

PSYCHOLOGICAL TRAITS IN OPTION TRADING DECISIONS WITHIN THE SDG FRAMEWORK

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ABSTRACT. This study explores the intersection of behavioural finance and sustainability within the context of options trading, focusing on how psychological traits influence decision-making in alignment with the Sustainable Development Goals (SDGs). The primary objectives are to investigate the mediating role of sustainable investment practices in the relationship between psychological traits and trading performance and to assess the moderating effect of market volatility on the relationship between psychological traits and sustainable practices. Primary data were collected from 300 options traders in Kerala using a stratified random sampling method. Structural Equation Modelling (SEM) was employed to analyse the complex interrelationships among the key variables. While the findings provide valuable insights for option traders, financial institutions, and policymakers seeking to embed sustainable practices in trading behaviour, the study is limited in its generalizability. The conclusions are based on data from a specific regional context—retail option traders in Kerala—where factors such as financial literacy and educational access may differ from those in other populations. Therefore, caution should be exercised when extending these results to broader or more diverse trading communities. This study highlights the need for region-specific educational and regulatory interventions and encourages future research to validate the model across different demographics and market environments.

1. INTRODUCTION

In recent years, behavioural finance has attracted much interest because it explains the psychological effects on traders' financial market decisions. Many studies have revealed how cognitive biases, emotions, and psychological traits influence trading decisions and the final outcomes of markets (Kahneman and Tversky 1979; Thaler 1980), but traditional finance models underlie the assumption that market participants are rational. However, these behavioural factors are so pertinent that they often encourage traders to take certain actions that would be minimally impacted by market anomalies, such as overconfidence, loss aversion, or herding behaviour (Barberis and Thaler 2003). Psychological traits such as neuroticism and self-control can lead traders to have different risk preferences and change their behaviour under uncertainty when trading options. Academic attention to behavioural finance, however, has been considerable, and the inclusion of sustainability within the field is not very common. With the increasing importance of sustainability in investment strategies, it is important to identify the ways in which psychological traits affect sustainable investment usage in options trading (Revelli and Viviani 2015).

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With SDGs becoming a trend in the financial market, market participants are encouraged to make investment decisions in line with long-term global objectives such as environmental protection and social inclusion (UN 2015). This brings about a dual challenge to option traders, who can be tasked with absorbing market volatility while trying to incorporate sustainability into their trading strategies. It is essential to understand how psychological traits such as risk tolerance and emotional reactions to market changes influence sustainable investment strategies to achieve responsible trading. To investigate these dynamics, this study considers the mediating role of sustainable investment practices in the relationship between psychological traits and options-trading performance. Further, it investigates the influence of market volatility on how psychological traits contribute to sustainable investment behaviour. This study contributes to the underdeveloped body of literature on behavioural finance and sustainability by using a sample of 300 option traders from Kerala and SEM to explain how options traders integrate their trading decisions with the broader thinking of SDGs.

2. LITERATURE REVIEWS AND HYPOTHESES DEVELOPMENT

Much research has been conducted on behavioural finance to investigate the relationship between psychological traits and financial decision making in the context of how cognitive biases and emotions influence effectiveness in trading. Psychological traits, such as overconfidence, loss aversion, and risk tolerance, play major roles in decision-making when trading, especially in high-risk environments, such as options trading (Kahneman 1992; Shefrin and Statman 2000). It is well known that excessive risk-taking stems from overconfidence, and loss aversion leads to suboptimal decision-making when traders refuse to accept losses (e.g., Barberis and Thaler 2003). The existence of these biases adds additional hazards to trading outcomes and influences the strategies traders use in their investments and differs in risk tolerance and psychological resilience. As options trading is an extremely hazardous decision-making process, it requires a proper understanding of the direct impact of these psychological traits on the performance of the trader because options trading is a confusing interaction of riskier decisions.

Additionally, the relationship between sustainable investment practices and financial performance is receiving increasing attention. Revelli and Viviani (2015) find evidence that sustainable investment, which takes environmental, social, and governance (ESG) factors into account when making investment decisions, has a positive effect on financial returns. According to Verschuren and De Swaan (2021), psychological traits, in turn, influence the adoption of sustainable investment practices, and these practices mediate the impact of psychological traits on trading performance. With better risk management and long-term thinking, sustainable investment practices are found to improve trading performance and, hence, decision-making through both (Hersh and Walker 2016). Furthermore, options trading characteristics, such as market volatility, can dampen the correlation between psychological traits and their association with both sustainable investment practices and trading performance (Graham and Harvey 2001); therefore, we investigate the combined role of market conditions with psychological traits and sustainability on trading behaviour.

