Modelling on Behaviour of Indian Investor Towards Responsible Investing Using ISM

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ARTICLE HISTORY	ABSTRACT

Responsible Investment has gained increasing attention in recent years as investors seek to align financial returns with ethical, social, and environmental considerations. In the Indian context, understanding the factors that shape investors' behaviour towards Responsible Investment is essential for promoting sustainable and informed investment practices.

Purpose: The purpose of this study is to identify and analyse the behaviour of Indian investors towards Responsible Investment by examining the key variables that influence their decision-making.

Design/Methodology/Approach: The study adopts a mixed-method approach using both primary and secondary data. Primary data were collected through an interview schedule administered to investors and academicians to obtain expert opinions on the influence of identified variables. Interpretive Structural Modelling (ISM) was used to develop a hierarchical structure and analyse the contextual relationships among these variables. A detailed literature review supported the theoretical grounding of the study.

Findings: The ISM analysis revealed that all identified variables are interconnected and mutually influence one another in shaping investor's behaviour towards Responsible Investment. The model derived two levels of variable hierarchy, demonstrating how certain factors drive or depend on others. The proposed ISM model provides a structured understanding of the contextual relationships affecting investor behaviour.

Research Limitations/Implications: The study is limited by its reliance on expert opinions drawn from a specific sample of investors and academicians, which may not fully represent the broader Indian investor population. ISM also captures subjective judgments, which may vary across contexts.

Originality/Value: This study contributes a novel ISM-based framework to understand the behaviour of Indian investors towards Responsible Investment, offering practical implications for policymakers, financial advisors, and investment institutions.

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INTRODUCTION

The term "responsible investing" refers to an investment approach that recognises the importance of environmental, social, and governance (ESG) aspects to the investor, as well as the market's overall long-term health and stability. It recognises that long-term sustainable returns require stable, well-functioning, and well-governed social, environmental, and economic systems. Individual and institutional investors in most regions of the world are becoming more interested in Socially Responsible (SR) investing (GSIA, 2016). Socially Responsible Investment arose from a strong desire to make the world a better place, to promote social justice, and to ensure a world that can be sustained. We do so because we've realised that market pricing and self-regulation aren't the only, or even the best, solutions to some of the world's most serious problems. There are some things that cannot or should not be priced (Sandel 2012).

The Indian government incorporated ESG into its system over a decade ago, with the introduction of Corporate Social Responsibility, which requires all enterprises to support initiatives that address bigger social issues in society.

In 2012, the Securities and Exchange Board of India (Sebi) published a circular requiring the top 100 listed companies to publish an annual business responsibility report. This requirement was extended to the 500 largest companies under the Sebi's Listing Obligations and Disclosure Requirements Regulations 2015. Also, In the aim of extending ESG reporting practises, the Securities and Exchange Board of India (SEBI) launched the Business Responsibility Reports (BRRs). The top 100 publicly traded corporations by market capitalization are now required to declare BRR in their annual reports.

The Committee on Business Responsibility Reporting produced the Business Responsibility and Sustainability Report (BRSR) in May 2020 and proposed that it relate to the MCA21 site. In March 2021, SEBI (with the advice of the MCA) made BRSR reporting mandatory for the top 1000 listed businesses (by market capitalization).

Today, Individual investors have become more aware of their investments. It's seen that from 2011 to 2015, retail investors' share of the Socially Responsible asset market increased from 5.90% to 22.07% (Eurosif, 2012, 2016). Investors are prepared to pay a premium for well-governed companies, according to a widely referenced McKinsey opinion survey (conducted in 2000). Intuitively, incorporating ESG factors into investment analysis aids in the selection of high-quality companies with long-term viability. It also helps to mitigate risk, as ESG failures can be costly to investors, as recent incidents in industries like oil exploration, automobiles, and banking have demonstrated. (*The Importance of Responsible Investment and How It Adds Value to Investors*, n.d.)

This thesis seeks to analyse the importance of Responsible investment and the behaviour of Indian investor towards Responsible investing. It also intends to contribute to theoretical knowledge by highlighting the elements that Individual Investors consider before making Responsible Investments, as well as demonstrating that Responsible Investment is primarily driven by investor sentiments toward enterprises' social goals. Much other research has been done on Responsive Investment and its importance, but none of this research show the behaviour of Indian investors towards parking their money in an ethical manner. So, author would want to make people aware about various variables associated with responsible investment and its importance in investment decisions.

