

“Extending TPB Framework: Investigating Environmental and Social Influences on Sustainable Investment Intention”

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Abstract:

Purpose: The present study has attempted to extend the TPB Framework evaluating factors influencing behavioural intention towards Sustainable investments by adding Environmental concern (EC) and Social Responsibility (SR) in the current model.

Methodology: Data has been collected from 425 investors and Structural equation model (SEM) technique has been used for the current Sustainable investment intentions.

Findings: The study reveals significant positive impact of ATT, SN, EC, SR and PBC on Sustainable investment intentions.

Practical Implications: Investment companies can leverage insights from this study to design and promote tailored ESG investment products that resonate with environmentally and socially conscious investors. The government can use these insights to develop policies that promote sustainable investments, encouraging responsible financial practices.

Originality: The study sought to address a critical Gap in the research literature by examining collective impact of EC and SR on the TPB constructs.

Keywords: *Theory of Planned Behaviour; ESG.*

1. Introduction:

1.1 Environmental Social Governance

Environmental issues have become becoming more pressing as the globe struggles with major problems like ecosystem degradation, biodiversity loss, and climate change. This heightened awareness is leading to a drive for more sustainable practices in various sectors. Businesses and organizations must take on more environmental responsibility by reducing their ecological footprint, eliminating resource waste, and employing cleaner production practices (Lima et al., 2024). As a result, the ESG (Environmental, Social, and Governance) framework—which assesses an organization's success in terms of environmental, social, and governance factors—has become increasingly significant. ESG takes into account a business's environmental impact, governance norms, and social responsibility. According to Rigon, Degenhart, and Ribeiro (2023), companies that adopt ESG principles aim to uphold the highest ethical standards while finding a balance between turning a profit and improving the environment and the people they serve. Some ways to include ESG are by putting strong social and environmental policies into place, diversifying the leadership to encourage greater inclusivity, and incorporating ESG metrics into financial reporting. According to Machado and Checon (2023), companies are also adopting ethical investment techniques that prioritize social and environmental impacts as much as financial rewards. ESG has grown to be an essential tool for companies trying to stay sustainable and competitive over the long run in a world increasingly driven by urgent environmental and social issues. (C, Silva, et al. 2024).

1.2 Growth of sustainable investments

The field of sustainable finance has expanded significantly in recent years. According to the 2020 Global Sustainable Investment Review, the total value of sustainable investing assets in the major global markets of Europe, the US, Canada, Japan, and Australasia was USD 35.3 trillion at the start of 2020, a 55% rise from 2016. This increase translates into a

larger share of the total managed by professionals assets in these regions by 2020, when it was 35.9%. The overall value of sustainable assets as well as their percentage of all managed assets demonstrate the good trend in sustainable finance. Since the survey ignores rising markets like China and India, where sustainable investment activity is expanding quickly, the numbers are probably significantly higher on a worldwide basis. For example, it is estimated that the total value of publicly held ESG funds in China alone is RMB 48.6 trillion (USD 7.55 trillion). Sustainable finance is emerging as a result of the growing incorporation of ESG considerations into investment choices, as evidenced by the rising popularity of ESG-focused funds. Programs like the EU Sustainable Investment Taxonomy and the UN Principles for Responsible Investment, which assist standardise and steer investments towards sustainability, are also bolstering the shift to a more sustainable global financial system. These advancements show that sustainable finance is now an essential component of the global investment landscape rather than a specialised market. Lin, Lin. (2022).

2. Significance of the study

This study's importance comes from its ability to provide light on the variables influencing investors' intentions to make sustainable investments. By extending the Theory of Planned Behaviour (TPB) framework, this research integrates environmental and social influences, which are increasingly important in shaping individuals' investment decisions. The study offers insights into how these influences, in combination with traditional TPB components, can guide investors towards more sustainable choices.