2.1. H1: Psychological traits have a direct impact on option trading performance.

In particular, behavioural finance research has focused on the influence of psychological traits on options trading performance. Research conducted on humans shows that psychological traits such as overconfidence, loss aversion, and risk tolerance can directly affect decision-making processes in the high-stakes environment found in options trading. One of the most common cognitive biases among traders is overconfidence, leading traders to overestimate their ability to predict market movements and then take unreasonably high risk, only to perform poorly (Barberis and Thaler 2003). Loss aversion refers to a trader's tendency to worry about or fear loss more than to be excited about gain and can lead to ineffective decision-making, such as holding onto the losing position for longer than it should be (Tversky and Kahneman 1992). In addition, risk tolerance also affects how traders handle options, and individual traders with

higher tolerance to risk utilize speculative trading strategies that can lead to either substantial profits or losses (Shefrin and Statman 2000). Traders are influenced by these psychological biases, both in their individual behaviour in trading and in creating systematic market inefficiencies, where traders' emotional responses may distract from rational decision making. Given that options trading is highly volatile and has complex risk profiles, it is important, at least for practitioners and researchers in financial markets, to understand how psychological traits directly affect trading performance.

2.2. H2: Psychological traits influence the adoption of sustainable investment practices. The adoption of sustainable investment practices is significantly driven by psychological traits, where several cognitive biases and personality factors drive investors' propensity to incorporate ESG factors into their decision-making. Research has found that people characterized by high risk aversion tend to choose sustainable investments over others because they are perceived to have lower volatility and longer-term focus, and are therefore more suited to a long-term strategy (Borghesi et al. 2020). Moreover, those with greater levels of pro-environmental attitudes and social consciousness are likely to focus on the sustainability aspects of an investment decision, regardless of whether such investments lead to more lucrative short-term financial returns (Riedl and Smeets 2017). Another psychological trait that might impede sustainable investing is overconfidence, which leads overly confident investors to disregard ESG factors in favour of their private assessment of financial returns over long-term sustainable considerations (Baker and Nofsinger 2010). Likewise, investors with higher levels of materialism are less likely to lean toward sustainable investments, as they tend to prioritize short-term financial returns at the expense of the impact of these investments (Gremle and Scannell 2017). Personality traits, such as openness to new experiences and conscientiousness, have been found to be related to a greater propensity to adopt sustainable investment practices, since these traits are related to greater levels of social responsibility and future-oriented thinking (Lins et al. 2017). Our findings show that psychological traits have a decisive impact on investor behaviour and act as key drivers in sustainable investing, where goal orientation and social responsibility play a key role in decision making.

2.3. H3: Sustainable investment practices positively impact option trading performance. In high-risk environments such as options trading, sustainable investment practices are recognized as having the potential to increase financial performance. First, it is reported that sustainable investment occurs when ESG criteria are used to make investment decisions, which, according to the literature, helps to improve long-term performance (Friede et al. 2015). Through these practices, we obtain a diversified portfolio that lowers the number of high-risk assets and is stronger when irregularities exist in the market (Kruger 2015). With the sustainability issues we mentioned, being able to mitigate those risks with market fluctuation, we will particularly consider options trading, where volatility plays a very large part (Whelan et al. 2020). In addition, sustainable investment practices tend to be aligned with longer-term value creation, thereby helping traders make more rational and less impulsive decisions and improving trading performance (Clark et al. 2015). Sustainable investors, as a group, are typically more disciplined and forward thinking, which means they are less inclined to make knee-jerk reactions to short-term market noise (Malmendier and Nagel 2011). Finally, sustainable investment practices have a positive effect on investor reputation, increasing investor flows and liquidity, which has a positive impact on options trading performance (Barberis et al. 2016). For this reason, integrating sustainability into investment strategies not only fulfils wider social goals but also provides a strategic edge in improving options trading performance.

2.4. H4: Sustainable investment practices mediate the relationship between psychological traits and option trading performance. Sustainable investment practices are an emerging area of study in behavioural finance regarding the role of psychological traits as mediators in the relationship between psychological traits and options trading performance.

Specifically, risk tolerance, overconfidence, and loss aversion will have a psychological influence on investors' decision-making and their willingness to adopt a sustainable investment strategy (Zhao and Wu 2018). The presence (or absence) of these traits either promotes or hinders the integration of sustainability factors in trading strategies that ultimately determine trading outcomes. For example, investors with risk aversion can be more motivated to practice sustainable investment, considering it more stable and less volatile, which can provide higher performance in volatile markets, such as options trading (Kempf and Osthoff 2007). However, traders with overconfidence above the expected (average) level are likely to underestimate the role sustainability plays in investment decisions and are subject to poor trading performance (Cohen and Dey 2017). Numerous studies have shown that sustainable investment practices accelerate financial performance by encouraging value-driven long-term decision-making that results in more consistent and less emotion-driven trading decisions, thereby mediating the effect of psychological traits on options trading outcomes (See Lins et al. 2017). Additionally, sustainable practices promote a more diverse portfolio, reducing the risks from involuntary market shifts, which is important in options trading (Lobza et al. 2015). It is also shown that the mediation effect of sustainable investment practices originates from the joint presence of psychological and sustainability factors in trading strategies and improves overall performance.