LITERATURE REVIEW

Responsive Investments

Responsible investment is a kind of investment strategy which explicitly talks about the

significance of the environmental, social, and governance factors to investor, and at the same time about long-term health and steadiness of the market in a holistic approach. (Von Wallis & Klein, 2015). It says that the meaning of Responsible Investment will remain constant and what it means ''Integration of specific concerns which are not related to finance, such as ethical, social or environmental, into the process of investment.''(Sandberg et al., 2009). Dorfleitner & Utz (2012), did not believe there that there was a requirement of a broad definition of Responsible Investment, stating that sustainability is subjective and will mean different things to different people and that responsible investments adequately summarise every preferable non-financial impact an investment known to have. These investment types can be referred as a "matter of taste". Cowton (1999), stated that applying ethical considerations to investment is like that; any aspect of human activity should be subject to ethical scrutiny.

Also, shareholders can use their right to votes to push the management/decision makers of company in a more Socially Responsible direction. (Sparkes & Cowton, 2004) stated that Companies that implement CSR lay the groundwork for Responsible investors to consider their company as a potential investment.

ESG Rating - ESG (Environmental, Social and Governance) Ratings are used to assess the ability of a company to withstand a long-term, specific to the industry material environmental, social, and governance (ESG) risks.

Business Responsibility Report - BRR, or Business Responsibility Report, is widely regarded as India's first move toward making non-financial reporting mandatory. The BRR is based on nine principles outlined in the MCA's National Voluntary Guidelines on "Business's Social, Environmental, and Economic Responsibilities." The rules indicate that businesses should be responsible not only financially, but also socially, economically, and environmentally. Businesses should gain a greater grasp of the transformation

process, which will make their operations more accountable, according to the rules.

Positive Screening – Investors choose companies that provide good examples of environmentally friendly products and socially responsible business operations, rather than eliminating them, this is known as Positive screening. Smaller enterprises that have created breakthrough items that improve the world's sustainability may be included in a positively vetted investment portfolio.

Negative Screening - Negative screening refers to the process of eliminating organisations that do not meet pre-determined social or environmental criteria.

Corporate Social Responsibility – CSR activities or corporate social responsibility refers to the initiatives that company/corporates implement as a part of their corporate governance programme to ensure that their operations are perfectly ethical and it a useful part of the society.

Investor Attitude - The existence of psychological elements that influence the behavioural decisions made by individual stock market investors has been highlighted as one of the causes of these phenomena. 2014 (Cuong & Jian). As a matter of fact, investors' decisions are influenced not only by rational factors but also by psychological ones (Phan, Jian Zhou, 2014). Psychological factors can have a significant impact on people's attitudes and behaviours; for example, when people are in a good mood, they become more optimistic in their judgments, whereas when they are not, they become more pessimistic. As a result, studying the Individual attitude and behaviour is becoming more important as it directly affect their investment decisions.

Investors with strong pro-social beliefs may thus invest in responsible companies, even if it means incurring a "ethical penalty" in the form of lower returns on investments (McLachlan & Gardner, 2004)

According to (Dilla et al., 2013) there is also a positive, direct relationship between investors' attitudes toward environmentally responsible

investment and the proportion of their portfolio that is invested in responsible investments.

Writing from the standpoint of management research, (Cheah et al., 2011) describe investor perspectives indicating that Investors attitudes play a role in the decision to invest in Responsible Investment. Some investors may also regard a company's financial performance as less important than its social and environmental performance.

Psychological factors - Conservatism, Overconfidence, herding attitude, and availability bias are the four psychological aspects investigated. All these psychological elements have been proven to play a substantial role in determining investors' investment decision-making based on earlier studies.

Behavioural Finance - Behavioural finance, a branch of behavioural economics, theorises that psychological factors and biases influence investors' and financial practitioners' financial decisions.

Peer influence – People's choices frequently follow those of their peers. Peer effects have been investigated in several fields, including economics and social psychology. Concerns about financial market volatility and herding have sparked a flurry of research into the role of peers in financial decisions.

Code of Conduct

When our activities have an impact on others, ethics is a set of moral principles or standards of behaviour that guide us. The principles like honesty, dedication, fairness and concern drive the ethical behaviour, which finds a balance between self-interest and the immediate and indirect consequences of one's actions on others. (*Ethics and the Investment Industry*, n.d.).

Ethical decision-making is influenced by social and moral norms, especially when it comes to what to do and what is right and wrong. This is significant since investing Responsibly necessitates making ethical decisions regarding environmental well-being while keeping monetary reasons in mind. As a result, these variables can be seen of as a

relationship between investment decision-making and growing environmental concern (Raut et al., 2020).