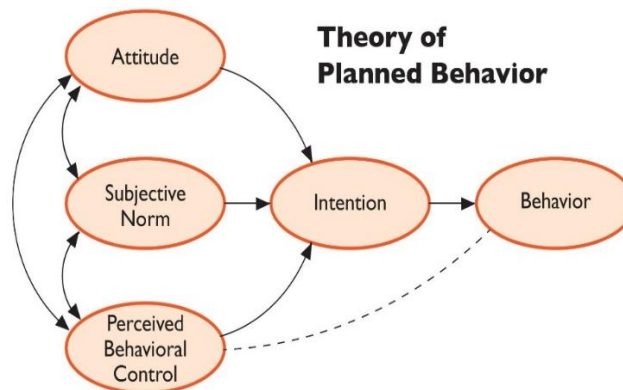
3. Literature Review

Investment is a topic that is often discussed because everyone requires a good investment for an environmentally friendly existence (Jorgenson, 1967). These days, everyone is interested in investing, from college freshmen to people in their forties, as it provides a means of saving money and, for some, a source of extra income. In this period of growing expenses, warming temperatures, and the loss of natural resources, we must all cooperate to transition to sustainability. Therefore, investments to develop exponentially, sustainability is also necessary. As a result, sustainability and investment are linked and need to be carefully considered (Peylo & Schaltegger, 2014).

Sustainability has introduced numerous new factors that should be considered and taken into consideration with this new and altered approach to investment. The study is based on a number of studies that focus on investing and the variables that affect it, especially ESG considerations. The ESG score is essential for educating investors about a company's foundations and swaying their choices (Pedersen et al. 2020). ESG is used by many investors due to client demand. Additionally, ESG data helps investors make easier investment decisions and filters new goods (Friede et al. 2015; Amel-Zadel & Serafeim, 2018). ESG investors handle the research of certain businesses. Governance and management quality are closely related in ESG (Van Durren et al. 2016). According to Aich, S., et al. (2021), ESG concerns are now an essential part of the investment process, with an emphasis on long-term risk-adjusted returns, rather than being a separate field. Afeef, M., & Kakakhel, S. J. (2022) found that ESG factors had an impact on investors and that these factors' combined effects were beneficial. Environmental considerations also had an impact on investment decisions, but governance factors were the most important. Social factors came in second. According to the study, opinions on ESG factors had a big influence on investment results. Khemir, S., et al. (2019) findings demonstrate that ESG considerations have an impact on Tunisia's investment allocation choices. Furthermore, the post-hoc test results show that social and governance information were more influential than environmental information. Sultana, S., et al. (2018). revealed that the goal of the investment and ESG concerns had a big impact on the decision to invest.

4. Theoretical Framework

Theory of Planned Behaviour



According to TPB, which is an expansion of the Theory of Reasoned Action (TRA) (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975), decision makers' behavioural goals and attitudes determine their actions, while perceived behavioural control and accepted standards affect their behaviour intentions. To operationalise TPB, the study considers subjective criteria (such moral awareness) as well as the "attitudes" of stock market investors towards ESG issues. After that, it concentrates on the "intention" towards ESG investing by considering investment choices. Research has indicated that people's intents to trade stocks online are favourably influenced by their views, "subjective norms, and perceived behavioural control" (Gopi and Rumayah, 2007). Warsame and Ileri (2016) applied the Theory of Planned Behaviour (TPB) to Sukuk investing and found that behaviour intention was positively and significantly impacted by attitude and perceived behaviour control.

4.1 Construct and Hypotheses

4.1.1 Attitude

ATT is a person's overall assessment or emotion, which can be either good or negative, regarding a specific thing, concept, person, or circumstance (Ajzen, 1985). ATT, as used in this study, refers to an individual's belief in the benefits of investing in ESG funds. The long-standing and empirically confirmed association between ATT and IINT has been shown in a number of research in the domains of conventional investment (Akhtar & Das, 2018; Mahardhika & Zakiah, 2020) and sustainable investing (Apostolakis et al., 2018; Mehta et al., 2021; Thanki et al., 2022). H. L. Weinbrenner (2023).

H_{a1}: ATT has significant positive impact on Behavioural intention Towards ESG investments.

