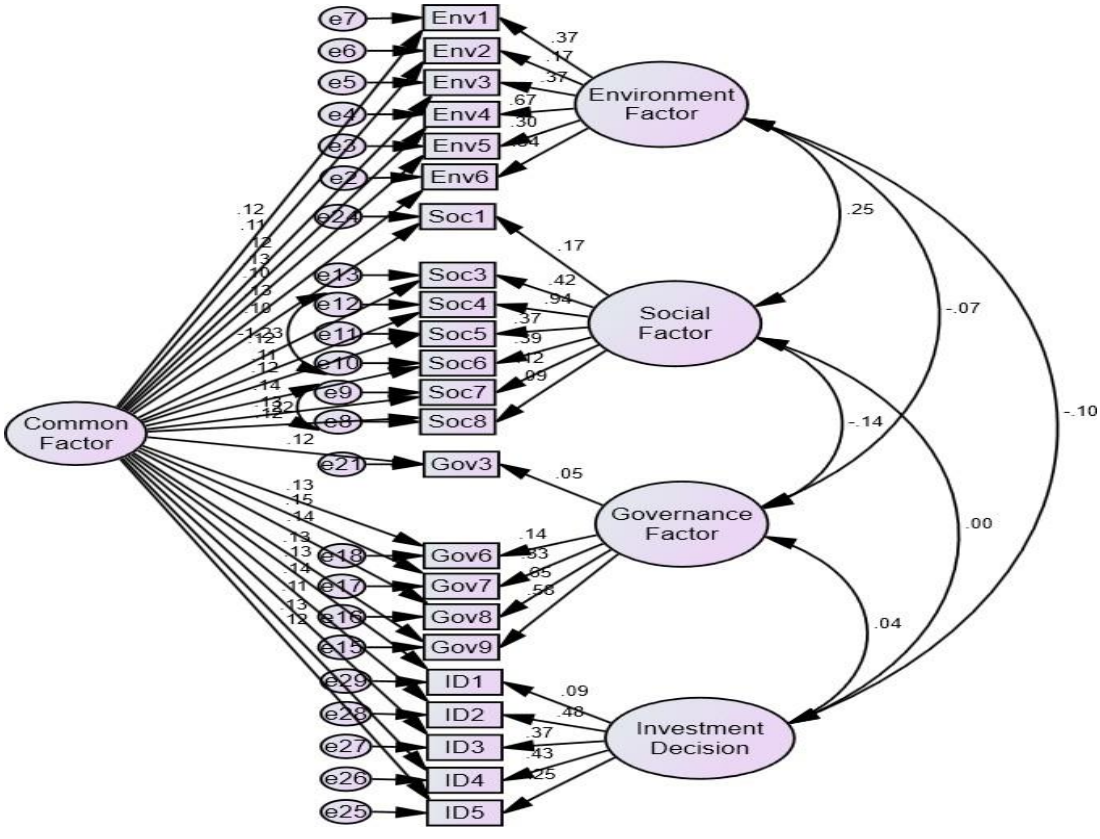


Table 6 indicate the result of comparison of standard regression weight of CFA model with and without common. As the difference value from the table is less than 0.2, this indicate that there is no common method bias in the data, hence we can proceed further for CFA (Serrano et al., 2018).

Confirmatory Factor Analysis

Confirmatory factor analysis is a statistical method that looks at the link between observed variables and their underlying latent factors in order to assess the validity of a proposed measurement model. In other words, CFA helps researchers to determine whether the data they have collected support the idea that a set of variables are measuring a particular construct or factor (Hair et al, 2010). In the context of the structural equation modeling methodology, CFA is often the first step in data analysis. SEM is a statistical approach used to model complex relationships between variables and latent factors, and it can be used to test a wide range of hypotheses about the relationships between variables. However, before researchers can conduct SEM, they must first establish the validity of their measurement model using CFA. In this study, the CFA was utilized to evaluate the validity of their measurement model using software AMOS (version 22), which is a popular tool for conducting SEM. To estimate the parameters of the model, a maximum likelihood estimator was used. The ML estimator is a commonly used method for estimating model

parameters, and it is often preferred over other estimation methods because it is unbiased and efficient under certain assumptions (Byrne, 2016).