Portfolios' risks

A Portfolio is a collection of objects that are viewed. There are several distinctions that may be useful for discussion purposes. A portfolio of risks is a collection of possible events that could result in a collection of negative consequences. There could be a portfolio of at-risk assets that are impacted by events, resulting in consequences. Importantly, the risk manager selects a portfolio of risk-reduction decisions (Olivieri & Pitacco, 2011).

Responsible Investment funds are anticipated to underperform the overall market and their unconstrained conventional fund equivalents, according to reports. Which could be countered Very well by Renneboog et al. (2008), Responsible Investment portfolio managers aim to achieve both social and Financial objectives.

Portfolio - The definition of a portfolio is a collection of financial assets and investing tools held by an individual, financial institution, or investment firm.

Risk – Every investment entails some level of risk. Risk in finance refers to the degree of uncertainty and/or potential financial loss associated with an investment decision. When investment risks rise, investors typically seek higher returns to compensate for the risk they are taking. Investors' risk appetite has an impact on how they arrange their financial assets and investments.

Financial literacy and intention towards Responsible investing

The ability to understand and apply financial principles is known as financial literacy. These financial abilities include budgeting, credit management, investing, and financial management. In other words, financial literacy is the ability to handle one's finances. (*What Is Financial Literacy? How to Improve Your Skills? | Scripbox*, n.d.). Individuals that are financially literate are better able to understand money and make money-related decisions.

Responsible investment includes a mix of financial and non-financial motivations; it is believed that Responsible investment will require a high level of financial literacy. As a result, it's vital to understand the link between financial literacy and investor interest in SRI in India (Raut et al., 2020).

RESEARCH METHODOLOGY

The research will be divided into three phases: identifying characteristics through a **Systematic Literature Review**, validating those elements through empirical research, and modelling and classification of interpretive structures. The sample was chosen so that the responders came from a diverse group of 23 specialists. Research type adopted is descriptive research. For understanding the nature of relationship between the five variables, the link between them and their significance the ISM (Interpretative structural modelling) model has been used.

INTERPRETATIVE STRUCTURAL MODELLING (ISM) -
Warfield proposed a method that relied on the systematic application of basic graph theory and Boolean algebra ideas. The three dimensions of the ISM technique are as follows:

• To interpret (based on expert opinion), It is structural because it is based on the relationships and links that have been discovered between variables. It is modelling as it involves giving pictorial presentation based on iterations.

• ISM is a collaborative learning experience. A group of diverse directly and indirectly connected items is arranged into a thorough systematic model using this technique.
ISM (interpretive structural modelling) is a tried-and-true method for discovering connections between disparate elements that represent a problem or issue. After deciding on the element set and contextual relationship, a structural self-interaction matrix (SSIM) is created by comparing variables pairwise. The SSIM is then turned into a reachability matrix (RM) and the transitivity of the

RM is tested. A matrix model is created when transitivity embedding is completed. The elements are then partitioned, and an extraction is performed

Table 1 - Identified Variables for ISM Model

V1	Responsive Investments
V2	Investor Attitude
V3	Code of conduct
V4	Portfolios' risks
V5	Financial literacy and intention towards Responsible investing.

SSIM (Structural Self Interaction Matrix)
SSIM depicts the contextual link between several variables discovered. For Expert Opinion, a group of experts comprised of academics and practitioners was contacted. The relationship was discovered through brainstorming and interview scheduling. Four symbols are shown in *Table 2* i.e., V, A, X, and O, with I and j denoting symbols to establish the relationship. The SSIM is created by following the rules. The contextual relationship is provided by the SSIM. The five variables are Responsive Investments (V1), Investor Attitude (V2), Code of conduct (V3), Portfolios' risks (V4) and, financial literacy and intention towards Responsible investing (V5).
i indicates variables in vertical column.
j indicates variables in horizontal row.
To demonstrate this, the symbols 'V, A, X, and O' are utilised. Following are the rules, through which SSIM table is derived.

1. V denotes whether i will assist j variable in reaching the objectives.
2. A is indicating whether j can be achieved with the variable i.
3. X denotes a correlation between i and j in both directions.
4. O denotes that i and j are unrelated.

Table 2 – 'Structural Self Interaction Matrix'

J → I ↓	V5	V4	V3	V2	V1
V1	X	V	X	X	
V2	X	V	A		
V3	X	O			
V4	V				
V5					

Reachability Matrix

This matrix is derived by converting the symbols V, A, X, O into binary digits 0 and 1, we can do this by adhering to the listed rules.

