

Uncovering Behavioral Determinants for Adopting and Implementing Green IS/IT: A Framework Based on Systematic Review and Bibliometric Insights

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Abstract

Green Information Systems and Green Information Technology (Green IS/IT) have emerged as crucial tools for mitigating environmental impact, enhancing cleaner industrial processes, and fostering sustainability-driven economic growth. Although technological readiness and policy support for Green IS/IT are steadily increasing, organizations still face notable barriers in their adoption and implementation, particularly those rooted in human behavior. This study addresses this gap by identifying and synthesizing the behavioral dimensions that influence the adoption and implementation of Green IS/IT. A hybrid methodological approach was employed. First, a systematic literature review was conducted to extract behavioral factors associated with Green IS/IT. Second, a bibliometric analysis was performed to map research trends, intellectual structures, and thematic evolution within the field. The consolidated findings were categorized into behavioral dimensions and structured using an adapted Belief–Action–Outcome (BAO) framework to conceptualize the determinants and expected outcomes of Green IS/IT adoption. The review reveals that green human resource management practices, green organizational culture, and behavioral intention to use technology are the most influential behavioral determinants of Green IS/IT adoption and implementation. Complementary relationships among green culture, value-based alignment, employee commitment, and intention emerge as critical enablers. Additionally, green competitive advantage, enhanced environmental performance, improved brand value, and a strengthened corporate image are identified as key outcomes of Green IS/IT initiatives. The proposed theoretical framework provides a foundational structure for future empirical validation and offers actionable insights for organizations seeking to integrate behavioral dimensions into their Green IS/IT strategies. The broad adoption of Green IS/IT has the potential to significantly enhance data-driven sustainability practices, process monitoring, and environmentally responsible decision-making.

1. Introduction

“Technology is best when it brings people together.”

-Matt Mullenweg

Emerging advances in people, processes, and technology have become crucial for achieving sustainable development goals (Melville, 2010). The rise of green technologies represents a transformative pathway for addressing climate change while simultaneously strengthening economic systems. These eco-innovations enable organizations to reduce their carbon emissions and enhance their technological capabilities (Technology & Innovation Report, 2023). According to the March 2023 UNCTAD report, the global economy has now entered a decisive phase of green technological innovation, making it imperative for organizations, especially in developing nations, to leverage these technologies to enhance economic growth and mitigate environmental harm (Green Technologies: Coherent Policy Action Needed for Developing Countries to Reap the Benefits, 2023). Furthermore, scholars emphasize that such green innovations act as catalysts for sustainable competitiveness and long-term organizational performance (Albino, Berardi, & Dangelico, 2009).

Green information systems and technologies represent a key technological pathway for advancing sustainable development objectives (Alsdorf, 2022; Jenkin et al., 2011; Loeser et al., 2017; Zeng et al., 2020). As a specialized area within the information systems domain, Green IS/IT supports environmental sustainability by enabling reductions in CO₂ and other greenhouse gas emissions, lowering operational costs, minimizing electronic waste, improving corporate reputation, and decreasing the overall ecological footprint (Alsdorf, 2022; Dalvi-Esfahani et al., 2017; Loeser et al., 2017). However, despite these advantages, the adoption of Green IS/IT in industries, particularly within developing economies, remains at an early stage (Green Technologies: Coherent Policy Action Needed for Developing Countries to Reap the Benefits, 2023). Scholars in the IS/IT field suggest that this lag is largely due to the complex set of factors that influence the adoption and effective implementation of such green technologies.

Numerous factors and organizational conditions influence the adoption and implementation (A/I) of green information systems (GIS) and green information technology (GIT) (Dalvi-Esfahani et al., 2017; Verdecchia et al., 2022). These include absorptive capacity, green organizational identity, stakeholder engagement, organizational culture, corporate environmental ethics, and green intellectual capital, as noted by several scholars and practitioners (Yang et al., 2017). As the popular saying suggests, “Technology is best when it brings people together,” highlighting that technology cannot operate in isolation; it relies on people for its development, functioning, and management (Cabrera et al., 2001). The behaviors, beliefs, habits, and values of individuals collectively shape an organization's culture (Büschgens et al., 2013), and these human and cultural elements significantly influence the adoption and implementation of any technological or innovative practice (Gholami et al., 2013; Isensee et al., 2020; Ojo & Fauzi, 2020). “People” encompass individuals’ behaviors, attitudes, knowledge, and efficacy, whereas “culture” represents the shared beliefs, values, and attitudes embedded within the organization (Wang, 2019). Furthermore, an individual’s decision to use an IT/IS system is often the first step in the overall adoption process, emphasizing the central role of human behavior in both pre-adoption and post-adoption stages (Shaikh & Karjaluo, 2015). Human resources, user attitudes, and managerial orientations are therefore considered integral components of the internal context of IS/IT adoption, as they are inherent features of the organization (Caldeira & Ward, 2003).

Thus, in this paper, we are aiming to determine the ecocentric behavioral dimensions of adopting and implementing any technology or innovation, and basically green information systems and technology, as it is still unexplored (Alsdorf, 2022; Anthony et al., 2020b; Mishra et al., 2014; Singh & Sahu, 2020; Singh et al., 2022). Although academicians have deliberated on several aspects of green information systems and green information technology adoption and implementation (Green IS/IT A/I), they have not specifically addressed the ecocentric behavioral factors. This paper primarily focuses on the pre-adoption behavioral factors that should be present in the organization for better Green IS/IT A/I. The reason for calling these behavioral factors “pre-adoption behavioral factors” is that these are the ingrained/core/and root factors that play crucial roles in adopting any technology and innovation.

This paper will focus on the arrangements and requirements related to behavioral dimensions when adopting and implementing green information systems and technologies within an organization. With this, we are aiming to ascertain the following objectives:

- To determine the behavioral dimensions of green IS/IT A/I via a systematic literature review.
- To develop the theoretical models with the constructs of behavioral dimensions using the BAO framework.
- To explore the green IS/IT A/I field to analyze the growth pattern and emerging trends with the help of bibliometric analysis.

This paper is divided into several sections and subsections, each of which explains a part of the overall paper. Section 2 outlines the research methodology, explaining the approach used to select the number of papers. Section 3 explains the behavioral dimension and outcome of green IS/IT A/I discussed in this paper. Section 4 explains the analytic interaction between the elements (variables) of green IS/IT A/I using models within the belief-action-outcome (BAO) framework, highlighting the study's significant propositions. Section 5 presents a scientific review of the green IS/IT A/I literature and discusses the results of the bibliometric analysis. Finally, we summarize the paper, outlining the study's implications and conclusions, as well as its limitations and future scope.

2. Research Methodology

This section addresses the methodology and outlines the criteria used to select the number of papers to be reviewed in this study. For this study, we conducted a systematic literature review of the recommendations provided by Transfield et al. (2003) and Gupta et al. (2019). We have classified this section into three parts: (i) Planning the Review, (ii) Conducting the Review, and (iii) Reporting and Dissemination. The methodology is discussed in detail in the following subsections. Section 2.1 explains how we have finalized the keywords and articles for review; the actual process of searching for relevant papers is discussed in this section. Section 2.2 classifies the literature based on research areas and shows the year-wise publication of Green IS/IT literature articles. Section 2.3 addresses the reporting aspect, listing critical theories/frameworks, methodology, antecedents, and outcomes in the Green IS/IT literature.

2.1. Identification of Literature

Beginning with this stage, we selected the keywords and databases to be used for extracting the relevant studies. The database used for searching papers is Web of Science, as it contains SSCI and SCIE-based journal papers, prioritizing quality over quantity. Though our paper relates to green information system initiatives, we have also searched for papers on green information technology because both concepts are used interchangeably (Loeser et al., 2017). Green information systems are also sometimes considered a type of green information technology. Therefore, we have used both terms for the search. As we conduct the literature review on the adoption and implementation factors of green IS/IT, we have searched for terms related to adoption and implementation. The keywords used for searching the data are as follows:

Table 1 Keywords Used for the Study

Green Information System and Green Information Technology	Adoption and Implementation (A/I) factors
“Green Information System” OR “Green IS” OR “Green Information Technology” OR “Green IT”	“adoption” OR “antecedents” OR “drivers” OR “factors” OR “determinants” OR “implementation”

Source: Author’s Compilation

After searching for keywords related to green information systems and technology, as well as A/I factor, individually using the “OR” operator for different synonyms, we combined the two searches using the “AND” operator to retrieve papers related to the adoption and implementation of green IS/IT. After that, we applied additional filters to identify the relevant studies. Figure 1 gives a clear picture of the data selection process for the articles.