2.5. H5: Market volatility moderates the relationship between psychological traits and sustainable investment practices. Importantly, market volatility moderates the relationship between psychological traits and both behaviours associated with sustainable investment practices and options trading performance. Risk tolerance, emotional regulation, and overconfidence are psychological traits that influence how investors respond to market volatility and, thus, determine how they behave when trading and making decisions (Pompian 2012). For instance, more risk-averse people may tend to follow more sustainable investment strategies to minimize the risks arising from market fluctuations, and traders who have too much overconfidence could neglect those risks, which in such a case may lead to suboptimal decision making (De Bondt and Thaler 1995). The psychological traits underlying cognitive biases are found to amplify in the presence of market volatility, in a fashion that can both facilitate and hinder the adoption of sustainable practices, depending on the period of financial uncertainty (Hirshleifer 2001). Additionally, theories regarding stable characteristic show that we can effectively employ sustainable investment strategies, which are based on long term growth and robustness, as a 'buffer' for option traders in volatile periods (Statman 2000). As a result, volatility can play a key role in how psychological traits correspond to sustainable investing, in turn determining options market performance as a whole (Fama and French 1992). Moreover, market volatility undermines short-term, speculative trading strategies, which emphasizes the need for ongoing processes as a means of improving long-term trading performance (Hong and Kacperczyk, 2009). Since then, it is essential to know how psychological traits affect market volatility to develop investment strategies that strike the best balance between risk and sustainability in options trading.

3. CONCEPTUAL FRAMEWORK

The interrelationships between psychological traits, sustainable investment practices, and options trading performance in the market volatility context are formulated into a conceptual framework (Figure 1) for this study. Risk tolerance, overconfidence, and loss aversion are simple psychological traits key to making trading decisions in environments such as options trading (when risk is high) (Barberis and Thaler 2003; Shefrin 2002). The way traders perceive risk and return is shaped by traits that affect their trading strategies and ultimately affect their performance. It is hypothesized that sustainable investment practices, which combine ESG criteria, mediate the relationship between psychological traits and options trading performance. More specifically, investors with a pronounced psychological predisposition for sustainability are more likely to integrate a long-term perspective into their investment strategies, which in turn

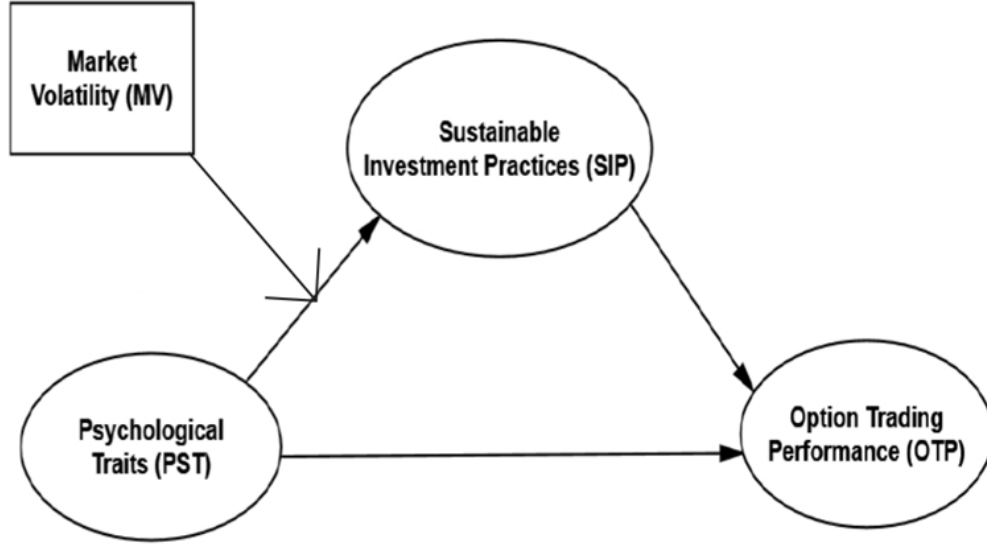


FIGURE 1. Psychological Traits Model for Option Trading Decisions

means reducing investment in portfolios that are affected by short-term market swings (Kruger 2015). Focusing on resilience, these practices have been shown to reduce volatility in trading outcomes, thereby improving returns on trading options (Statman 2000). The framework posits that psychological traits affect the uptake of sustainable investment practices, which positively affect options trading performance.

Additionally, market volatility is proposed to moderate the association between psychological traits, sustainable investment practices, and options trading performance. Traders' psychological bias is usually magnified during periods of high volatility and thus affects the trader's decision to make the market (Hirshleifer 2001). Traders who are less risk-averse or lack the emotional aspect to regulate are more open to buying into sustainable investment practices as a shield against market uncertainties (Pompian 2012). Alternatively, overconfident traders may choose to ignore sustainability, leading to inferior trading results in volatile periods. The moderating effects of market volatility reveal that the relationship between psychological traits and trading performance is moderated by external market conditions, a case in which good sustainable investment practices can play a stabilizing role (Hong and Kacperczyk, 2009). It offers a more complete picture of how different psychological traits, sustainable practices, and market forces combine to affect trading performance.