4.1.2 Subjective Norms (SN)

SN is the term used to describe a person's opinion of whether or not someone who is very important to them thinks investing in ESG funds is desirable and whether or not they should make the investment. According to Ajzen (1985), this construct represents the societal pressure that a person may encounter, which may ultimately make them more likely to engage in SRI. According to the body of research, SN may accurately predict an individual's IINT. This includes both conventional (Akhtar & Das, 2018) and ESG investment decisions (Apostolakis et al., 2018; Gamel et al., 2022; Gutsche et al., 2018; Jensen et al., 2016; Thanki et al., 2022). Few researchers have discovered that, in the context of the TPB paradigm, SN have little or no predictive ability. Weinbrenner, H. L. (2023).

H_{a2}: SN has significant positive impact on Behavioural intention Towards ESG investments.

4.1.3 Perceived Behavioural Control (PBC)

PBC is a construct that describes how easy or difficult a somebody believes a particular behaviour to be. From a conceptual standpoint, PBC can be viewed in two ways: either as a result of the constrained availability of opportunities and resources needed to carry out the desired behaviour, or as a reflection of factors that may prevent the individual from engaging in the target behaviour (Ajzen, 1991). According to recent studies, PBC takes into account an investor's ability to engage in impact investing as well as their access to pertinent investment options (Adam & Shauki, 2014). Additionally, Gamel et al.

(2022) have pointed out that awareness of limited resources, like monetary capital or understanding of the broad range of ESG investment alternatives, is a critical part of PBC in impact investing. Notably, recent research has shown that PBC explains a significant portion of the differences in people's intentions to engage in specific actions (Armitage & Conner, 2001). Furthermore, it has a direct impact on how people behave in the future. Weinbrenner, H. L. (2023).

H_{a3}: PBC has significant positive impact on Behavioural intention Towards ESG investments.

4.1.4 Environmental Concern (EC)

Investor decision-making has been more and more impacted by environmental considerations, such as a company's environmental practices and their effects on waste management, air pollution, and climate change. Research has demonstrated that adverse environmental effects, including air pollution, might discourage investment. For example, studies have found that private equity investments in French companies that disregard environmental issues have significantly decreased (Crifo et al., 2015). Accordingly, companies that disclose ESG-related information and implement robust environmental regulations are more likely to be preferred by investors in Italy and Japan (Fazzini & Dal Manso, 2016). Investors that place a high priority on sustainability are more likely to fund companies with strong environmental policies because they think these actions will improve the company's long-term profitability and reputation in the marketplace (Amel-Zadeh & Serafeim, 2018; Rooh et al., 2021). As a result, it is now essential for both financial success and ethical business practices to incorporate environmental factors into investment decisions.

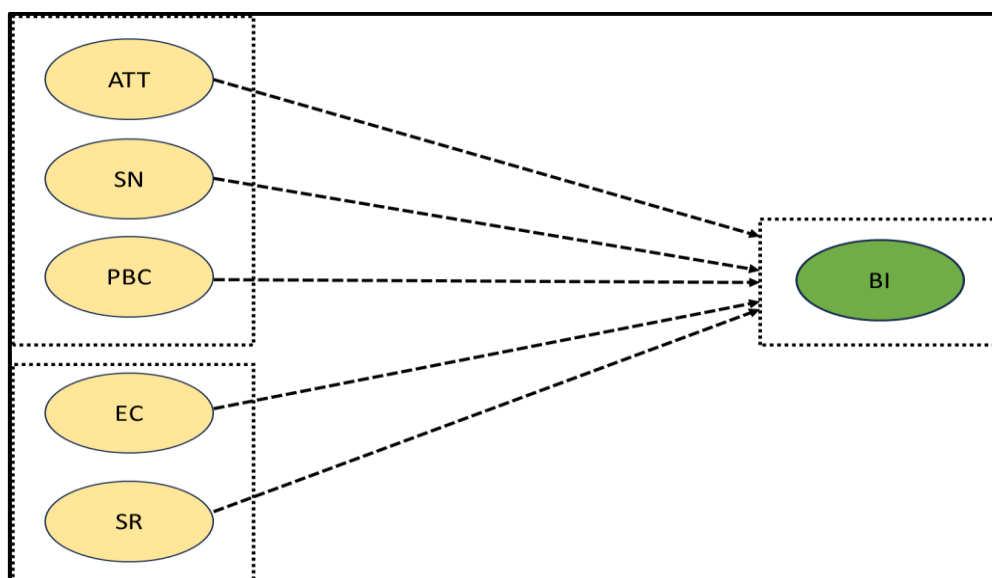
H_{a4}: EC has significant positive impact on Behavioural intention Towards ESG investments.