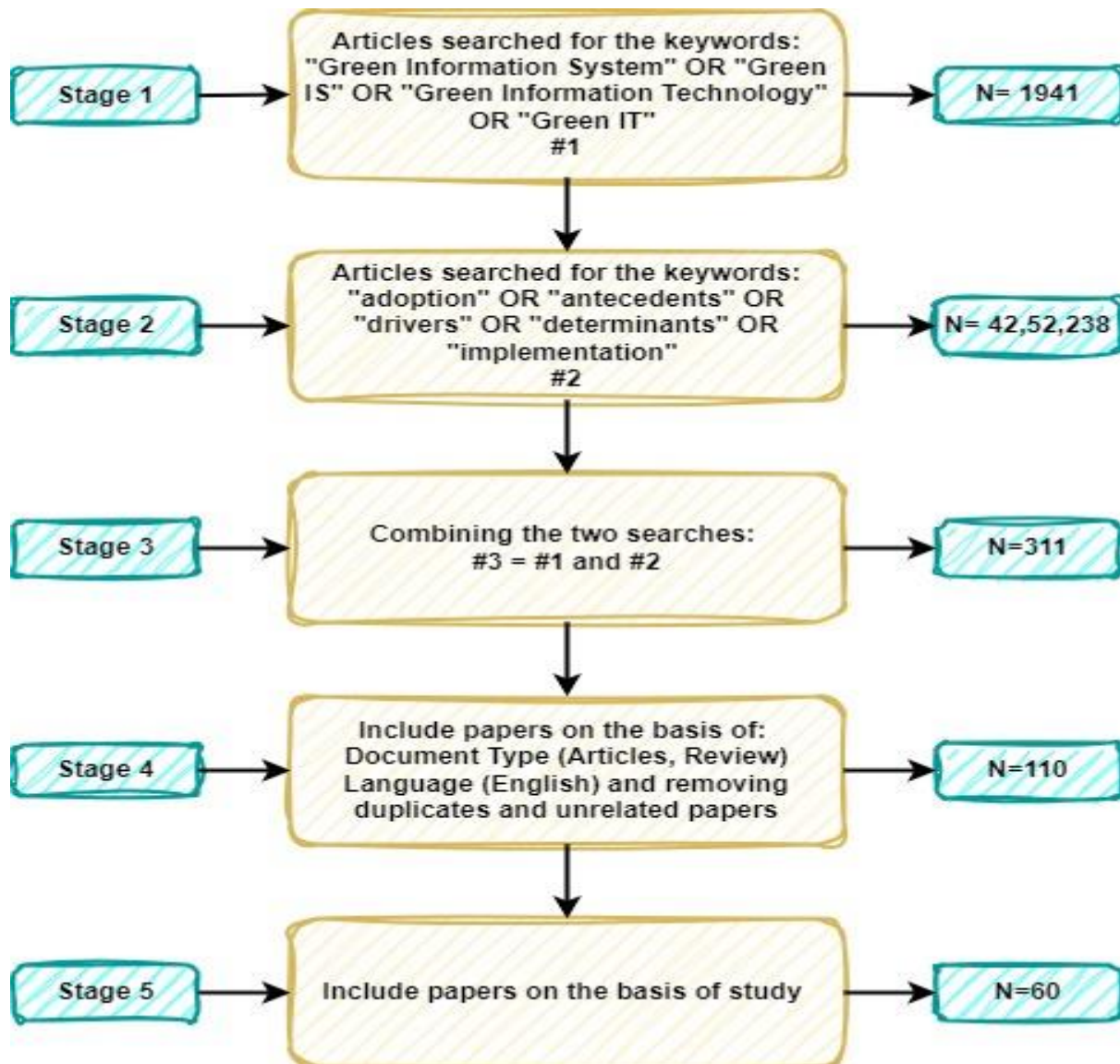


Fig.1 Stages describing data selection process (Source: Web of Science Database, Feb 6, 2024).
 Source: Author's Compilation

2.2. Classification of Literature

This section classifies the articles based on research areas (Fig. 2) and year of publication (Fig. 3). Fig. 2, the classification pie graph shows that the area where major research of green IS/IT is conducted is the environmental sciences ecology area with 19 percent indicating that research focus of green IS/IT has been on deriving its relationship with humans and physical environment. The research areas of science technology (16%), information and library science (15%), and computer science (15%) have high rates because green IS/IT falls within the domain of information systems, which requires the use of information and technology. Green IS/IT offers economic benefits, such as cost reduction, profit surplus, and increased brand value, all of which contribute to the research area of business economics, accounting for 11 percent. The other research areas include engineering (10%), psychology (4%), mathematics (2%), and others (7%).

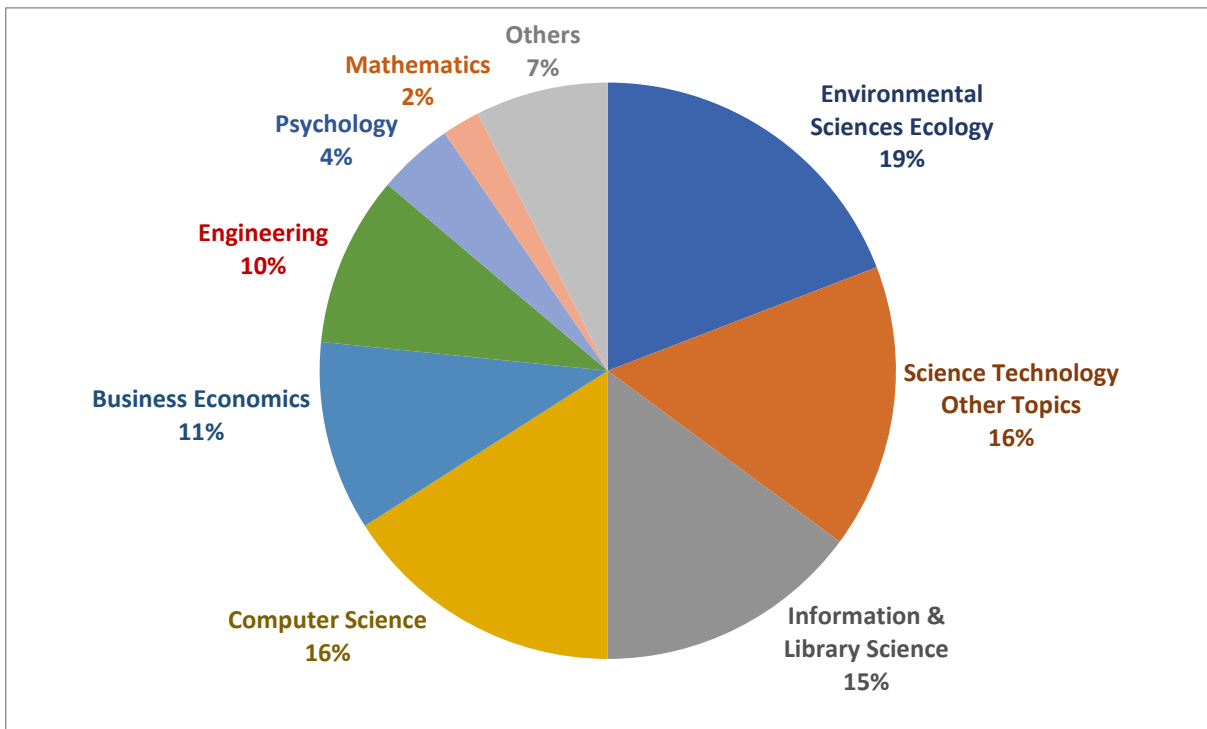


Fig.2 Classification of articles based on research areas. *Source:* Author’s Compilation using Web of Science database

Figure 3, the publication year graph, shows that researchers started exploring this area in 2011, and from 2013, the research field started emerging; the number of articles shows the trending graph; however, in 2018, the trend came down, but again, from 2019, the graph shows an increase in the number of publications. In 2022, we have a maximum number of publications indicating that green IS/IT A/I is an emerging area, and researchers are increasingly concerned with identifying the factors influencing green IS/IT adoption and implementation (A/I). In subsequent years, 2023-24, the trend continues, demonstrating the importance of the green IS/IT A/I field.

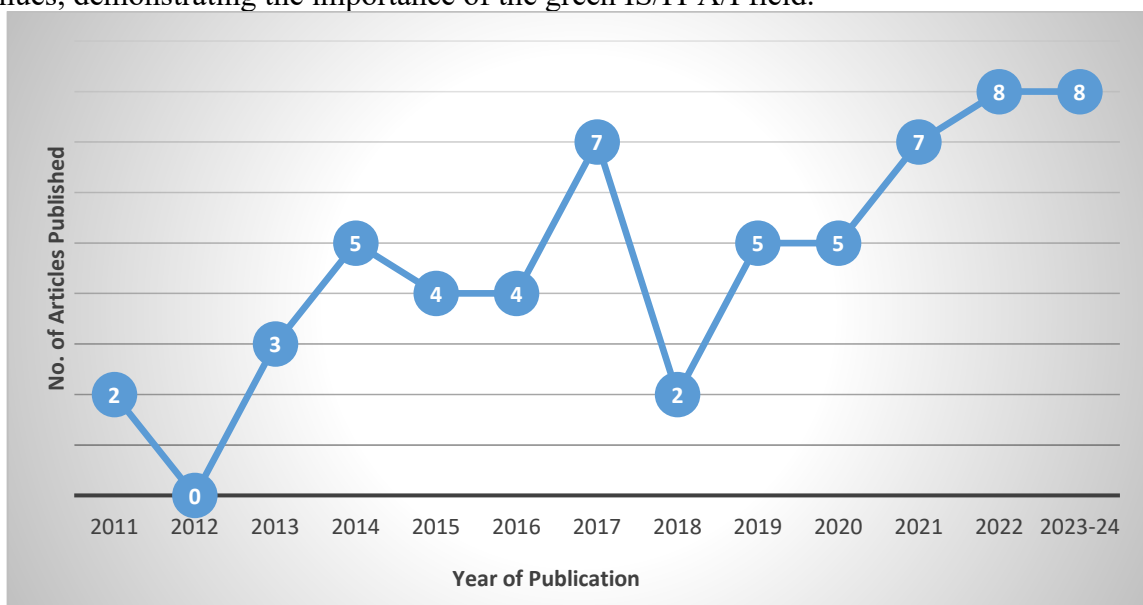


Fig.3 Year of Publication Graph *Source:* Author’s Compilation

2.3. Reporting and Review

This section presents a detailed summary of the green IS/IT A/I literature, outlining all the essential theories, frameworks, variables, methodologies, and related findings presented in Appendix A. From Appendix A, we have identified essential theories, frameworks, and behavioral dimensions (variables) of green IS/IT A/I that require in-depth discussion. Figure 4 summarizes all the possible behavioral elements of green IS/IT A/I and categorizes them into major elements or categories with the help of the literature discussed in Section 3. Table 2 presents critical theories and frameworks of green IS/IT A/I, along with their definitions.