4. OBJECTIVE

1. To examine the mediating role of sustainable investment practices in the relationship between psychological traits and option trading performance under the framework of SDGs.
2. To analyse the moderating effect of market volatility on the relationship between psychological traits and sustainable investment practices among option traders

5. METHODOLOGY AND RESEARCH DESIGN

5.1. Research Design. This study adopts a quantitative research method to examine the relationship between psychological traits, sustainable investment practices, and options trading

performance, where volatility in the market serves as a moderator. Using a cross-sectional survey design at a single point in time, data are obtained to provide a snapshot of the direct and indirect relations between the variables in the study and finding out how market volatility acts as a moderator of these relations is possible with this design.

5.2. Sample. The study sample consists of 300 option traders from Kerala, India. The state has a growing financial market, and options trading is a popular financial tool for investors in this area. Healthy retail investor participation and remittance driven liquidity and financial awareness has made the state popular in trading. Therefore, the state can select the traders. This sample size is based on the recommendations of the SEM, for which a minimum sample size of 200-300 respondents is sufficient to achieve reliability in model estimations (Kline 2011). The sample contains options traders actively trading in options, and represents a range of financial market experience. Respondents were chosen from both rural and urban areas across Kerala, keeping in mind the age, gender, and educational profile of the respondent sample.

5.3. Sampling Technique. Participants were selected using stratified random sampling. Lacking suitable controls, the population of option traders is categorized into strata based on key correlates, such as age, experience, and trading frequency. Stratification guarantees that all population subgroups are covered in the sample. The participants were randomly selected from each stratum to minimize sampling bias and obtain a diverse sample.

5.4. Tools. The data were collected primarily using a structured questionnaire consisting of both close- and Likert-scale questions. The questionnaire was designed to capture information on the following key variables.

1. Psychological Traits: Measured risk propensity, which can affect trading decisions, using standardized scales such as the Risk Propensity Scale (Weber, Blais and Betz 2002) to measure traits such as risk tolerance and overconfidence.

2. Sustainable Investment Practices: Existing sets of ESG criteria (Bennett 2017) were used to develop a set of items to capture traders' adoption of sustainable investing practices.

3. Option Trading Performance: The effectiveness of the treatment was evaluated using self-reported measures of options trading success, such as profitability and return on investment, adapted from performance assessment scales (Liu et al. 2014).

4. Market Volatility: A new composite scale consisting of respondents' perception of market fluctuations and the way they react to them in their trading decisions.

Before full deployment, the questionnaire was pretested on a small group of traders to ensure that the measurement was clear, reliable, and valid.

5.5. Techniques. Structural equation Modelling serves as the primary statistical technique used in this study to test hypothesized relationships between psychological traits, sustainable investment practices, and options trading performance, with market volatility as a moderator. For example, SEM can be used to test complex relations and can assess multiple regression equations simultaneously; thus, it is ideal for this study to analyse the direct, indirect, and moderating effects (Hair et al. 2014). Data analysis was performed using CB SEM and similarly, Partial Least Squares (PLS) SEM because PLS can deal with small sample sizes and non-normal data distributions (Hair et al. 2014).

Descriptive statistics were used to summarize the demographic characteristics of the sample and other variables, in addition to SEM. The scales used in this study were measured for internal consistency using Cronbach's alpha reliability analysis. The measurement model is validated through confirmatory factor analysis (CFA) in order to confirm that the observed variables adequately measure the constructs.

5.6. Data Analysis and Interpretation. After data were collected, they were coded and analysed using AMOS 26. The analysis proceeds using a two-step approach; therefore, the first operation is to evaluate the measurement model for construct validity and reliability,

and the second operation is to test the hypotheses by evaluating the structural model. In particular, the path coefficients, R-squared values, and moderated effects of market volatility on the relationships between the key constructs are highlighted. Through the application of these research methods, this study seeks to achieve an in-depth understanding of the determinants associated with options trading performance, and how psychological traits and sustainable investment practices contribute to performance across markets.

6. RESULTS AND DISCUSSIONS

TABLE 1. Demographic Profile of Option Traders

Age	No. of Option Traders	Percent
Below 30 years	48	16.0
30–35 years	170	56.7
35–40 years	33	11.0
Above 40 years	49	16.3
Total	300	100.0
Gender	No. of Option Traders	Percent
Male	191	63.7
Female	109	36.3
Total	300	100.0
Educational Qualification	No. of Option Traders	Percent
Higher Secondary	68	22.7
Bachelor's Degree	95	31.7
Master's Degree	59	19.7
Professional Qualification	21	7.0
PhD or Doctorate	57	19.0
Total	300	100.0
Experience in Derivative Trading	No. of Option Traders	Percent
Less than 3 years	21	7.0
3–5 years	196	65.3
5–10 years	31	10.3
More than 10 years	52	17.3
Total	300	100.0
Monthly Income	No. of Option Traders	Percent
Below 50,000	29	9.7
50,000–100,000	169	56.3
100,000–200,000	34	11.3
Above 200,000	68	22.7
Total	300	100.0