Table 6

Standard Regression Weight of CFA Model with and without Common Factor

Relationship between Variable			Estimate without common factor	Estimate with common factor	Difference
Env6	<---	Environment_Factor	0.359	0.339	0.02
Env5	<---	Environment_Factor	0.32	0.298	0.022
Env4	<---	Environment_Factor	0.669	0.672	-0.003
Env3	<---	Environment_Factor	0.392	0.368	0.024
Env2	<---	Environment_Factor	0.197	0.173	0.024
Env1	<---	Environment_Factor	0.395	0.373	0.022
Soc8	<---	Social_Factor	0.113	0.092	0.021
Soc7	<---	Social_Factor	0.149	0.123	0.026
Soc6	<---	Social_Factor	0.43	0.387	0.043
Soc5	<---	Social_Factor	0.396	0.372	0.024
Soc4	<---	Social_Factor	0.908	0.944	-0.036
Soc3	<---	Social_Factor	0.441	0.421	0.02
Gov9	<---	Governance_Factor	0.579	0.576	0.003
Gov8	<---	Governance_Factor	0.664	0.65	0.014
Gov7	<---	Governance_Factor	0.362	0.334	0.028
Gov6	<---	Governance_Factor	0.169	0.137	0.032
Gov3	<---	Governance_Factor	0.08	0.054	0.026
Soc1	<---	Social_Factor	0.183	0.165	0.018
InvDec5	<---	Investment_Decision	0.264	0.25	0.014
InvDec4	<---	Investment_Decision	0.438	0.43	0.008
InvDec3	<---	Investment_Decision	0.368	0.371	-0.003
InvDec2	<---	Investment_Decision	0.525	0.478	0.047
InvDec1	<---	Investment_Decision	0.144	0.089	0.055

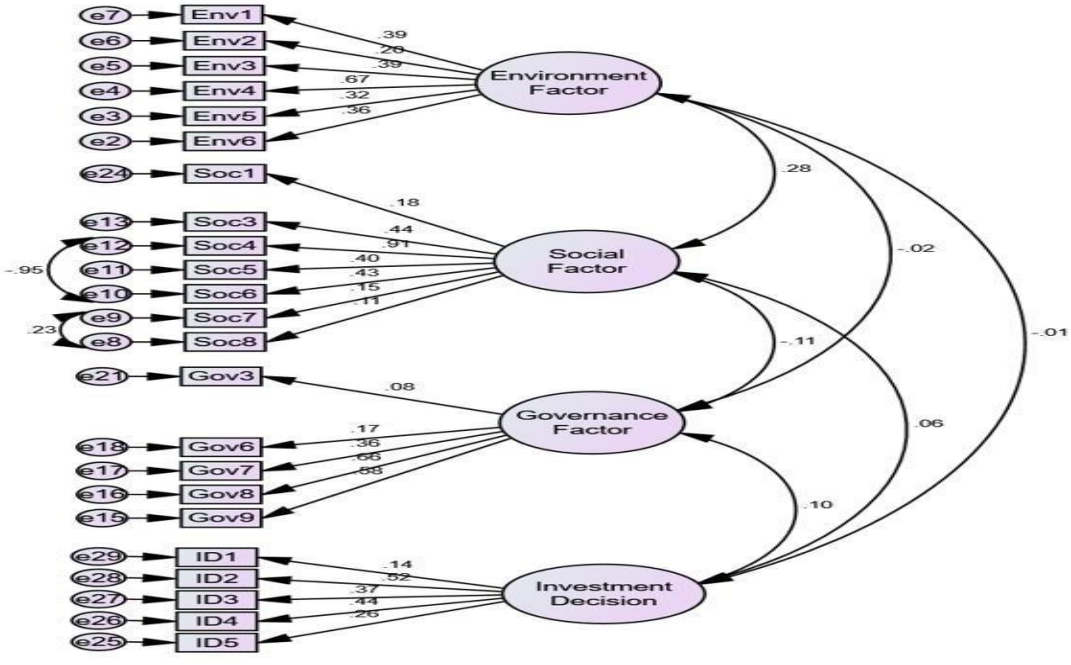
Source: Field Survey, 2023 and authors' calculation