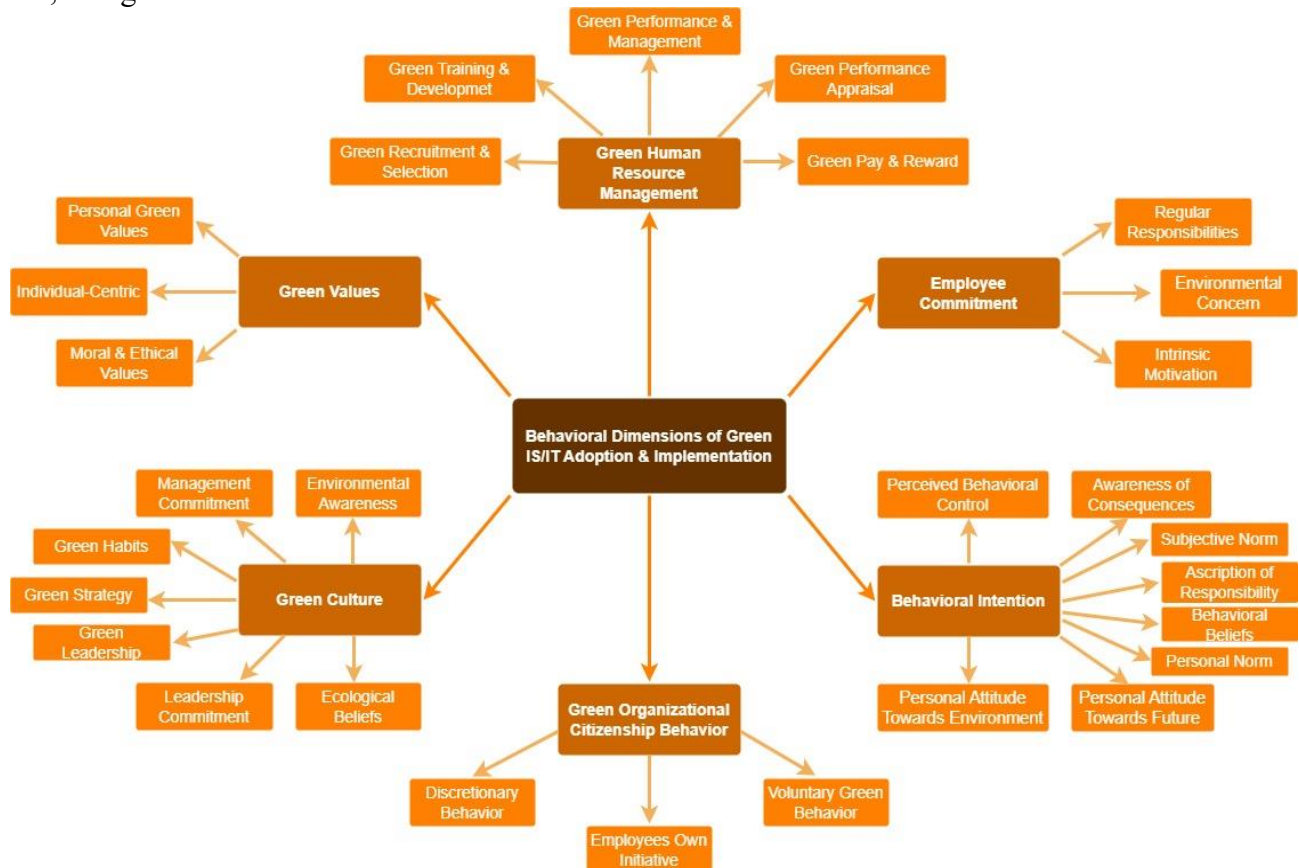


Fig. 4 Identification of Behavioral Dimensions of Green IS/IT Adoption and Implementation Factors
 Source: Author's Compilation

The green IS/IT A/I factor identified from previous literature can be categorized into six key areas: green human resource management, green culture, green values, employee empowerment, behavioral intention, and green organizational citizenship behavior. These dimensions have been referred to as pre-adoption behavioral factors in this study, as they are the internal factors of any organization. (2003) have also highlighted in their study that human resources, user attitudes, IS/IT competence, organizational structure, management perspectives, and attitudes are part of the internal context of IS/IT adoption. The above dimensions have been explained in detail in Section 3.

Table 2: Prominent theories and frameworks discussed in Green IS/IT A/I literature

Theories/Frameworks	Concept	Papers
Belief-Action-Outcome Framework or Model (BAO)	The BAO framework helps form the association of an organization's beliefs, practices, and outcomes for sustainability and other purposes.	Baggia &Maleti, 2019; Gholami et al., 2013; Loeser et al., 2017; Molla et al., 2014; Ojo et al., 2019; Ojo & Fauzi, 2020; Rayner & Morgan, 2018; Yang et al., 2017; Zeng et al., 2018
Institutional Theory	The institutional theory describes three types of pressures (mimetic, coercive, and normative pressure) that force the organization to shape its organizational structure.	(Ainin et al., 2016; Butler, 2011; Butler & Hackney, 2021; Carberry et al., 2017; Chen & Roberts, 2024; Coffey et al., 2013; Deng & Ji, 2015; Gholami et al., 2013; Hu et al., 2016)
Norm Activation Theory or Model (NAT or NAM)	NAM is used to explain an individual's pro-environmental and pro-social behavior.	(Asadi et al., 2019, 2021; Buba et al., 2022; Cordero et al., 2022; Dalvi-Esfahani et al., 2017; Maity et al., 2019)
Theory of Planned Behavior (TPB)	TPB explains human behavior by determining behavioral intention from attitude, norms, and behavioral control.	(Akman & Mishra, 2014; Asadi et al., 2019; Buba et al., 2022; Cordero et al., 2022; Dalvi-Esfahani et al., 2020; Lembcke et al., 2021; Mat Nawi et al., 2024)
Technology Acceptance Model (TAM)	TAM explains an individual's behavioral intention when using a technology.	(Akman & Mishra, 2015; Ali et al., 2021; Lembcke et al., 2021; Römer et al., 2015)
Theory of Reasoned Action (TRA)	TRA suggests that attitude determines an individual's behavior and subjective norms.	(Mishra et al., 2014; Molla et al., 2014; Römer et al., 2015)
Resource-Based View Theory (RBV)	RBV suggests a firm could achieve a competitive advantage by harnessing its resources.	(Deng & Ji, 2015; Hameed et al., 2023; Lei et al., 2023; Nanath & Pillai, 2017; Nanath & Radhakrishna Pillai, 2021)
Unified Theory of Acceptance and Use of Technology (UTAUT)	UTAUT explains technology adoption by comprising four key determinants: performance expectancy, effort expectancy, social influence, and facilitating conditions.	(Ali et al., 2021; Anthony et al., 2020; Maity et al., 2019)
Grounded Theory	Gioia proposed this theory in 2013 for measuring data analysis. This theory is mainly used in qualitative research.	(Xu et al., 2024)
Natural Resource	ROT theory is an extension of RBV theory. It is a business strategy-focused theory that concentrates on the role of	(Riaz et al., 2024)

Orchestration Theory (ROT)	managers in achieving a competitive advantage by utilizing a firm's resources efficiently.	
Diffusion of Innovations Theory and Activity Theory	DOI posits that adopting innovation is a process that goes through five steps in order, i.e, knowledge, persuasion, decision, implementation, and confirmation. Activity theory posits that human behavior is affected by specific challenges when responding to a stimulus.	(Kirchner-Krath et al., 2024)
Institutional Legitimacy Theory (ILT), Green Technology Innovations (GTI) Theory, and Corporate Financial Performance (CFP) Theory	ILT theory identifies the proactive and reactive approaches to green technology innovation, enabling it to gain credibility and boost profits. GTI theory is supported by the interpretation of reactive and proactive green innovative technology. CFP theory analyses many financial indicators beyond profits, including risk, solvency, and capacity.	(Qing et al., 2024)

Source: Author's Compilation

3. Understanding the elements

This section explains the major elements (variables) discussed in this study and helps achieve the first objective, i.e., identifying pre-existing behavioral factors of green IS/IT.

3.1. Green Information System and Green Information Technology (Green IS/IT)

Green information systems and technologies fall within the broader field of information systems (Loeser et al., 2017). Although the terms "Green IS" and "Green IT" are often used interchangeably, scholars distinguish between them based on their conceptual definitions (Dalvi-Esfahani et al., 2017). Green Information Systems (GIS) refer to systems designed to minimize an organization's environmental footprint. They involve the creation and use of tools such as teleconferencing platforms, groupware, automation systems, and environmental auditing systems to reduce waste, lower carbon emissions, enhance energy efficiency, and ultimately promote organizational sustainability (Sahu & Singh, 2016; Yang et al., 2018). Within this context, green IS infrastructure, primarily the hardware component, is considered a tangible organizational resource that supports green innovation and facilitates the effective functioning of green IS initiatives (Yang et al., 2017). Green Information Technology, or Green IT, or GIT, is a way to achieve corporate environmental sustainability by using, disposing of, and developing IT products by industries so that they have less or no harmful effect on the environment (Ali et al., 2021). Green IT can be defined as "the practice of designing, manufacturing, using, and disposing of computers, servers, and associated subsystems efficiently and effectively with minimal or no impact on the environment, and with a strong focus on using information systems to enhance sustainability across the economy." (Deng & Ji, 2015). Green IT and Green IS contributed to sustainable development by promoting cleaner processes and environmentally responsible production practices, enabling organizations to lower CO₂ emissions,

decrease energy consumption, minimize waste generation, and reduce overall environmental impact (Anthony et al., 2020a).

3.2. Green Innovation

Green innovation refers to industries adopting innovative techniques to shift towards sustainable operations from traditional practices (Sharma et al., 2021). The concept of green innovation can be understood in relation to eco-innovation, which refers to “new products and processes which provide customer and business value but significantly decrease environmental impacts.” (Yang et al., 2017). The green innovation concept asserts that innovation can be product-based, process-based, or managerial-based (Sharma et al., 2021; Yang et al., 2017). Green innovation promises many organizational benefits, such as competitive advantage, green corporate image, green performance or environmental performance, and economic and operational performance (García-Machado & Martínez-Ávila, 2019; Wang, 2019; Yang et al., 2017). Green innovation is essential for sustainable development and environmental protection (Yang et al., 2020). The adoption of green IS/IT would lead to the enhancement of green innovation.

3.3. Green Human Resource Management (GHRM)

Green human resource management refers to integrating human resource management practices with environmental management strategies (Hooi et al., 2022; Jabbour & De Sousa Jabbour, 2016). GHRM practices encourage pro-environmental behaviors among employees, such as minimizing waste, utilizing resources responsibly, and undertaking tasks with an environmentally conscious mindset, which collectively support the organization in achieving its environmental objectives (Rayner & Morgan, 2018). The human resource dimensions, such as recruitment and selection, training and development, performance appraisal, and rewards, contribute to implementing and maintaining the environmental management systems (Jabbour & Santos, 2008). GHRM increases employees' awareness of their environmental responsibilities and equips them through training and motivation to engage in sustainable practices that support environmental preservation. These practices contribute to the development of a green organizational culture, encouraging employees to exhibit green organizational citizenship behaviors (Hooi et al., 2022; Muisyo et al., 2022). By cultivating green skills, pro-environmental attitudes, and environmentally responsible values, GHRM strengthens the foundations of a green culture and enhances the organization's overall green performance (Muisyo & Qin, 2021). GHRM practices, with the help of green culture, lead to a green competitive advantage (Muisyo et al., 2022).