Table 1 provides a comprehensive demographic profile of 300 option traders. The majority are aged 30–35 years (56.7%), with smaller groups under 30 years (16.0%), 35–40 years (11.0%), and above 40 years (16.3%). Most traders are male (63.7%), with females comprising 36.3%. Regarding education, 31.7% hold a Bachelor's degree, followed by those with higher secondary education (22.7%), Master's degrees (19.7%), PhDs or doctorates (19.0%), and professional qualifications (7.0%). In terms of trading experience, 65.3% have 3–5 years of experience, while smaller segments have less than 3 years (7.0%), 5–10 years (10.3%), and over 10 years (17.3%). Monthly income shows a significant concentration in the Rs. 50,000–100,000 range (56.3%), with others earning below Rs. 50,000 (9.7%), Rs. 100,000–200,000 (11.3%), and above Rs. 200,000

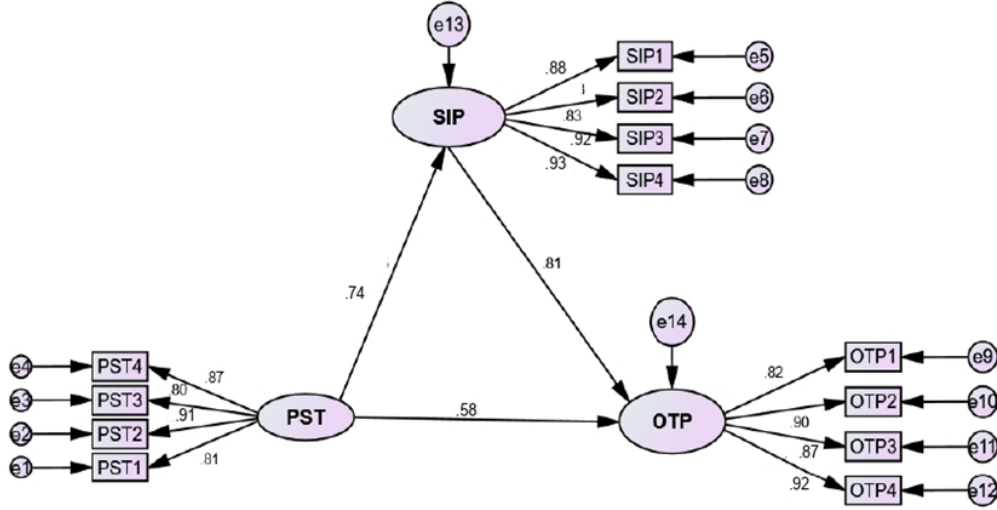


FIGURE 2. Structured Model of Psychological Traits Model for Option Trading Decisions

(22.7%). This profile highlights a predominance of young, educated, and relatively experienced traders with moderate to high incomes.

6.1. Model Validity and Reliability. In SEM, the assessment of model validity and reliability involves examining composite reliability, convergent validity, and discriminant validity. Composite Reliability (CR) is deemed acceptable when values exceed 0.7 (Hair et al. 2019). Convergent validity was evaluated using Average Variance Extracted (AVE), which measures the extent to which ideal items within a construct share variance. Items aggregated to a construct with correlations of 0.5 or higher demonstrate good correlation, and shared common variance (Fornell and Larcker 1981). To comprehensively verify model reliability and validity, both the Fornell-Larcker criterion and discriminant validity measures should be employed simultaneously (Henseler et al. 2015). The combined use of these methods provides a thorough validation of the robust results obtained from the SEM analysis.

TABLE 2. Composite Reliability and Convergent Validity of the Psychological Traits Model for Option Trading Decisions

	CR	AVE	MSV	MaxR(H)
PST	0.909	0.715	0.337	0.911
SIP	0.940	0.797	0.396	0.971
OTP	0.930	0.768	0.413	0.944

Source: Author's own compilation.

The psychological trait model in the context of options trading decisions is presented in Table 2 with CR, AVE, Maximum Shared Variance (MSV), and Maximum Reliability (MaxR(H)). CR values are all above the commonly accepted threshold of 0.7, indicating high internal consistency of the constructs: Option Trading Performance (OTP: 0.930), Sustainable Investment Practices (SIP: 0.940), and Psychological Traits (PST: 0.909). AVE values were above 0.5, supporting

adequate convergent validity with PST (0.715), SIP (0.797), and OTP (0.768), indicating that a considerable amount of variance in the observed variable is explained by its respective construct. MSV values for all constructs are below their corresponding AVE values. Further discriminant validity was supported by confirming that the constructs were more strongly related to their own indicators than to those of other constructs (PST: 0.337; SIP: 0.396; OTP: 0.413). Finally, MaxR(H) values, which assess the reliability of the construct under its highest possible loadings, were also robust (The reliability and validity of the model were reinforced PST = 0.911, SIP = 0.971, OTP = 0.944). In sum, this analysis shows that the constructs in the psychological traits model for options trading decisions are reliable and have strong convergent validity.

TABLE 3. Discriminant Validity of the Psychological Traits Model for Option Trading Decisions

	PST	SIP	OTP
PST	0.846		
SIP	0.587	0.893	
OTP	0.618	0.598	0.877

Source: Author's own compilation.