The CFA has an excellent measurement model, as evidenced by the absolute fit indices for GFI, AGFI, $\chi 2$, and RMSEA. The suggested model fits the data quite well, as evidenced by the fit goodness indices (GFI and AGFI), which have values of 0.944 and 0.931, respectively. GFI and AGFI values, however, are influenced by sample size, and the effect may be greater for models with lax definitions. Consequently, their use as fit indices is somewhat limited. To

evaluate the model's fit, more fit indices are therefore used. According to Hair (2011), the average chi-square ($\chi 2$) - ($\chi 2$ to degrees of freedom, $\chi 2$=273.373, d.f. = 222, is 1.231, which is less than the 3.0 acceptable level. But because the chi-square value increases with sample size and the number of variables observed, the model is biased. Consequently, a number of model fit indices have been examined. The root mean square error of approximation (RMSEA), which is 0.024 and less than 0.08, indicates that the fit is good (Hair, 2011). The incremental fit indices for the Tucker Lewis Index (TLI) and Comparative Fit Index (CFI) are 0.887 and 0.901, respectively. In summary, the confirmatory factor analysis results indicate that, with fit indices of RMSEA=0.024, GFI=0.944, AGFI=0.931, $\chi 2$/df = 1.231, CFI=0.901, and TLI=0.887, the measurement model appears to have a good match. Hair (2011)

Figure 3

Measurement Model of Impact of Environmental, Social and Governance Factors on Investment Decision of Stock Investors in Nepal



Structural Model or Path Analysis

Figure 4 illustrates how the focus of the research changes from the interactions between latent constructs and observable variables to the type and strength of the connections between the constructs as it moves from the measurement model to the structural model. The structural model is defined with the aid of well-known economic theories. It is hypothesized that aspects of the environment, society, and government influenced the investment decisions made by investors who visited several brokerage firms in Pokhara. Table 7 presents the results of the SEM path analysis. The study uses structural or path analysis to examine the proposed causal relationship that is depicted in the theoretical model.

Table 7

SEM Path Analysis

Structural path		Estimate	SRW[a]
Investment decision	←— Environment factor	-0.008	-0.028
		(0.01)	
Investment decision	←— Social factor	0.185**	0.079
		(0.211)	
Investment decision	←— Governance factor	0.053**	0.108
		(0.05)	

Squared Multiple Correlation

Investment Decision (γ^2=0.69)

Model Fit Measures

Chi-square = 273.373 (df=222, prob. = 0.011)

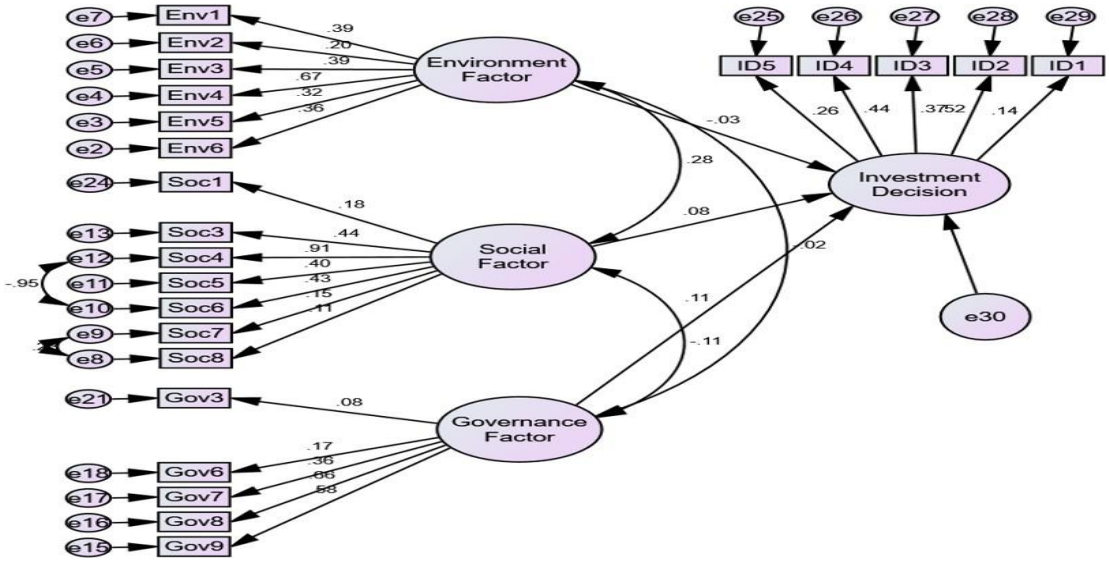
CMIN/DF=1.231, CFI=0.901, *RMSEA*=0.024, *TLI*=0.887, *GFI*=0.944, *AGFI*=0.931

[a]SRW = Standardized regression weights*** p<0.001, **p<0.01

Source: Field Survey, 2023 and authors' calculation.