3.4. Green Culture

Green culture is a growing concept within the green economy, referring to the collective environmental beliefs, values, and practices shared by individuals in an organization (Abbas & Dogan, 2022). When an organization aligns its business with environmental management and makes decisions that consider its environmental impact, this is referred to as a green culture (Jabbour & Santos, 2008). A green culture provides a platform for organizations where they can adopt all sorts of green practices, such as GHRM, GSCM (Green Supply Chain Management), GCSR (green corporate social responsibility), and other green initiatives (Jabbour & De Sousa Jabbour, 2016), thus, enabling the organizations to adopt green IS initiatives such as green IS and green IT. A culture should be adaptive, enabling the organization to anticipate and respond to environmental changes. A green culture enables the organization to adapt to environmental changes by fostering an organizational climate that can effectively address these changes. Green culture leads to environmental performance (Hooi et al., 2021). Green culture serves as a key source of competitive advantage, enhancing both an organization's competitiveness and its green performance, while green innovation plays a mediating role in this relationship (Wang, 2019). The enablers of green culture, including leadership emphasis,

message credibility, peer involvement, and employee empowerment, enable an organization to achieve competitiveness and improved environmental performance (Muisyo et al., 2022).

3.5. Behavioral Intention to use a technology

Behavioral intention to use a technology or behavioral intention includes the whole dimension of an individual's behavior toward technology, including their attitude, belief, awareness, interests, efficacy, knowledge, and experience (Akman & Mishra, 2014). In general, norm activation theory and the theory of planned behavior are used extensively for explaining the behavior of individuals (Asadi et al., 2019), while in green IS/IT A/I literature, BAO, NAT, TPB, TAM, TRA, RBV, and UTAUT theories (Table 2) are mainly used to study individual and organizational behavior. All the constituents relating to behavioral intention have been identified from the literature in Appendix Table A and are explained in this section.

The first factor incorporated in the concept of behavioral intention is the personal norm that defines the *moral commitment* of individuals, whether they feel compelled to follow or disregard a specific behavior (Asadi et al., 2021). Personal norms activate pro-social behavior in individuals (Asadi et al., 2019). Attitude or environmental attitude refers to the magnitude of awareness and interest an individual has toward environmental concerns (Dalvi-Esfahani et al., 2017; Hankel et al., 2019). *Awareness of consequences involves understanding how one's actions affect the environment* (Buba et al., 2022). When individuals understand that environmentally responsible actions lead to a healthier environment, while harmful actions contribute to environmental degradation, this reflects their awareness of consequences. *Ascription of responsibility* refers to the perception that passive environmental behavior may lead to negative consequences for the environment (Dalvi-Esfahani et al., 2017). There are several factors related to behavioral intention, including perception, such as perceived behavioral control, which refers to the ease of performing a particular behavior or the extent to which one has control over and limits the action of a specific behavior (Buba et al., 2022; Lembcke et al., 2021). *Perceived ease of use and perceived usefulness* refer to the interpretation of how easy it is to use a technology. *Eco-technological knowledge* refers to the knowledge of methods for protecting the environment, which plays the role of intrinsic and extrinsic motivation for an individual (Koo & Chung, 2014). *Subjective norms* are also referred to as perceived social pressures from society's expectations that one should behave in a particular manner (Akman & Mishra, 2015). (2022) defines *environmental concern* as “a universal perception or behavior that triggers an individual to engage in activities that adequately protect the environment.” Environmental concern refers to an individual's contribution to safeguarding environmental sustainability or the triple bottom line of sustainability (Gholami et al., 2018).

These components, including environmental attitude, beliefs, perceived behavioral control, perceived usefulness and ease of use, personal norms, and subjective norms, are all used to discuss and explain the intention behind individuals' behavior in various dimensions of the research field.

3.6. Green Organizational Citizenship Behavior

Green organizational citizenship behavior refers to the employee's extra effort concerning environmental management that was not asked by the organization, but is purely the employee's own will (Hooi et al., 2022). Green organizational citizenship behavior is a green behavior that stems from an individual's environmental concern; these efforts are not formally rewarded, but an organization must appreciate and acknowledge this behavior to promote green performance and foster a green culture.

3.7. Outcomes

The outcomes of green IS/IT and green innovation have been thoroughly discussed in this subsection. Green brand value, green performance, green corporate image, and green competitive advantage are

among the key advantages of green IS/IT and green innovation; however, the list does not end there. Let us get into the meaning of these outcomes:

Green brand value is created for a brand when the organization follows environmentally friendly practices in manufacturing its products or when the product is labeled as environmentally friendly. Green brand value refers to the brand value associated with a green image, thereby strengthening the organization's green corporate image.

Green performance is “the measurement of the interaction between the business and the environment.” (Sharma et al., 2021). It refers to the performance of a business for the environment (Wang, 2019).

Green corporate image refers to the image made by the firm in customers' eyes, and it takes business action considering environmental issues into mind (Alam, 2021). Yang et al. (2017) It is posited that establishing a good green image through the use of green technologies leads to a green competitive advantage, and effective environmental management results in a positive corporate image. The use of environmental management systems and technologies (green IS/IT) helps the organization to reduce its emissions, corporate waste, and pollution, thus building a reputation for the organization with its stakeholders (Baggia & Maletić, 2019; Loeser et al., 2017; Muisyo & Qin, 2021). (2017) suggests that green environmental technologies build an organization's corporate reputation.

Competitive advantage refers to a position where it becomes difficult for an organization's rival to imitate its distinctive strategies, giving the firm an edge over its competitors (Nanath & Pillai, 2017).

Green competitive advantage is the position gained through the adoption of unique, sustainable practices and differential environmental strategies, such as green IS/IT, a green culture that gives an organization a cutting edge over its rivals, and also builds a green image for its stakeholders (Alsdorf, 2022; Muisyo & Qin, 2021).

4. Relationship between the elements: Proposition and Green IS/IT A/I Framework Development

This section focuses on ascertaining the second objective: developing theoretical models to establish relationships among the factors and green IS/IT. The relationship between the factors with green IS/IT, green innovation, and their outcomes has been constructed and presented through the Belief-Action-Outcome (BAO) framework.

4.1. Deriving the link between the elements

This section explicitly explains the relationship between the elements presented in Model 1, Fig. 5(a), as it is the basic model. The basic model is extended by adding three more variables to the framework, as explained in Section 4.2.2.

4.1.1. Green Culture and Behavioral Intention to use a technology (Arrow 1 and 2)

Culture and behavior are two sides of the same coin; one cannot be studied without the other. It is the behavior of employees that forms the culture in an organization, whereas it is the culture that brings about changes in the behavior of employees (Cabrerera et al., 2001). Culture and behavior are interdependent. The individual behavior of employees affects, improves, and develops the organization's culture, just as the organization's culture affects, improves, and develops the behavior of employees (Ojo et al., 2019). Green culture influences the behavior of the employees towards eco-friendly and pro-environmental behavior (Al-Swidi et al., 2021). Yang et al. (2017) assert that the organization's green culture guides employee behavior. Abbas & Dogan, (2022) posit that green culture reshapes the behavior of employees, and they tend to behave in a socially responsible manner. The enablers of green culture, including leadership emphasis, message credibility, peer involvement, and employee empowerment, influence employee behavior, making them more proactive and engaging with environmental issues within the organization (Muisyo et al., 2022). Culture/leadership

influences the attitude of employees (Hankel et al., 2019). Green culture is a crucial factor in environmental studies that influences the pro-environmental behavior of individuals. It has a positive relationship with green behavior (Al-Swidi et al., 2021) and directly influences an individual's attitude toward green IT/IS (Asadi et al., 2021).

Proposition 1: Green Culture and behavioral intention are positively related.

4.1.2. Green IS/IT and Green Innovation (Arrow 7)

Green IS/IT and green innovation are closely related, supplementing each other's effectiveness. Green IS/IT has a positive impact on green innovation, contributing to its development and operation, while green innovation enhances the effectiveness of green IS/IT (Loeser et al., 2017; Yang et al., 2017). Green IS is often considered a source of green innovation (Baggia & Maleti, 2019). Nanath and Pillai (2017) have explored the effect of green IS practices on green innovation, stating that green IS has a positive impact on green innovation performance. Additionally, green IS, with a mediating effect on green innovation, positively affects competitive advantage. Green IS/IT practices lead to green innovation capabilities (Loeser et al., 2017). The enhancement of green drives green innovation IS and Green Supply Chain Management (GSCM) endeavors, as the two are considered to be the pillars of green innovation and have a direct impact on its performance; the alignment of GIS and GSCM with green innovation yields a positive impact on organizational performance (Yang et al., 2020). Green IS/IT is a technology-driven practice that enhances the performance of green innovation, yielding many organizational benefits for the organization, such as green image, competitive advantage, organizational capabilities, cost efficiency, and organizational performance (Loeser et al., 2017; Nanath & Pillai, 2017; Yang et al., 2020; Yang et al., 2017).

Proposition 2: Green IS/IT is positively related to green innovation.

4.1.3. Green Culture with Green Innovation and Green IS/IT (Arrow 3 and 4)

Green culture has a supplementary relationship with green innovation and green IS/IT. It enhances the effectiveness of green innovation and green IS/IT; in the same way, green innovation and green IS/IT also enhance green culture's effectiveness (Yang et al., 2017).

Büschgens et al. (2013) postulate that different cultural traits offer different success rates for innovation. Some cultural traits, such as hierarchical culture, negatively correlate with innovation. However, that does not mean a culture is inherently good or bad; it simply means that culture has different relationships with innovation. However, a green culture is an intangible resource that supports innovation and technology implementation in the organization (Yang et al., 2017). Many scholars and authors have reported a strong positive relationship between green culture and innovation. A green culture promotes green innovation by creating a space for green innovation culture (Muisyo & Qin, 2021). Green innovation provides sustainability to green culture in the organization by making creative and transformative changes in the ways of doing business, as green culture requires a dynamic and creative environment to sustain (Porter-O'Grady & Malloch, 2010). Green culture is one of the critical determinants of green innovation (García-Machado & Martínez-Ávila, 2019). Sharma et al. (2021) opine that many researchers have included green culture in their innovation models. Green culture has a positive and direct impact on green innovation effectiveness, which further leads to green performance and other environmental outcomes (Sharma et al., 2021; Wang, 2019; Yang et al., 2017).