Table 3 and the Fornell-Larcker criterion demonstrate the discriminant validity of the Psychological Traits Model for Option Trading Decisions, in which the values on the diagonal are the square root of AVE of each construct, and the values below the diagonal are inter-construct correlations. The square roots of the AVE for PST = 0.846, SIP = 0.893, and OTP = 0.877 were all greater than their correlations with the other constructs, confirming discriminant validity. In particular, the moderate correlations of PST with SIP (0.587) and OTP (0.618) suggest that they are related to each other yet with differentiation. Similarly, SIP has a moderate correlation with OTP (0.598) which, while less than twice the square root of AVE (0.893), is nonetheless more than sufficient to affirm SIP as a unique construct within the model. The results validate that the model delineates psychological traits, sustainable investment practices, and options trading performance constructs. This discriminant validity is very important, as it affects the reliability and precision of subsequent analyses.

6.2. Moderated Mediation Model. The Figure 3 adopts a moderated mediation model to examine the interplay between PST, SIP, OTP, and Market Volatility (MV). Psychological Traits is an effective investment practices that influences the traders to increase option trading. Furthermore, MV serves as the moderating variable following the relationship between psychological traits and sustainable investment practices, whereby (PST_MV) is the interaction between the two. The model tests the hypothesized relationships with an iteration number 5,000 as suggested by Preacher and Hayes (2008), using the bootstrapping method. Bootstrapping provides confidence intervals for indirect and moderated effects, with greater robustness to non-normality in the sampling distribution. Integrating moderation, mediation, and bootstrapping, the model presents a nuanced and statistically robust bottom line on how psychological traits impact option trading performance through moderation (MV) and mediation variable (SIP).

6.3. Model Fit. For the SEM, model fit examination is highlighted as it would help to determine if a given theoretical framework is capable of explaining the data given. First has to be building up the foundation of how their construct dimensions impact their items. We conduct a "construct validity" on the dimensions of the relationship between PST, SIP, OTP, and MV as part of Figure 3. The values determine the model's worthiness of the data defined in Table 4.

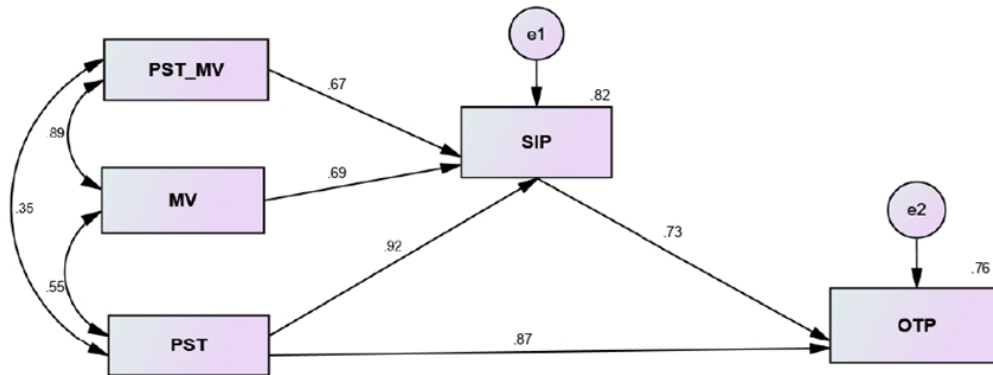


FIGURE 3. Moderated Mediation of Psychological Traits Model for Option Trading Decisions

TABLE 4. Model Fit Measures related to the Psychological Traits Model for Option Trading Decisions

Model Fit Indices	Citation	Threshold Limit	Estimated Value	Interpretation
Normed Chi-Square	Kline (2015), Schermelleh-Engel et al. (2003)	< 3	88.17/41 – CMIN/DF = 2.150	Excellent
CFI	Hu & Bentler (1999), Marsh et al. (2004)	> 0.90	0.909	Acceptable
GFI	Bentler & Bonett (1980), Hair et al. (2019)	> 0.90	0.917	Good
IFI	Bentler (1990), Hooper et al. (2008)	> 0.90	0.928	Good
NFI	Kline (2015)	> 0.90	0.916	Good
RMSEA	Browne & Cudeck (1992)	< 0.08	0.051	Acceptable
SRMR	Hu & Bentler (1999)	< 0.06	0.056	Excellent

Source: Author's own compilation.

Appropriate model indices are presented in Table 4. Regarding the model fit criteria, all measures (GFI, IFI, NFI, and CFI) exceeded 0.9, the ratio of Goodness of Fit to Degrees of Freedom was below 3, and RMSEA was less than 0.08. An elevated SRMR indicates a less plausible model. A model was deemed acceptable when the RMSEA value fell below 0.08, and the CMIN/DF ratio was less than 3.