Figure 4

SEM Path Analysis Showing the Impact of Environment, Social, Governance Factors on Investment Decision



The results of the path analysis show the overall fit metrics mentioned in the preceding section, which provide an assessment of how well the path or structural model fits the data. The chi-square value *[(χ2 (222) = 273.373, p=0.011*), *CFI=0.901, TLI=0.887, RMSEA=0.024*] showed a reasonable match, according to the study of path model outputs. With a χ2 of significant (*p<0.001*), the match is poor. On the other hand, the model fit is sufficient because the normal chi-

square ($\chi 2 /df$) is smaller than the cutoff value of 3. Moreover, the RMSEA value of 0.024 is below the 0.08 permissible threshold. In a similar vein, the incremental fit indices CFI and TLI often have values that fall between the cut-off points of 0.887 and 0.901, respectively, which denote an acceptable level of model fit (Hair, 2011). As a result, the model is considered to be sufficiently suitable to proceed with additional investigation.

The findings of the path analysis enable testing of the proposed relationship between the constructs, as shown in Figure 4. In H_1 it was found that environment factors have negative and insignificant impact on investment decision. This indicated that stock investors in developing countries like Nepal may not consider environmental factors as significant factors affecting their investment decisions due to a lack of awareness or understanding of the potential environmental risks and opportunities associated with their investments. In H_2, it was hypothesized that social factor has positive and significant impact on investment decision. The reason for this could be that social factors can have a significant impact on a company's long-term financial performance and sustainability. Companies that have strong social policies and practices, such as fair labor practices, community engagement, and ethical business practices, may be more likely to attract and retain customers, employees, and investors in the long run. As stated by H_3, governance factors have positive and significant impact on investment decision which is in hypothesized direction. The reason for this outcome is that good governance practices can help ensure that a company is well-managed, transparent, and accountable to its shareholders. Companies that have good governance practices, such as having independent directors, transparent financial reporting, and effective risk management systems, may be more likely to generate long-term sustainable returns. According to the values of squared multiple correlations, the independent variables of environmental, social, and governance aspects together account for around 69 percent of the variation in investment decisions.

Moderating Effect of Investor Awareness

By evaluating the moderating variable effects, the multi-group SEM inside AMOS 22 was utilized to test for variations in the strengths of the structural relationships (Arbuckle & Wothke, 1999; Byrne, 2016). Determining if the path coefficients for the links between the ESG components and investment decision were equal in both the aware and unaware groups of investor awareness is the objective of multi-group simultaneous path analysis.

The dataset was divided into two sub-groups for the moderation tests: aware and unaware groups, or 331 and 61 cases, respectively, based on investor awareness. There are two steps involved in conducting the multi-group comparison test. To create an estimated covariance matrix for each group and an overall $\chi 2$ value for the sets of sub-models as a single structural system, the relevant structural parameters are first limited to be identical across groups. After that, the constraints related to parameter equality are eliminated, yielding a second $\chi 2$ value that has less degrees of freedom. By determining whether there are any noteworthy variations between the two $\chi 2$ values, the moderator effects are evaluated. If the change in the $\chi 2$ value, is statistically significant, the null hypothesis of parameter invariance is rejected, and a moderator effect is indicated (Brockman & Morgan, 2003). The results of this analysis are shown in Table 8.

Table 8

Chi-square Difference Test for Moderator Effects of Investor Awareness

Hypothesize moderated path	Equality constraint model	Free modal	Chi-square difference
ESG dimensions ----> Investment Decision	1.955 (*df=3*)	0.000 (*df=0*)	1.955 (*df=3*)

Source: Field Survey, 2023 and authors' calculation.

The $\chi 2$ difference comparison result showed that there is no significant difference in the association between ESG characteristics and investment decision between the aware and unaware groups ($\Delta\chi 2/\Delta df = 1.955/3, p > .05$). This suggests that the association between investment decisions and the ESG characteristics is not moderated by investor awareness.