Green culture is a determinant, driver, antecedent, and predictor of green IS/IT. Enablers of green culture encourage employees to be proactive in green initiatives, such as green IS infrastructure (Muisyo & Qin, 2021). Green culture drives the adoption of green IT (Al-Zamil & Saudagar, 2020; Deng & Ji, 2015). Singh & Sahu (2020) posit that an organization must change its traditional organizational culture to green to promote green IS. Ojo et al. (2019) define green culture as important in determining green IT. Zeng et al. (2018) posit that developing a green culture (internal motivation

within the organization) and promoting sustainability beliefs is the first step in executing a green IT transformation, as it engages employees and motivates them to work toward the organization's long-term sustainability goals. Green management culture influences the GIT attitude (Ojo et al., 2019). Furthermore, studies indicate that the adoption of green IS/IT promotes green culture within the organization and leads to overall societal changes by fostering environmental sustainability (Nanath & Pillai, 2021; Singh & Sahu, 2020; Yang et al., 2017).

Proposition 3: Green culture has a positive influence on green innovation and green IS/IT A/I.

4.1.4. Behavioral Intention to use technology with Green Innovation and Green IS/IT (Arrow 5 and 6)

Behavioral intention to use technology is an inevitable determinant of the behavioral dimension in adopting and implementing green innovation and green IS/IT. Behavioral factors such as personal norms, the ascription of responsibility, awareness of consequences, subjective norm, perceived control, employees' attitude, belief, etc., contribute to determining the behavioral intention to green IS/IT A/I (Asadi et al., 2021; Dalvi-Esfahani et al., 2020).

Ecological beliefs are crucial in adopting green IS (Singh et al., 2022). Personal norm is a significant predictor in determining the intention to adopt green IT (Asadi et al., 2021; Dalvi-Esfahani et al., 2020; Yoon, 2018), and it positively influences the intent to adopt green IS (Dalvi-Esfahani et al., 2017). Dalvi-Esfahani et al. (2017) define "Green IT/IS attitude is an important factor in determining managers' decisions in adopting Green IT/IS." He also suggests that individuals aware of the behavioral consequences of their actions on the environment are more inclined to adopt green IT/IS practices. Perceived usefulness significantly impacts the adoption of green IT/IS (Asadi et al., 2021). Eco-technological is said to have a positive effect on intrinsic as well as extrinsic motivation and has a significant influence on smart green IT adoption (Koo & Chung, 2014). Mishra et al. (2014) posit that "subjective norms have a strong positive effect on the behavioral intention of IT professionals in adopting GIT, and their path coefficients are the highest of all." Behavioral intention to use technology guides the organization about the interests and readiness, as well as the magnitude of interests and readiness of their employees and professionals about using technology or innovation.

Proposition 4: Behavioral intention positively influences green innovation and green IS/IT A/I.

4.1.5. Green IS/IT and Green Innovation with Outcomes (Arrow 8 and 9)

Green IS/IT, and green innovation yields numerous benefits. The very first outcome offered by the two is organizational and environmental sustainability (Alsdorf, 2022; Asadi et al., 2021; García-Machado & Martínez-Ávila, 2019; Jenkin et al., 2011; Muisyo & Qin, 2021; Wang, 2019). The alignment of green IS/IT and green innovation with culture and behavioral intention helps organizational performance (Yang et al., 2017). Green innovation leads to green performance and improves the organization's image (Sharma et al., 2021). The exhaustive list of all outcomes is discussed in Appendix A.

Proposition 5: Green IS/IT and green innovation have a positive relationship with the outcomes.

4.2. Proposed Model: Constructing links between the elements via the BAO Framework

The relationship between the behavioral elements of green IS/IT used in this study is constructed using the BAO framework model. The BAO framework was first introduced by Melville (2010) to explain the role of human behavior in adopting and implementing information systems and their outcomes. The BAO framework explains "how environmental orientation shapes individual and organizational actions, which in turn impact environmental performance." (Ojo & Fauzi, 2020). Melville (2010) posits that environmental concern motivates individuals and organizations to adopt specific sustainable actions, which in turn lead to improved environmental outcomes.

4.2.1. Model 1 (Basic Model)

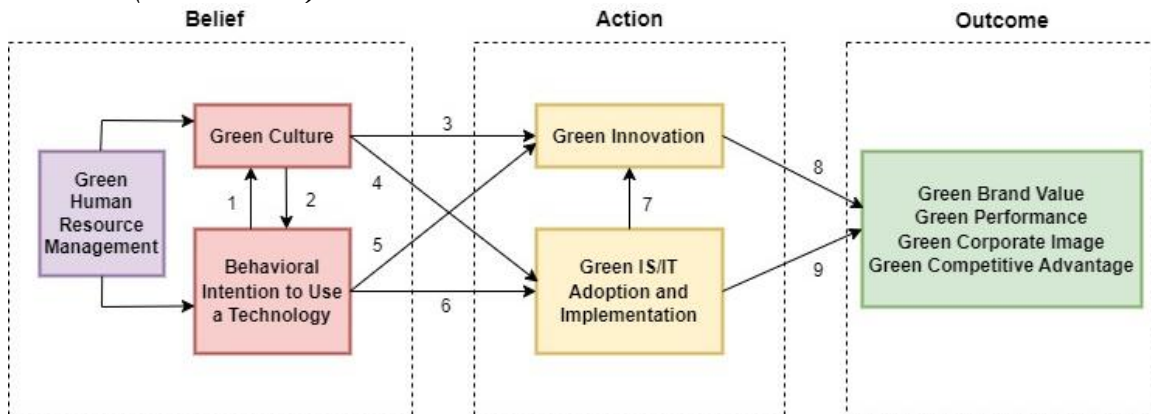


Fig.5 (a) BAO Framework of Green IS/IT Adoption and Implementation *Source: Author’s Own Construction*

The above model, Fig. 5(a), demonstrates green human resource management (GHRM), green culture, and behavioral intention to use technology as the organization’s belief, which leads to action in the form of green innovation and green IS/IT which further leads to environmental outcomes in the form of green competitive advantage, green corporate image, green performance, and green brand value. Before green culture and behavioral intention, GHRM was added to the behavioral dimension of green IS/IT A/I. The rationale behind adding GHRM into the green IS/IT BAO framework is that GHRM influences the green culture and behavior of employees in the organization (Muisyo et al., 2022; Rayner & Morgan, 2018). Green culture is believed to be developed when we train human resources to behave eco-friendly manner and practice activities that protect the environment (Jabbour & De Sousa Jabbour, 2016). This green culture and eco-friendly behavior can be quickly developed by implementing GHRM; GHRM is a precursor to green culture and environmentally responsible behavior. Green culture and behavioral intention are supplementary to green innovation and green IS/IT as they enhance their effectiveness. In turn, green innovation and IS/IT also stimulate their efficacy. Green IS/IT is a green innovation, but it also contributes to the effectiveness of green innovation. A detailed explanation of the relationship between the elements has been discussed in Section 4.1.

Proposition 6: Green human resource management has a positive impact on green culture and behavioral intention.

4.2.2. Model 2 (Extension to Model 1)

Model 2, fig. 5(b), is an extension of model 1, adding three more elements to the green IS/IT A/I framework. It was found in the literature that green values, employee commitment, and green organizational citizenship behavior operate within the context of a green IS/IT A/I framework. Let us explore their role in the green IS/IT framework and how they are related to the elements discussed in Model 1:

Arrows 1 and 2 in Fig. 5 (b) indicate the complementary relationship between green culture-green values and behavioral intention-employees’ commitment, respectively. Green culture and green values complement each other, sharing some commonalities, yet they are distinct concepts. Green values refer to the moral and ethical principles that employees demonstrate in their concern for the environment, whereas green culture represents an organization’s values and beliefs regarding environmental protection (Hooi et al., 2022). Employees’ green values contribute to the organization’s green culture; similarly, a green culture enhances employees’ green values and their pro-environmental behavior towards the environment and society (Hooi et al., 2022). Behavioral intention and employees’ commitment also complement each other, in that behavioral intention is the first step

toward employees' commitment, whereas employees' commitment is the ultimate goal of behavioral intention; employees' commitment encompasses behavioral intention. The behavioral intention about technology use refers to the intention of employees to use or not to use technology, and it is flexible. It depends on whether individuals intend to use technology or not. In contrast, an employee's commitment refers to the employee's dedication to a particular job and their level of commitment to performing that job (Dalvi-Esfahani et al., 2020).

Proposition 7: Green culture and green values are positively related.

Proposition 8: Behavioral intention and employees' commitment are positively related.

Arrows 3 and 4 illustrate the supplementary relationship between green culture, green values, and behavioral intention, as well as employees' commitment. Green culture and green values supplement the relationship between behavioral intention and employees' commitment in the same way that behavioral intention and employees' commitment also supplement the relationship between green culture and green values.

Proposition 9: Green culture plus green values positively affect behavioral intention plus employees' commitment.

Arrows 5 and 6 explain the relationship between green culture, green values, behavioral intention, and employees' commitment to green organizational citizenship behavior. Green culture, green values, behavioral intention, and employees' commitment lead to green organizational citizenship behavior. Green culture and values vitalize employees' behavioral intention, and commitment to using technology motivates behavior and commitment. The behavioral intention and employees' commitment contribute to the development of the organization's green values and culture.

Proposition 10: Green culture, green values, behavioral intention, and employees' commitment positively affect green organizational citizenship behavior

Arrows 7 and 8 show the relationship between green organizational citizenship behavior, green innovation, and IS/IT A/I, respectively. Green organizational citizenship behavior plays a crucial role in the adoption and implementation of any technology or innovation. The relationships between arrows 9, 10, and 11 (Fig. 5(b)) are explained in Model 1 for arrows 7, 8, and 9 (Fig. 5(a)).