SYMBOLS	ENTRY	VALUE IN REACHABILITY MATRIX
For V	(i,j)	1
	(j,i)	0
For A	(i,j)	0
	(j,i)	1
For X	(i,j)	1
	(j,i)	1
For O	(i,j)	0
	(j,i)	0

Table 3 – Conversion Of V, A, X, O into Binary Digits

Level	Variable
1	Responsive Investments
1	Investor Attitude
2	Code of conduct
2	Portfolios' risks
2	Financial literacy and intention towards Responsible investing.

Level-Partitioning

The reachability matrix was used to calculate the reachability and antecedent set. To identify levels, a series of iterations were carried out. Reachability is horizontal, and antecedent is vertical.

Table 4 – Level of Partitioning (Level 1)

IJ	REACHABILITY MATRIX	ANTECEDENT MATRIX	RS AS	LEVEL
V1	12345	1235	1235	Level 1
V2	1245	1235	125	
V3	1235	135	135	
V4	45	124	4	
V5	1235	12345	1235	Level 1

Table 5 – Level of Partitioning (Level 2)

| IJ	REACHABILITY MATRIX	ANTECEDENT MATRIX	RS AS	LEVEL
V2	24	23	2	Level 2
V3	23	3	3	Level 2
V4	4	24	4	Level 2

Level Matrix

The relationship between five variables has been categorized into 2 levels and their direction is represented by arrows.

Table 6 – Level Matrix

Level	Variable
1	Responsive Investments
1	Investor Attitude
2	Code of conduct
2	Portfolios' risks
2	Financial literacy and intention towards Responsible investing.

Figure 1 - An ISM Model On Behavior Of Indian Investor Towards Responsible Investing
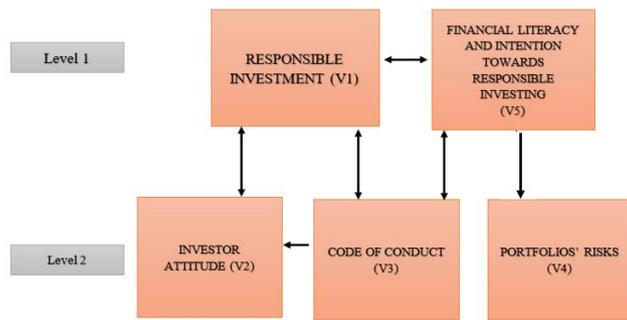
CONCLUSION

The *figure 1* depicts the ISM model that's been developed following the prescriptive phase (Review of the literature, arrangement of the literature, and the formation of relationships) and the prospective phase (includes the development of an iterative matrix as well as ISM and MICMAC analysis). The model reveals that the five variables are split into two levels, the second of which is the most important.

According to the model, the most significant elements that influence Indian investor behaviour toward responsible investing options are investor attitude, code of conduct, and portfolio risk. We can easily deduce that elements such as investor attitude, code of conduct, financial literacy, and intention toward responsible investing influence responsible investment, and that responsible investing influences the three factors. The impact of responsible investing on portfolio risk is still under research, though a few studies have found that investing Responsibly lessens the risk.

Since code of conduct is individualistic, it cannot influence the risk element connected with investment decisions, hence there is no link between portfolio risk and code of conduct. The financial literacy element has an impact on portfolio risk; the more financially literate a person is, the lower the risk in his portfolio will be since he will be capable of managing his finances well.

While examining the behaviour of investors we could come up to a conclusion that those with strong environmental values are more likely to choose Responsible Investments that are consistent with their values. We may also conclude that financial performance is the most significant factor to consider when making an investment decision. Investors are wealth maximising rationalists who find it difficult to see beyond this while making investment decisions. As a result, Responsible investment fund managers should focus on promoting their funds' performance, with its qualities coming in second. Further motive of the fund managers should be to make investors aware about the importance of parking a part of their funds responsibly to promote individual's responsibility towards the society and environment

The Study's Limitations

The limitation of ISM Model Is that it is based on the implementation of ISM **FINDINGS** in real-world contexts, which necessitates some changes. To gain a true picture, the study might be repeated for institutes.

Further Research Directions-
The model created using ISM can be further validated by utilising structural equation modelling to test it empirically. Each factor has a relative weight that is hidden in the ISM hierarchy. To obtain the same, a more in-depth network analysis approach might be used. For elaboration, whole interpretative structural modelling, a more advanced technique, can be utilised.

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    (Note: You had two identical entries — Zhang & Frank (2010) and Zhang, F. (2010) — the second one is correct and included.)