Table 5 presents the direct effects of psychological traits (PST) on option trading decisions, specifically through sustainable investment practices (SIP) and option trading performance (OTP). The first row indicates a strong and statistically significant direct relationship between psychological traits and sustainable investment practices, with an estimate of 0.926, a standard error (S.E.) of 0.078, a critical ratio (C.R.) of 11.872, and a p-value of 0.001, suggesting that traders' psychological traits strongly influence their inclination toward sustainable investment

TABLE 5. Direct Effect of Psychological Traits Model for Option Trading Decisions

Direct Relationship	Estimate	S.E.	C.R.	P
SIP $\leftarrow$ PST	0.926	0.078	11.872	0.001
OTP $\leftarrow$ SIP	0.674	0.068	9.912	0.019
OTP $\leftarrow$ PST	0.695	0.079	8.797	0.000

Source: Author's own compilation.

practices. The second row shows that sustainable investment practices positively impact option trading performance, with an estimate of 0.674, S.E. of 0.068, C.R. of 9.912, and a p-value of 0.019, signifying that adherence to sustainable investment principles contributes significantly to trading performance. Finally, the third row highlights a direct and significant effect of psychological traits on option trading performance, with an estimate of 0.695, S.E. of 0.079, C.R. of 8.797, and a highly significant p-value of 0.000. These results collectively indicate that psychological traits not only directly enhance trading performance but also influence it indirectly through sustainable investment practices.

6.4. Mediation Effect. To test the mediation effect of SIP on the relationship between PST and OTP, the researchers used the bootstrapping method with an iteration number of 5000 as suggested by Preacher and Hayes (2008). The given research was done at a 95% confidence level.

TABLE 6. Mediation Effect of Psychological Traits Model for Option Trading Decisions

Effect	Standardized Estimation	Unstandardized Estimate	Confidence Interval (Low/High)	P-value
Indirect Effect (PST $\rightarrow$ SIP $\rightarrow$ OTP)	0.672	0.624	0.031 / 0.706	0.039

Source: Author's own compilation.

The table 6 provide statistical evidence supporting the hypothesis (H4) that SIP mediate the relationship between PST and OTP. The indirect effect of PST on OTP through SIP is significant, with a standardized estimation of 0.672 and an unstandardized estimate of 0.624. The confidence interval (0.031 to 0.706) does not include zero, further affirming the mediation effect. Additionally, the p-value of 0.039 indicates that the observed mediation effect is statistically significant. These findings validate the hypothesis by demonstrating that effective psychological traits influence option trading performance primarily by enhancing sustainable investment practices. Highlighting the crucial role of investment as a mediator in this relationship.

6.5. Probing Role of Market Volatility (MV) in Moderated Indirect Relationship. This study investigated the role of MV in the moderated (indirect) relationship between PST, SIP, and OTP. This analyses how MV affects the strength and direction of the mediating role of SIP in the PST.MV relationship. The study analyses the dynamics involved by examining how psychological traits can impact option trading performance through the conditional, that is, when, and contextual, that is, what conditions, the relationship between Market Volatility, and traders' initiatives to enhance option trading performance.

Table 7 presents the direct effects of the moderation model, assessing how psychological traits interact with market volatility to influence sustainable investment practices (SIP) in options trading decisions. The first relationship (SIP $\leftarrow$ PST.MV) shows that the interaction

TABLE 7. Direct Effect of Moderation Effect of Psychological Traits Model for Option Trading Decisions

Direct Relationship	Estimate	S.E.	C.R.	P
SIP $\leftarrow$ PST_MV	0.633	0.131	4.832	0.014
SIP $\leftarrow$ MV	0.515	0.134	3.843	0.002

Source: Author's own compilation.

between psychological traits and market volatility (PST_MV) has a significant positive effect on sustainable investment practices, with an estimate of 0.633, a critical ratio (C.R.) of 4.832, and a statistically significant p-value of 0.014. This indicates that market volatility strengthens the impact of psychological traits on sustainable investment behaviour. The second relationship (SIP $\leftarrow$ MV) also reveals a significant direct effect of market volatility (MV) on sustainable investment practices, with an estimate of 0.515, C.R. of 3.843, and p-value of 0.002. These results suggest that both the direct and interaction effects of market volatility meaningfully influence traders' adoption of sustainable investment practices, highlighting the importance of external market conditions in shaping behaviour under the behavioural finance framework.

TABLE 8. Indirect Effect of Moderation Effect of Psychological Traits Model for Option Trading Decisions

Effect	Standardized Estimation	Unstandardized Estimate	Confidence Interval (Low/High)	P-value
Indirect Effect (PST $\rightarrow$ SIP $\rightarrow$ OTP), Indirect Effect (PST_MV $\rightarrow$ SIP $\rightarrow$ OTP)	0.491	0.427	0.014 / 0.530	0.009

Source: Author's own compilation.

SIP was also used to assess the indirect effect of the interaction between PST_MV on OTP, as shown in Table 8. The standardized estimate of the indirect effect is 0.491, with an unstandardized estimate of 0.427, upper confidence limit (UL) of 0.530, and lower confidence limit (LL) of 0.014. However, with a p-value of 0.009, the effect was statistically significant ($p = 0.009$). The findings indicate that although an indirect effect does exist, this indirect effect is moderated by MV, as hypothesized. Thus, we investigated the relationship between psychological traits and sustainable investment practices at volatility in the market, and found variation in this relationship based on volatility in the market, supporting the moderating effect of MV on the indirect relationship.