Proposition 11: Green organizational citizenship behavior is positively related to green innovation and green IS/IT A/I

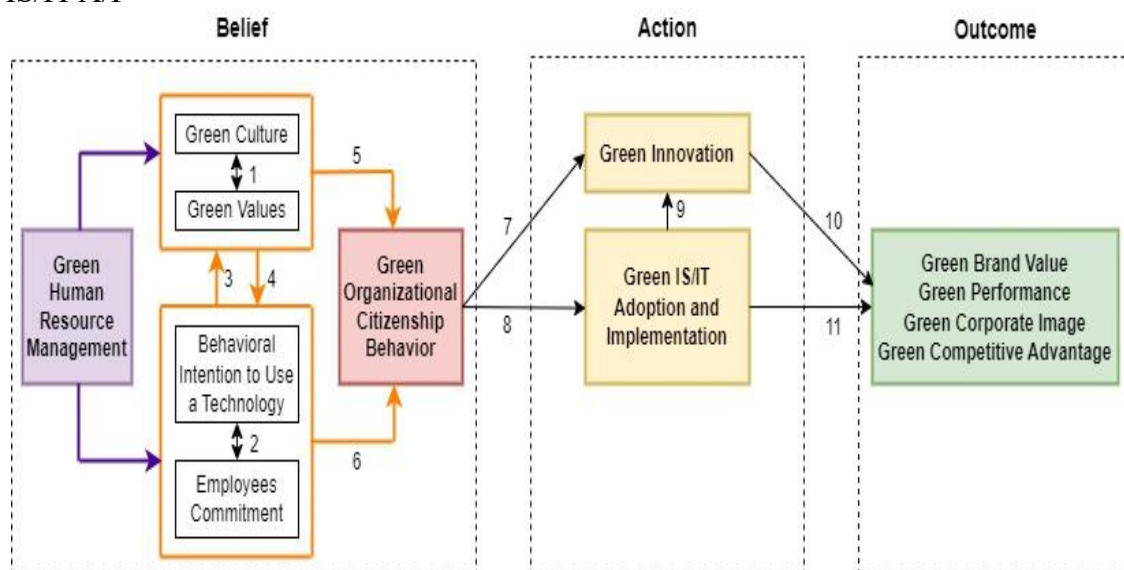


Fig.5 (b) BAO Framework of Green IS/IT Adoption and Implementation (Extended)

Source: Author's Construction

(2022) posit that GHRM inculcates green behavior in employees that builds their green values, ultimately promoting a green culture that certainly impacts their green organizational citizenship behavior. GHRM practices, such as green training and development, green performance appraisal, green recruitment and selection, and green rewards, bring about changes in individual behavior. They feel committed and motivated towards environmental protection, which further leads to developing their green values, which gives rise to a green culture in the organization (Rayner & Morgan, 2018). Employees committed to environmental protection contribute to greening the organization (Jabbour & Santos, 2008); committed employees develop green values not only among themselves but also influence the behavior and activities of their colleagues, thereby helping to create a healthy environment culture, i.e., a green culture. Green culture facilitates employees' behavior, beliefs, motivation, and commitment to green initiatives (Ojo et al., 2019).

In the above model (Fig. 5b), GHRM, green culture, and green values, along with employees' commitment and behavioral intention, led to green organizational citizenship behavior, which reflects an organizational belief. This further influences the action to green IS/IT and A/I, as well as the effectiveness of green innovation. These actions lead the way to organizational outcomes.

5. Reporting the results of bibliometric analysis: interpreting graphs

In order to understand the growth pattern and emerging trends of research in green IS/IT A/I literature, bibliometric analysis was conducted using R Studio (biblioshiny) and VOS viewer software (Donthu et al., 2021). The analysis was conducted at stage 3 of Figure 1, i.e., on 311 documents, as this represents the raw number of articles obtained from the initial search when combining green IS/IT with their adoption and implementation factors. This section addresses the third objective, namely, emerging trends and growth patterns in the research on Green IS/IT A/I literature. The relevant graphs considered for the review include the following:

5.1 Keyword Analysis

(i) Co-Word Network Visualization

The co-word network visualization graph was generated using VOSviewer. The analysis was conducted using author keywords, from which 41 words met the threshold out of 656 keywords, with a minimum of five occurrences, resulting in Figure 6. The figure illustrates four different colors, each representing a cluster, and each cluster conveying a distinct meaning. The circle (nodes) represents an entity (here, keywords), indicating the number of occurrences of each keyword. The size of the circle denotes the number of times the keyword has occurred; a bigger size indicates a high occurrence, whereas a smaller size indicates a low occurrence. The lines (links) between the nodes represent the number of co-occurrences between the keywords. The thicker line denotes the maximum occurrences of co-occurrences between the keywords (Donthu et al., 2021).

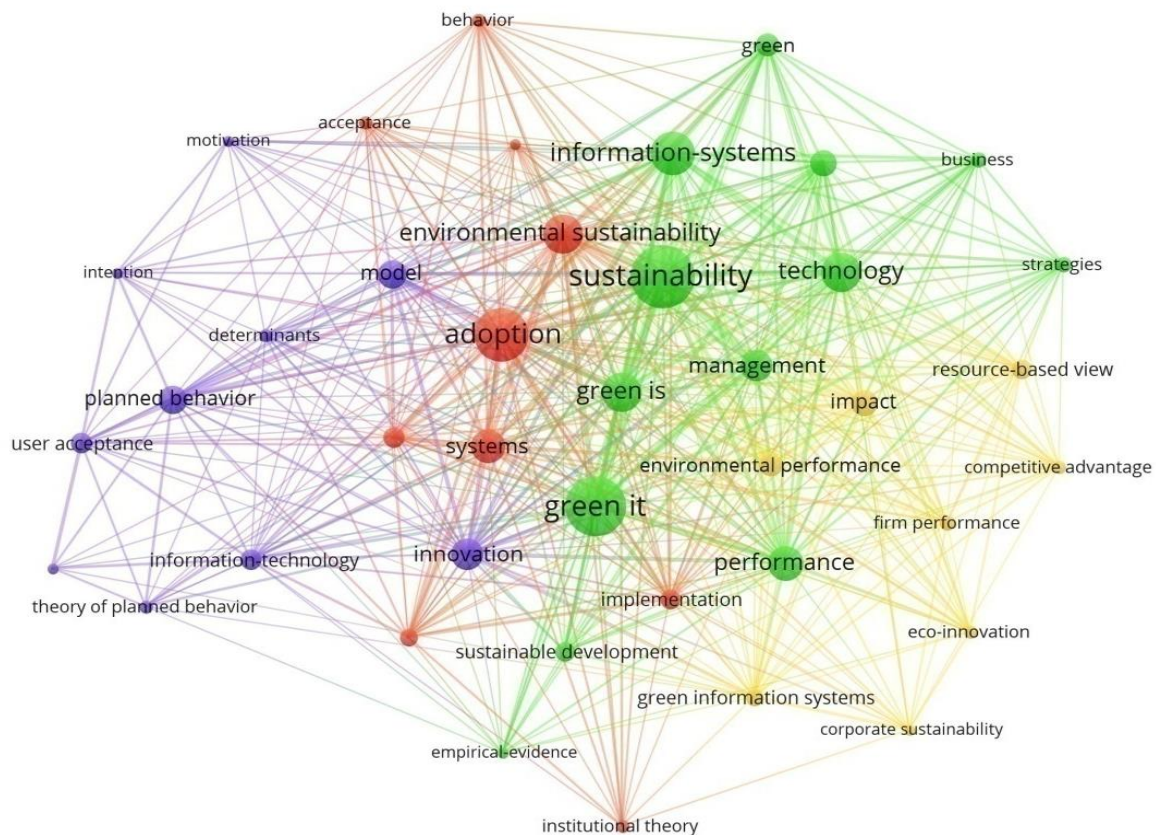


Fig. 6 Co-Occurrence of Author Keywords *Source: VOS Viewer*

Cluster 1 (Purple Color): Consists of keywords planned behavior, innovation, model, information technology, user acceptance, determinants, theory of planned behavior, intention, and motivation. These keywords collectively indicate a behavioral intention to adopt technology. Thus, this cluster can also be referred to as “behavioral intention to technology adoption.”

Cluster 2 (Red Color): Adoption, environmental sustainability, systems, acceptance, behavior, etc., keywords related to “acceptance of sustainable systems.”

Cluster 3 (Green color): The keywords sustainability, green IT, green IS, information systems, technology, performance, management, green, business, strategies, sustainable development, and empirical evidence related to “green IS initiatives of the organization.”

Cluster 4 (Yellow color): Impact, environmental performance, resource-based view, competitive advantage, firm performance, eco-innovation, green information systems, and corporate sustainability relate to “outcomes of green IS initiatives.”

The most co-occurring word in green IS/IT A/I literature is “sustainability,” followed by “green IT,” “green IS,” information systems,” “technology,” and so on. This means that the green IS/IT A/I literature revolves around sustainability, i.e., the researchers also believe that adopting and implementing green IS/IT offers sustainability.

(ii) Most Frequent Keywords

The word cloud (fig. 7) is generated by Biblioshiny using R Studio, illustrating the most frequently occurring keywords in green IS/IT A/I literature. The analysis was run on keyword plus because they are more general and comprehensive than author keywords (Zhang et al., 2016). The depth and variety of an article's content can be better captured with keywords plus phrases.



Fig. 7 Word Cloud *Source:* Biblioshiny using R Studio

The most common keywords are information systems, followed by performance, sustainability, adoption, technology, management, etc. Since green IS and green IT are part of the information systems domain (Loeser et al., 2017), information systems have the highest frequency.

5.2 Thematic Analysis

To explore the relevance and development of this field, a thematic analysis was conducted using author keywords, with a minimum of three keywords selected per cluster. The algorithm resulted in eight clusters (Fig. 8). A thematic map is divided into four themes, and each theme explains the existence of each cluster; each cluster is named after the keyword with the highest occurrence value in that cluster (Khare & Jain, 2022). Each theme has been analyzed along similar lines, as noted by Khare & Jain (2022) and Mühl & De Oliveira (2022).