Table 9

Results of Multi-Group Comparison Test

	Aware investors			Unaware investors		
Variable	Estimate	S.E.	C.R.	Estimate	S.E.	C.R.
Environment---> Investor Decision	-0.026	0.053	-0.489	-0.026	0.053	-0.489
Social ---> Investor Decision	0.040	0.057	0.704	0.040	0.057	0.704
Governance ---> Investor Decision	0.207	0.071	2.902	0.207	0.071	2.902

Source: Field Survey, 2023 and authors' calculation.
Note: $*p < .01$, S.E. = Standard Error, C.R. = Critical Ratio

Table 9 presents the findings from a multi-group comparison test about the investment decision and the ESG aspects (environment, social, and governance) between the groups who were aware and those that were not. The proportionate contribution of the three ESG characteristics (independent variables) to the variance in investment decisions (dependent variable) was explained by each of the beta coefficients. The strength of the suggested model can be assessed using the R^2 values. The structural model as a whole explained 2.1 percent of the variance in the investment choice with ESG dimensions for uninformed investors and 2.2 percent for aware investors, according to the results of the multivariate test of the model. There was no significant difference in explanatory power for investment decisions. The results of the moderating effect test show that both aware and unaware investors have a significant moderating effect ($p<0.01$) in the relation of governance factor and investment decision. But whereas both aware and unaware investors have insignificant moderating effects ($p>0.1$) in the relation of environment and social factor with investment decisions. The path diagram for both aware and unaware investors using multigroup analysis is given as by Figure 5 and 6 respectively.

Figure 5

Path Diagram for Aware Investor Moderating the Relation of ESG Dimension and Investment Decision

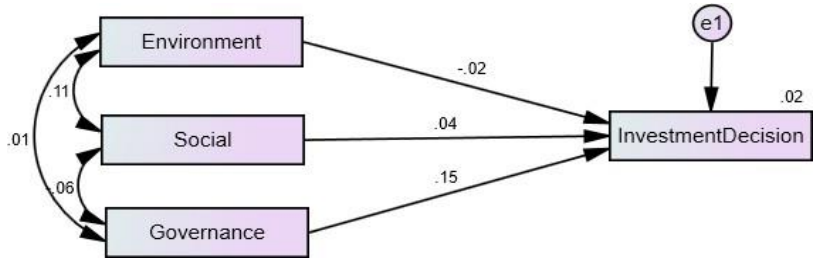
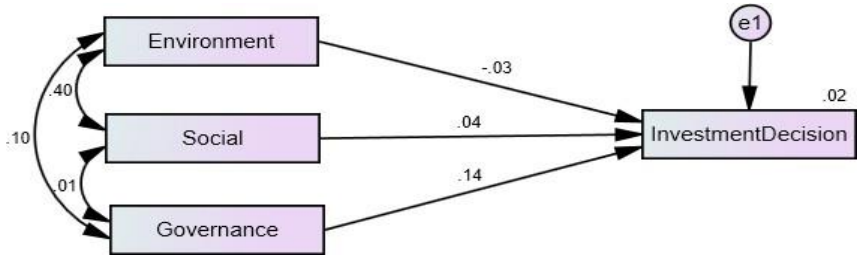


Figure 6

Path Diagram for Unaware Investor Moderating the Relation of ESG Dimension and Investment Decision



Discussion

The findings of the research study reveal that the majority of investors were male, young, unmarried, and had higher education levels. They also had a relatively short duration of investment and were aware of ESG factors. The study highlights the need for brokerage firms to cater to the needs and preferences of their predominantly young and educated client base while emphasizing the importance of ESG factors in investment decisions. This result was consistent with the findings of Mehwish et al. (2022). The results also suggest that investors prioritize investing in companies that reduce harmful environmental gases, care about their environmental practices, and have a good plan for decision-making. This result was consistent with Naveed et al. (2020). The outcome of Confirmatory Factor Analysis results indicated a good fit between the observed variables and their underlying latent constructs. The path analysis results showed that social and governance variables had a positive impact on investment decisions, while environmental variables had a negative and insignificant impact. This result was consistent with Sultana et al. (2018). The study recommends that brokerage houses and companies develop and market investment products that align with the specific ESG preferences of individual investors, particularly in relation to social and governance factors. It also emphasizes the importance of providing information about ESG practices of companies to attract investors.

5. CONCLUSION

In conclusion, this study offers valuable insights into the demographic characteristics of individual investors in the Pokhara Valley and their awareness of ESG factors. The majority of investors were young, educated, and aware of ESG considerations. These findings highlight the importance of brokerage houses catering to the preferences of this predominantly young and educated investor base while emphasizing the significance of ESG factors in investment decisions. Investors prioritize companies that exhibit environmentally responsible practices and effective decision-making plans. The study did not find any significant association between demographic variables and investor awareness about ESG dimensions, suggesting that investment decisions are influenced more by ESG factors rather than personal characteristics. Furthermore, the data analysis results reveal that social and governance variables positively impact investment decisions, while environmental factors have a negative and insignificant impact. The study emphasizes the importance of considering ESG factors in investment decision-making and recommends that brokerage houses and investors focus on social and governance factors when making investment choices. Around 69 percent of the variation in investment decision is explained by the combined effect of the independent variables, further underlining the relevance of ESG considerations.