4.1.5 Social Responsibility (SR)

Investor decisions are heavily influenced by social concerns since businesses are expected to perform responsibly towards their communities and stakeholders (Cohen et al., 2015). Aspects of social sustainability include consumer protection, work conditions, health facilities, labour standards, human rights, and relationships with local people (UN PRI, 2015). When assessing businesses, investors are giving more weight to these social concerns, especially in places like Australia where social considerations are a fundamental component of ESG. According to research, businesses that respect human rights, offer secure working environments and actively participate in their communities are more likely to be preferred by investors (Berry & Junkus, 2013; Rakotomavo, 2011). In industrialised economies, where social elements are prioritised over governance and environmental concerns, investors' decisions are frequently dominated by social issues (Sultana et al., 2018).

H_{a5}: SR has significant positive impact on Behavioural intention Towards ESG investments.

4.2 Conceptual Framework



4.2.1 Measurement Model

Table No: 1 Measurement Model

Construct	Description	References
Attitude	Individual's positive or negative evaluation of ESG investments.	Ajzen, I. (1991). The Theory of Planned Behaviour. <i>Organizational Behaviour and Human Decision Processes</i> , 50(2), 179-211.
Subjective Norms	Social pressure or influence from others to engage in ESG investments.	Ajzen, I. (1991). The Theory of Planned Behaviour. <i>Organizational Behaviour and Human Decision Processes</i> , 50(2), 179-211.
Perceived Behavioural Control	Perception of the ease or difficulty in engaging with ESG investments.	Ajzen, I. (1991). The Theory of Planned Behaviour. <i>Organizational Behaviour and Human Decision Processes</i> , 50(2), 179-211.
Environmental Concern	The level of concern and awareness about environmental issues influencing investment decisions.	Kim, Y., & Choi, Y. (2020). Environmental concern and sustainable investment: The role of individual and institutional drivers. <i>Environmental Sustainability</i> , 45(3), 233-250.
Social Responsibility	The belief that investments should contribute positively to society and adhere to ethical practices.	Carroll, A. B. (1999). Corporate social responsibility: Evolution of a definitional construct. <i>Business & Society</i> , 38(3), 268-295.

5. Data analysis

Table No: 2 Model Fit Indices

Goodness of fit model index	Recommended value	Model
CMIN/DF	< 3	2.931
GFI	> 0.8	.845
NFI	> 0.8	.877
TLI	> 0.9	.918
CFI	> 0.9	.932
RMSEA	< 0.08	0.065

All the values are complying with the recommended values as per Hair et al. (2010) Indication of **excellent Model fit**.