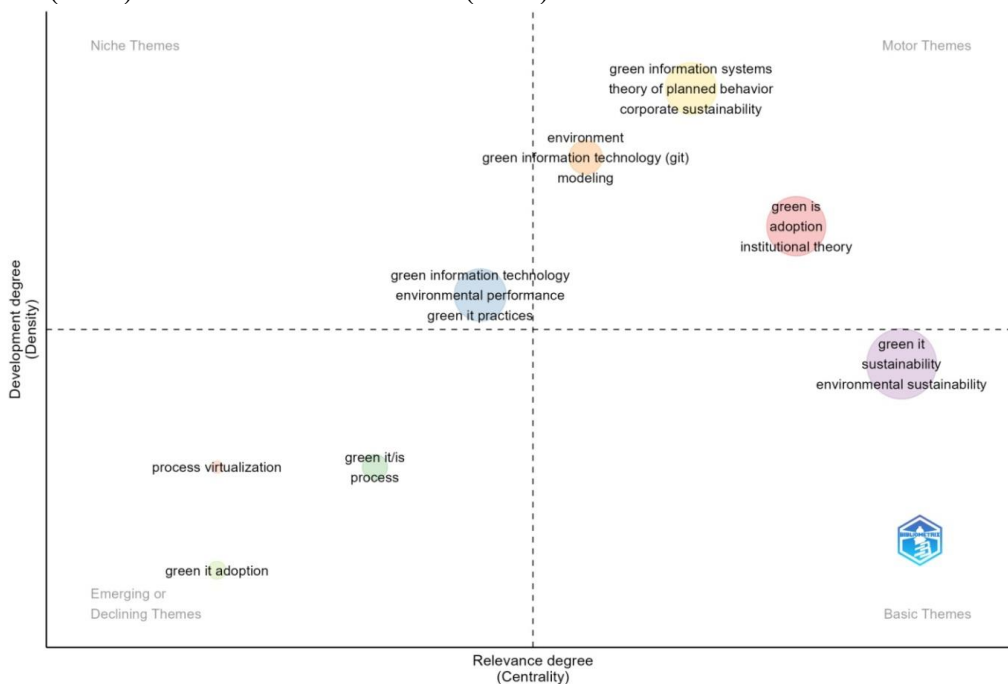


Fig. 8 Thematic Map of Green IS/IT A/I Field
Source: Biblioshiny using R Studio

The *basic theme* includes keywords such as “green it,” “sustainability,” and “environmental sustainability.” All these keywords are labeled under the name of the “**green it**” cluster. This theme is not fully developed (low density) but has high relevance (high centrality); this means the green IT cluster has high relevance, yet there is still enormous scope for its development.

Motor theme contains three clusters; the first is labeled as “**green is**” which includes “green IS,” “adoption,” and “institutional theory;” second is labeled as “**environment**,” which includes “environment,” “green information technology (git),” “modeling;” third being labeled as “**green information systems**” which includes keywords “green information systems,” “theory of planned behavior,” and “corporate sustainability.” Motor themes have high centrality and density, meaning all these clusters are fully developed and relevant in the green IS/IT A/I field.

The niche theme has low centrality but high density. The cluster falling under this theme is fully developed but has low relevance. The keywords “green information technology,” “environmental performance,” and “green it practices” will be categorized as “**green information technology.**”

Emerging or declining themes contain three clusters: “green IT adoption,” “process virtualization,” and “green it/is.” Clusters falling under this theme can be both emerging or declining. The three clusters could be emerging as the green IS/IT field is a relatively new concept and is still in its early stages of development.

5.3 Collaboration Network

(i) Co-Authorship Network

The co-authorship network gives us information about the collaborative work done by the authors; the thickness of the line between two authors shows the number of publications done together, i.e., a thicker line shows a higher number of publications (Mühl & De Oliveira, 2022). The node size represents the author's number of publications in the specific area, with a larger size indicating the highest number of publications in that field. Molla A has the maximum number of green IS/IT publications.

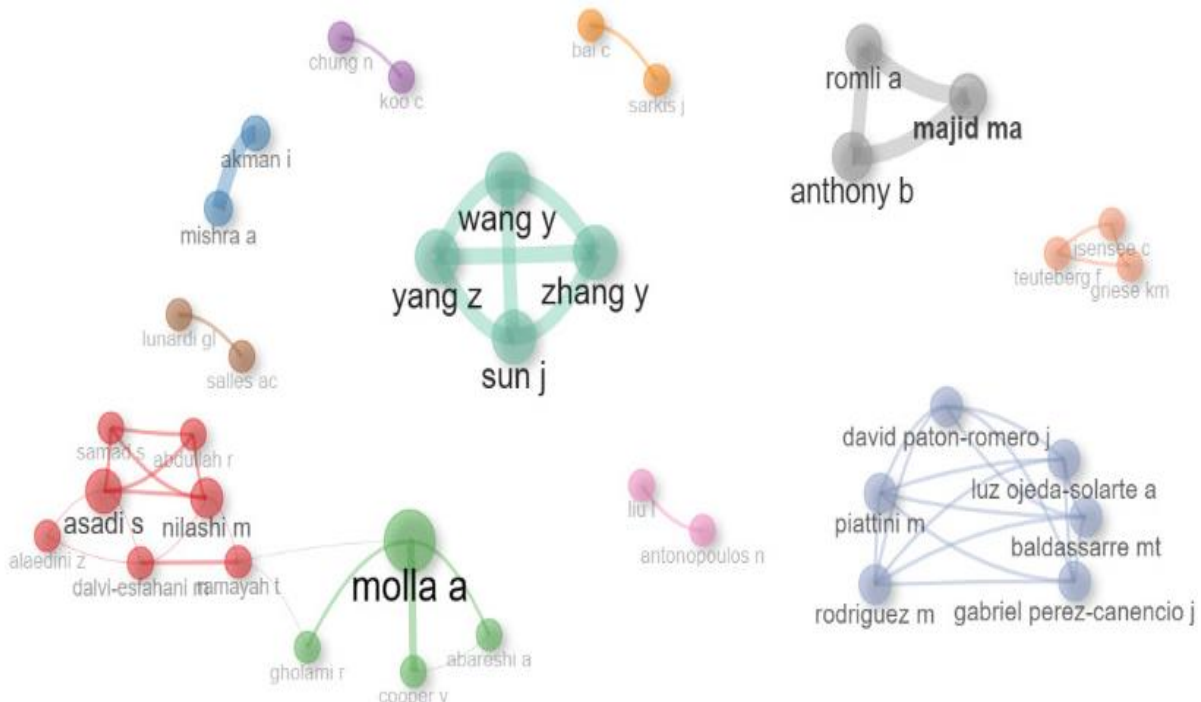


Fig. 9 Co-Authorship Networks *Source:* Biblioshiny using R Studio

The collaborative network of authors Majid Ma, Anthony B, and Romli A is vital as they have the highest number of publications, represented by thicker lines. The cluster, comprising authors Wang Y, Yang Z, Zhang Y, and Sun J, is the second most robust collaborative network, followed by the network of Akman I, Mishra A, and Molla A. However, the cluster in red is the most extensive collaborative network of authors, followed by the cluster in light blue. There is scope for more such collaborations, as this field still needs to be explored.

(ii) Country Collaboration Map

The country collaboration network illustrates that the authors of different countries have publications in collaboration (Farrukh et al., 2022). Suppose that if authors A and B of countries X and Y, respectively, collaborate, we can say that X and Y have country collaboration. The links (red curved lines) between the two countries show the collaboration between the two countries, illustrated in Fig. 10. China and the USA have the most substantial collaboration with ten publications. Vietnam and Malaysia have an equal number of collaborations with Saudi Arabia, and they have also collaborated with each other.

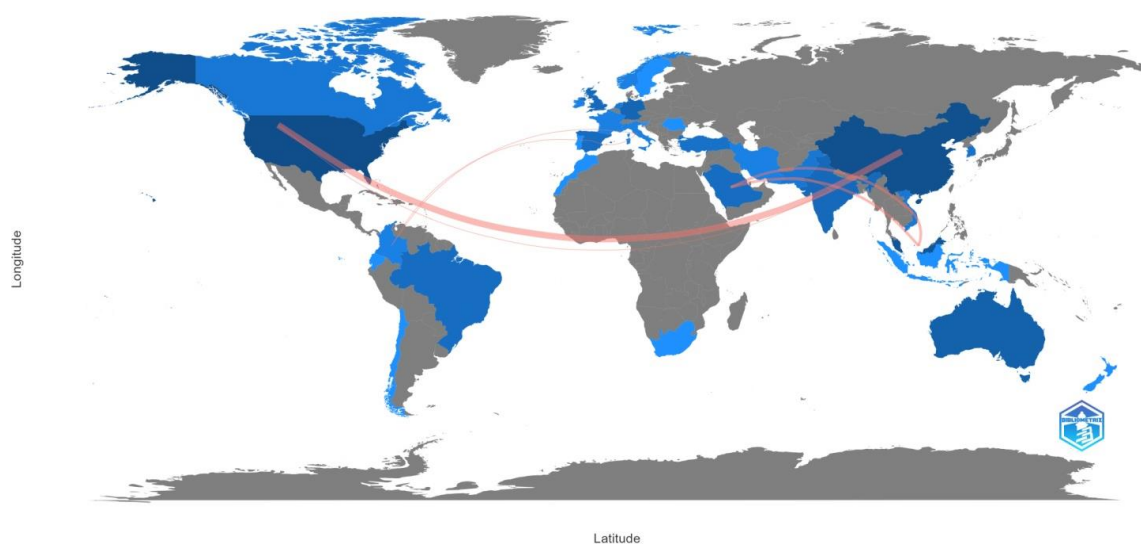


Fig. 10 Country Collaboration Map *Source:* Biblioshiny using R Studio

Collaboration between countries is still in its infancy, with considerable scope for future development. As the green IS/IT area develops, we hope to see more collaboration between countries.

6. Implication of the Study

6.1. Theoretical Implications

The study provides significant implications for green IS/IT A/I literature research. The purpose of conducting a systematic literature review in this area was to determine the behavioral dimension that targets the adoption and implementation of ecocentric behavior in green IS/IT, as it remains poorly defined in the literature. The primary ecocentric behavioral factors identified in the literature that influence green IS/IT adoption and implementation are GHRM, green culture, green values, behavioral intention, employee commitment, and green organizational citizenship behavior. The significant theoretical implications contributing to green IS/IT A/I research can be enumerated. First, this study will encourage IT practitioners and decision-makers to look at the adoption and implementation of IS/IT from a behavioral perspective. By focusing on the behavioral elements, IT executives and practitioners can develop a platform in their organizations that will support any

organizational change or innovation (such as Green IS/IT) coming into the organization. Moreover, IT executives and decision-makers can utilize the model to integrate green IS initiatives into their regular business operations. Second, the structural model of green IS/IT will guide the IT executives on the roles played by the behavioral factors in adopting and implementing green IS/IT and green innovation. Third, for academicians, the green IS/IT structural model serves as a descriptive pedagogy, providing a logical connection between the behavioral elements and outcomes related to green IS/IT. The model offers academicians various factors for further study, research analysis, discussion, and investigation. Furthermore, the outcomes presented in the model suggest the benefits and importance of implementing green IS/IT to enterprises pursuing environmental sustainability. The behavioral factors discussed in this paper revamp the BAO framework of green IS/IT and enrich the literature on information systems.