This study makes a significant contribution to the literature on behavioural finance, sustainable investing, and market dynamics. This study extends traditional models of financial decision-making, which typically ignore psychological factors that direct investment behaviour, by showing that psychological traits directly influence options trading performance and adoption of sustainable investment practices. It highlights the use of psychological traits to mediate between traders' mental states and their decisions when investing, providing insight into how individual biases and cognitive tendencies drive market impact. Furthermore, the study strengthens the sustainable finance framework by showing that social and environmental concerns merely do not drive sustainable investment practices but that psychological motivations

also lead to superior trading performance. By expanding the behavioural theory, the moderating role of market volatility demonstrates how external factors moderate psychological traits and investment practices in shaping trading outcomes. Drawing on these theoretical insights, however, challenges conventional wisdom in finance around rational decision making and instead proposes a more integrated approach whereby the psychological and environmental dimensions of the trader's environment influence behavioural decisions in the market and ultimately determine market performance.

7. CONCLUSION

This study examines the intricate relationships between psychological traits, sustainable investment practices, and options trading performance within the framework of Sustainable Development Goals (SDG). The findings indicate that psychological traits significantly influence trading behaviour and the adoption of sustainable investment strategies, which are associated with improved trading outcomes. The analysis further highlights the mediating role of sustainable investment practices in the relationship between psychological traits and trading performance, emphasising the importance of integrating sustainability-oriented skills into traders' decision-making. Additionally, market volatility moderates these relationships, suggesting that external market conditions can alter the effects of psychological traits and sustainability practices on the trading performance. These insights contribute to a broader understanding of how behavioural finance principles can be aligned with sustainability objectives in dynamic trading environments. However, it is important to acknowledge the limitations of this study in terms of generalizability. The sample was drawn from a specific population of retail option traders in a particular region of India, where financial literacy and access to structured financial education may differ markedly from other contexts. Therefore, the conclusions should be interpreted with caution when applied to traders outside this demographic or geographic scope. The role of financial education in shaping both psychological awareness and sustainable investment behaviour is a significant variable that may limit the broader applicability of these findings. This study suggests that policymakers and financial regulatory bodies should consider integrating psychological training and sustainable investment practices into educational and regulatory frameworks tailored to regional needs. Such measures could help traders better recognise and manage cognitive biases, especially overconfidence and loss aversion, thereby improving both financial outcomes and alignment with sustainable investment goals. Future studies should expand the scope across diverse regions and trader profiles to enhance the generalizability and robustness of these conclusions.

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APPENDIX

Demographic Profile:

1. Age

- ☐ Below 30 years
- ☐ 30–35 years
- ☐ 35–40 years
- ☐ Above 40 years

2. Gender

- ☐ Male
- ☐ Female

3. Educational Qualification

- ☐ Higher Secondary
- ☐ Bachelor's Degree
- ☐ Master's Degree
- ☐ Professional Qualification (CFA, CA, etc.)
- ☐ PhD or Doctorate

4. Experience in Option Trading

- ☐ Less than 3 years
- ☐ 3–5 years
- ☐ 5–10 years
- ☐ More than 10 years

5. Monthly Income

- ☐ Below 50,000
- ☐ 50,000–100,000
- ☐ 100,000–200,000

☐ Above 200,000

6. How often do you consider market volatility indicators (e.g., VIX or IV) when making trading decisions?

- ☐ Always
☐ Often
☐ Sometimes
☐ Rarely
☐ Never

7. Psychological Traits SA = Strongly Agree, A = Agree, N = Neutral, DA = Disagree, SDA = Strongly Disagree

Statements	SA	A	N	DA	SDA
I am willing to take higher risks in my trades if it means potentially higher returns	☐	☐	☐	☐	☐
I believe my ability to predict market movements is superior to that of most other traders	☐	☐	☐	☐	☐
I feel more upset about losing a trade than I feel happy about making a gain of the same size	☐	☐	☐	☐	☐
I tend to base my trading decisions on recent market trends, even if they might not be the most relevant indicators	☐	☐	☐	☐	☐

8. Sustainable Investment Practices

Statements	SA	A	N	DA	SDA
I actively seek out investment opportunities that align with my personal values and contribute to environmental sustainability.	☐	☐	☐	☐	☐
I prefer investing in options that are tied to companies with strong ESG practices.	☐	☐	☐	☐	☐
I consider the long-term impact of my investments on society and the planet before making a trading decision.	☐	☐	☐	☐	☐
I avoid trading options linked to companies or sectors that are harmful to the environment, even if they offer high returns.	☐	☐	☐	☐	☐

9. Option Trading Performance

Statements	SA	A	N	DA	SDA
My option trading strategies consistently deliver positive returns over time.	☐	☐	☐	☐	☐
I am able to manage my risk effectively, resulting in fewer significant losses compared to my gains.	☐	☐	☐	☐	☐
I regularly achieve risk-adjusted returns that exceed the market average in my option trades.	☐	☐	☐	☐	☐
I have a disciplined approach to option trading, sticking to my strategy even during market fluctuations.	☐	☐	☐	☐	☐