Figure No:1 Confirmatory factor Analysis

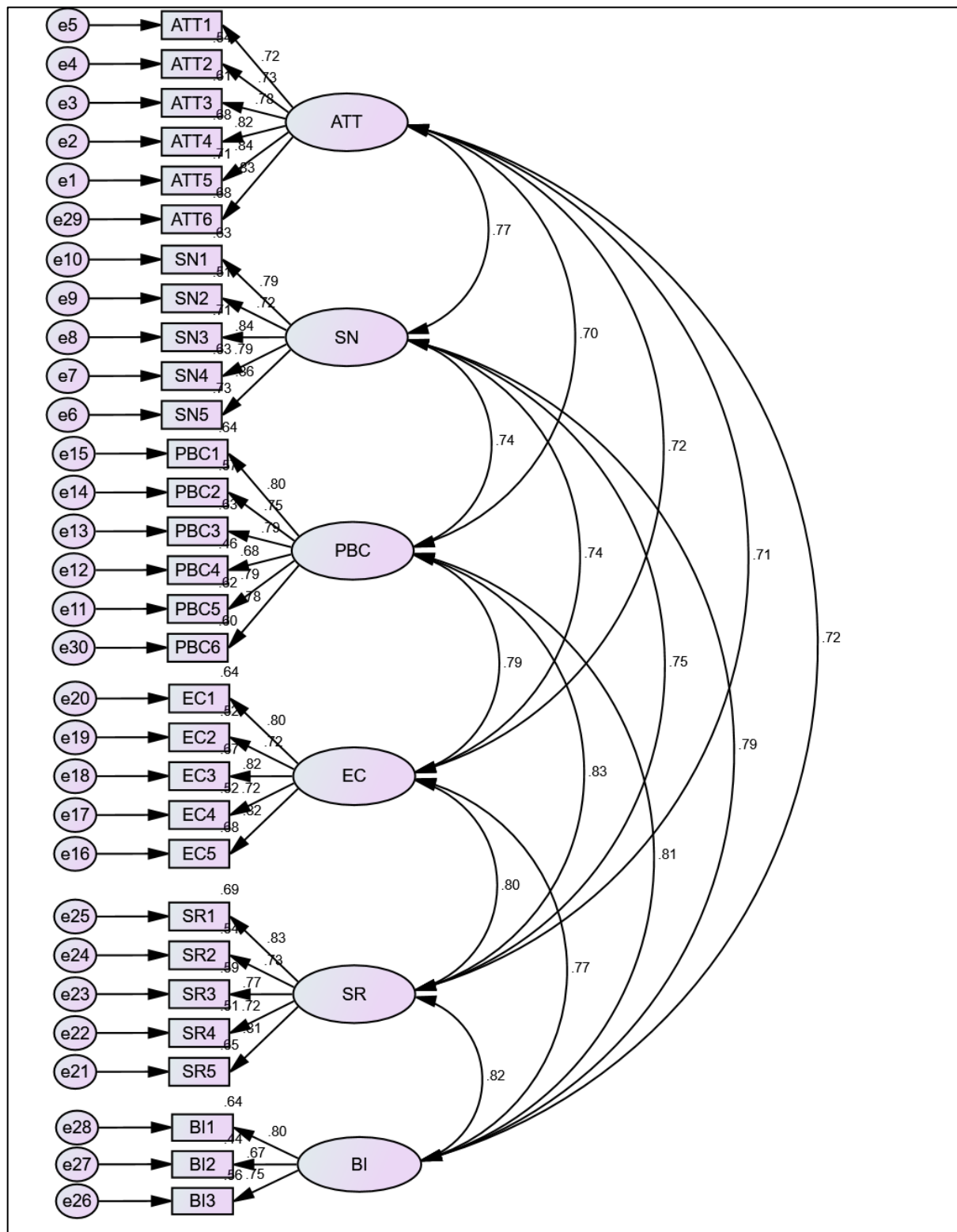


Table No: 3 Reliability and validity

Path	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Attitude	0.907	0.904	0.614
Behavioural Intention	0.782	0.784	0.549
Environmental Concern	0.884	0.883	0.605
Perceived Behavioural Control	0.895	0.894	0.587
Subjective Norms	0.900	0.900	0.643
Social Responsibility	0.881	0.880	0.600

As all the values are as per the recommended criteria of Hair et al 2013, we can conclude that there exist an adequate reliability and convergent validity.

Table No: 4 discriminant validity

Path	ATT	BI	EC	PBC	SN	SR
Attitude	0.783					
Behavioural Intention	0.747	0.741				
Environmental Concern	0.725	0.731	0.778			
Perceived Behavioural Control	0.712	0.711	0.774	0.766		
Subjective Norms	0.774	0.691	0.735	0.737	0.802	
Social Responsibility	0.720	0.705	0.776	0.718	0.736	0.774

Figure No:2 Structural Equation model (SEM)