The study's conclusions carry actionable implications for policymakers and governing bodies like SEBON and NRB. To effectively promote alignment with ESG preferences, specific strategies and initiatives are necessary. Policymakers should consider providing incentives to brokerage houses and companies to develop and market investment products customized to individual investors' ESG preferences, particularly in the areas of social and governance factors. This could involve introducing tax incentives, subsidies, or regulatory frameworks that reward ESG-focused investments. Investment managers and brokerage houses should prioritize ESG integration by actively providing transparent and comprehensive information about the ESG practices of companies. To attract investors, they can employ strategies such as ESG rating systems, disclosure requirements, and reporting standards. Additionally, these entities should create investment products designed to provide to the preferences of their educated and young client base, possibly through the development of ESG-themed funds or investment portfolios.

For future research, it is necessary to improve the specificity of recommendations. To improve the generalizability of findings, a broader range of brokerage houses should be included in the study. Expanding the sample size and geographical scope, including more metropolitan cities in Nepal, would provide a more comprehensive understanding of how ESG factors influence investment decisions. Such research endeavors will contribute to a more representative and in-depth understanding of investor perceptions and behaviors regarding ESG dimensions in the context of Nepal's stock market. These actionable recommendations will increase the practicality and applicability of the implications derived from this study.

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Appendix

Operationalization of variables

Environment Factors		
S.n.	**Symbol**	**Statements**
1	Env1	I want to invest in companies that care about climate change and global warming.
2	Env2	I want to invest in companies that manage waste from making things safely.
3	Env3	I want to invest in companies that use materials, energy, and water in a good way and find new ways to be friendly to the environment.
4	Env4	I want to invest in companies that reduce gases that are bad for the environment.
5	Env5	I want to invest in companies that make things that are good for the environment and last a long time.
6	Env6	I want to invest in companies that make new things to help the environment and create jobs.
7	Env7	I want to invest in companies that care about what people think about their environmental practices.
Social Factors		
8	Soc1	I want to invest in companies that give good benefits to their employees.
9	Soc2	I want to invest in companies that get along well with the government and the community by donating money or goods.
10	Soc3	I want to invest in companies that follow the rules about human rights, like not using child or forced labor.
11	Soc4	I want to invest in companies that help their employees learn new things and get better jobs by giving them training and education.
12	Soc5	I want to invest in companies that make their employees happy and work well by giving them a good balance between work and life, family-friendly policies, and equal opportunities.
13	Soc6	I want to invest in companies that make good things and tell customers what's in them and if they're safe.
14	Soc7	I want to invest in companies that care about what people think about their social practices.
15	Soc8	I want to invest in companies that give good benefits to their employees.
Governance Factors		
16	Gov1	I want to invest in companies that have a board of directors that does a good job and knows what they're supposed to do.

17	Gov2	I want to invest in companies that follow the rules about financial reporting.
18	Gov3	I want to invest in companies that have a committee that checks on how the company is doing financially.
19	Gov4	I want to invest in companies that use auditors who are independent.
20	Gov5	I want to invest in companies that pay their executives well and tie their pay to how well they do their job.
21	Gov6	I want to invest in companies that work to stop corruption and bribery.
22	Gov7	I want to invest in companies that treat all shareholders fairly, including ones who own less of the company.
23	Gov8	I want to invest in companies that have a good plan for what they want to do and follow it when they make decisions.
24	Gov9	I want to invest in companies that have a board of directors that does a good job and knows what they're supposed to do.
Investment Awareness		

25. Are you aware of ESG factors and its importance in investment decision-making?

i) Aware ii) Unaware

Investment Decision		
26	ID1	I carefully consider all available investment options before making a decision.
27	ID2	I am comfortable taking calculated risks when making investment decisions.
28	ID3	I prefer to invest in companies with high returns, even if they are riskier.
29	ID4	I believe that a company's ESG performance is an important factor to consider when making investment decisions.
30	ID5	I regularly review and adjust my investment portfolio based on changes in the market and my personal financial goals.