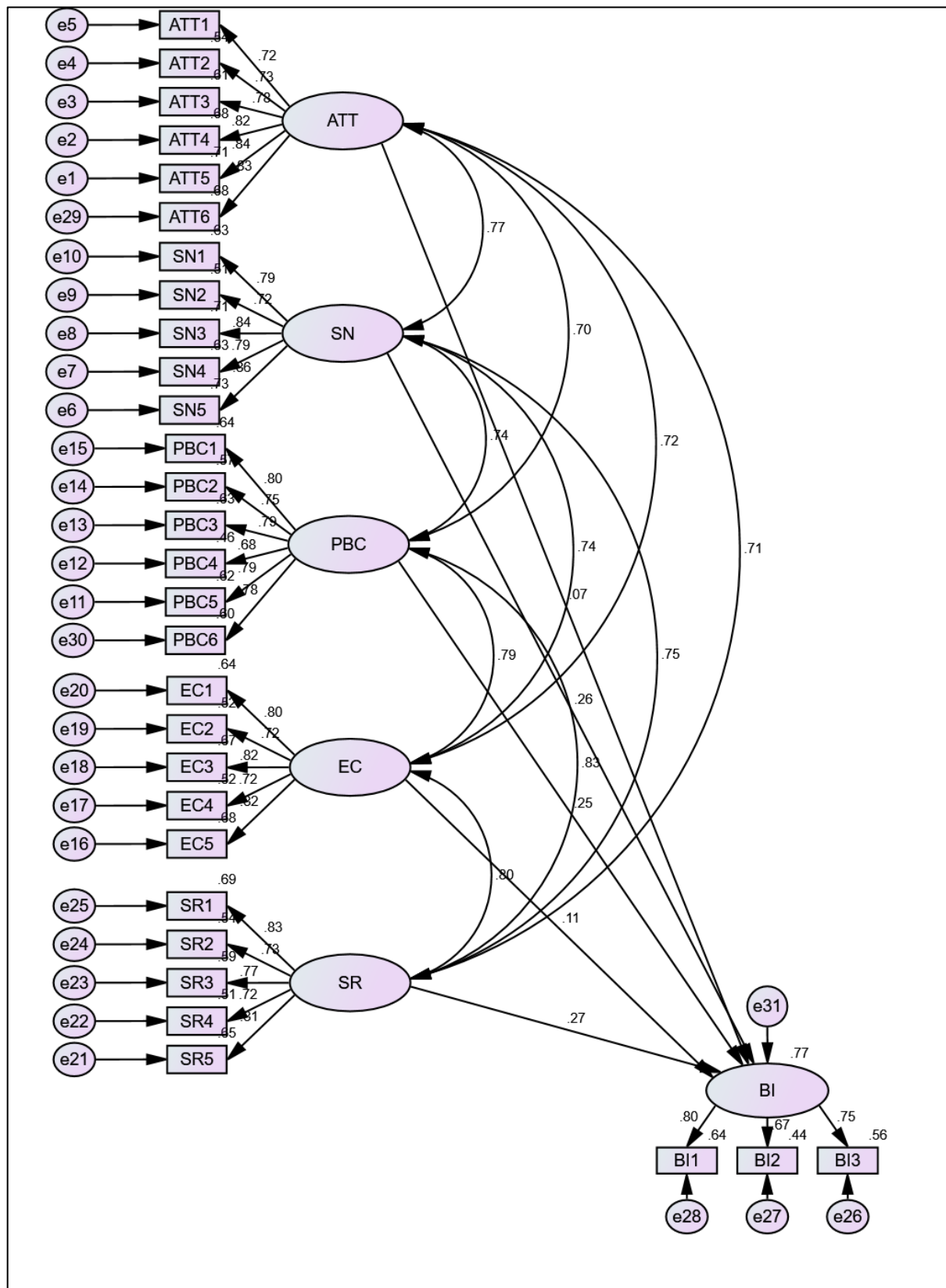


Table No: 4 Hypothesis testing

Path	Beta Coefficient	T-statistics	P-value
Attitude → Behavioural Intention	0.125	2.472	0.014
Environmental Concern → Behavioural Intention	0.123	2.409	0.016
Perceived Behavioural Control → Behavioural Intention	0.229	4.080	0.000
Subjective Norms → Behavioural Intention	0.218	4.116	0.000
Social Responsibility → Behavioural Intention	0.198	3.971	0.000

6. Conclusion

The study highlights that Attitude (ATT), Subjective Norms (SN), Environmental Concern (EC), Social Responsibility (SR), and Perceived Behavioural Control (PBC) significantly and positively influence sustainable investment intentions. These insights emphasize the need for policymakers and financial institutions to create supportive environments and educational initiatives that foster positive attitudes, address environmental and social concerns, and ultimately strengthen sustainable investment practices.

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