6.2. Managerial Implications

Our study focuses on the significance of improving soft power, i.e., people and culture, as software resources of the organization (Yang et al., 2017). The study's findings guide managers in the behavioral aspects of green IS/IT A/I, suggesting that they improve and develop a green culture and green human resources within their organization. The study suggests to managers the significance of the behavioral dimension of green IS/IT A/I. It motivates them to adopt green human resource management practices, as this will develop environmentally friendly behavior among employees, which will impulsively develop their intention and commitment towards using technology, and this will undoubtedly develop a green culture of the organization (Al-Swidi et al., 2021; Muisyo et al., 2022). Managers can plan and organize employees by improving their behavior and green values, and adopting and implementing green IS/IT. The BAO framework proposed in this paper will help managers understand organizational beliefs, sustainable actions, and the probable outcomes of green IS/IT adoption. Thus, this study aims to enhance managers' understanding of green IS/IT, as well as their adoption and implementation within the organization, from a behavioral perspective. The study suggests that GHRM, green culture, green values, behavioral intention, and employee commitment are the pre-existing behavioral factors that serve as prerequisites for adopting any new technology or innovation. Therefore, the primary focus should be on improving and developing these factors in the organization.

6.3. Social Implications

Green IS/IT adoption and implementation aim to reduce GHG emissions and waste generation, prevent environmental degradation, and promote environmental sustainability. This will bring a substantial positive social change. The behavioral elements discussed in this paper suggest that societal and behavioral arrangements are essential for bringing about possible changes in behavior, leading to the adoption of green IS/IT. Behavioral elements, such as green culture, green human resources, green values, pro-environmental behavior, and green organizational citizenship behavior, indicate a green cultural revolution in societal ideas and social order, which will foster environmental awareness and promote environmental protection and sustainable development.

7. Conclusion

This study aimed to discuss the ecocentric behavioral dimension of green IS/IT A/I and explicate the overall importance of the ecocentric behavioral elements that play a crucial role in adopting and implementing green IS/IT. The idea behind conducting this systematic literature review was to compile all the behavioral elements of green IS/IT under some broad categories. Although previous studies on the drivers, determinants, factors, and antecedents of green IS/IT adoption and implementation have discussed the behavioral elements, an overall picture of all these elements and their relationships was missing. The exhaustive study of green IS/IT A/I literature led us to the

conclusion that green human resource management (GHRM), green culture, and behavioral intention to use a technology or behavioral intention are the three main behavioral elements of green IS/IT A/I that influence an organization's decision in the adoption of green IS initiatives. Green culture and behavioral intention have an interdependent relationship influenced by each other's contiguity. The organization's green culture influences employees to behave in an eco-friendly manner, fosters a concern for the environment, and encourages them to adopt green practices, such as green IS/IT. Employees' behavior, attitude, awareness, beliefs, values, knowledge, and experience form and influence the organization's culture. Green values, habits, and awareness form a green culture in the organization. Green human resource management is a precursor to green culture and behavioral intention, as it helps to foster a green culture and encourages pro-environmental behavior among employees. GHRM practices such as green recruitment and selection, green training and development, green performance appraisal, and green compensation management vitalize the pro-environmental behavior of employees, which further influences the green culture of the organization. Green innovation and green IS/IT have a complementary relationship; green IS/IT is a form of green innovation that also contributes to enhancing the effectiveness of green innovation.

The study also identifies additional behavioral elements and their relationship with green innovation and green IS/IT A/I. It was found in the literature that the belief section is not limited to GHRM, green culture, and behavioral intention, but can be further extended to include green values and employees' commitment, which in turn influences employees' green organizational citizenship behavior. Green values, culture, and employees' commitment to behavioral intention have complementary relationships. These relationships, including green culture with green values and behavioral intention, along with employees' commitment, are facilitated by GHRM and succeed in promoting the element of green organizational citizenship behavior, which in turn leads to green innovation effectiveness and green IS/IT A/I. The behavioral elements of green culture and behavioral intention, including GHRM, are enough to study the behavioral dimension for green IS/IT A/I. However, extended elements such as green value, employee commitment, and green organizational citizenship behavior complete the whole behavioral dimension of green IS/IT A/I. Green IS/IT is directly related to sustainability, as it helps organizations achieve sustainable outcomes. The adoption and implementation of green IS and green IT promise many outcomes to an organization, such as green competitive advantage, green brand value, green corporate image, and green performance, but the list does not end here, as it also has some cost-associated benefits, making green IS initiatives the best choice for organizations.

8. Limitations and Future Scope

First, this study specifically focuses on the behavioral aspect of green IS/IT A/I literature, ignoring the other factors that might be more influential in green IS/IT A/I, such as technological, cost, and economic factors. Second, it overlooks the discussion of barriers and challenges associated with green IS/IT A/I. We have considered only one database, namely Web of Science, because it includes only SSCI and SCIE-indexed journals, whereas other databases, such as Scopus, EBSCO, and ProQuest, are also available. It is possible that some critical papers may have been missed in the review. This systematic literature review paper presents a framework that has not been empirically tested. Although the factors identified from the literature and their relationship have literature backing, these factors and their influence must be empirically tested. Thus, this becomes the future scope of study. This paper encompasses all possible behavioral elements, variables, methodologies, theories, and frameworks related to green IS/IT A/I from the literature, providing a comprehensive one-stop solution for those seeking the same. It aims to explore the field of green IS/IT literature. The results of this study are expected to help researchers conduct studies in the fields of green IS and green IT, as well as other information systems, focusing on both adoption and implementation. The model presented in the paper can be tested for further validation and theory development.

Appendix A

Papers	Theories/ Framework Discussed	Types of Variables			Methodology and Methods	Findings
		Antecedents/Driver/Determinants	Outcome Variables	Mediating/Moderating/Control Variables		
(Butler, 2011)	Institutional Theory and Organization Theory	Regulative, Normative, and Cultural-Cognitive Influence	CSR, Corporate Sustainability Report, Green strategy, Green Processes, Design for Environment, Green IT Products.	Mediator: Green IS Enabled Activities	Case Study	Regulative, normative, and cultural-cognitive factors affect an organization's environmental sustainability and regulatory compliance. These factors can be addressed through Green IS, which features decision-making, sense-making, and knowledge sharing.
(Bose & Luo, 2011)	Technology Organization Environment (TOE), Process Virtualization Theory (PVT), and Diffusion of Innovation (DOI)	Green IT Initialization (Technological Context, Organizational Context, and Environmental Context)	Green IT Maturation	Mediator: Green IT Integration	Qualitative Study	This study combines the theory of TOE, PVT, and DOI to explain the factors involved in green IT initialization during business transformation through virtualization.
(Cai et al., 2013)	Political-Economic Framework and The Stakeholder Theory	Political Influences (Public Concerns and Regulatory Forces), Economic Influences (Cost Leadership and Differentiation), and Perceived Complexity (negatively related)	Adoption of IT and IT for Green	—	PLS-SEM	Cost leadership is a key driving factor in adopting green IT, whereas differentiation has a significant impact on the adoption of green IT. Public concerns and regulatory forces impact on green IT. IT for green was found to be insignificant.
(Coffey et al., 2013)	Institutional Theory	Environmental Reporting, Financial Attitude, Leadership Commitment, Stakeholder Involvement, Education and Training, Supply Chain, Strategic Thinking, Government Regulations, and Implementing Green IT	Attitude Towards the Adoption of Green IT	—	Literature Review and Interview Method	Nine factors identified for SMEs' Green IT adoption. Normative pressures, including education and training, stakeholder involvement, and supply chain, were found to be the most influential factors because participants had both high consensus and high awareness of these factors.
(Gholami et al., 2013)	Belief-Action-Outcome Framework & Institutional Theory	Belief: Micro Factors-Attitude Consideration of Future Consequences Macro Factors- Coercive Pressures & Mimetic Pressures	Environmental Performance	Action: Green IS Adoption for Pollution Prevention, Product Stewardship, and Sustainable Development	PLS-SEM	Coercive pressure influences attitudes toward the adoption of Green IS, while mimetic pressure does not. Only long-term Green IS adoption was positively related to environmental performance.

(Akman & Mishra, 2014)	Theory of Planned Behavior (TPB)	Behavioral Beliefs, Subjective Norms, Perceived Behavioral Control	Actual Usage	Mediator: Behavioral Intention	ANOVA Technique	All the TPB factors (behavioral beliefs, subjective norm, and perceived behavioral control) are significant in determining the actual usage of green IT. This indicates that awareness and acceptance of green computing practices among IT professionals are at a high degree.
(Koo & Chung, 2014)	Self-Determination Theory	Eco-Technological Knowledge, Intrinsic Motivation, Extrinsic Motivation, and Social Influence	Continuous Intention to Use Green IT	Mediator: Attitude toward Green IT use Behavior	Confirmatory Approach Using Partial Least Squares (PLS)	Eco-technological knowledge has a significant impact on intrinsic motivation, as well as identified, integrated, and introjected regulation. Intrinsic motivation has a positive impact on extrinsic motivation. Attitude toward the use of Smart Green IT was the key predictor of continuous intention to use Smart Green IT.
(Mishra et al., 2014)	Theory of Reasoned Action (TRA)	Attitude Towards Behavior, Subjective Norms (External Factors: Person Related Beliefs, Sector of Respondent, Experience of Respondent, Level of Awareness)	Actual Behavior	Mediator: Behavioral Intention	SEM	Factors of TRA are positively associated with the adoption of GIT. The external factor significantly impacts the adoption of GIT, except for respondents in the specific sector. Individual workplace of private and public sector establishments also influences individuals' attitudes toward their GIT adoption behavior.
(Molla et al., 2014)	Theory of Reasoned Action & BAO Framework	Organizational Context and Information Acquisition capability	Pro-Environmental IT Practice	Mediator: Green IT Belief and Green IT Attitude Moderator: Age, Gender, and Education	SEM	Green IT attitude mediates the relationship between green IT belief and the pro-environmental behavior of IT professionals. Green belief has a strong influence on the attitude of IT professionals towards green IT. Information acquisition capability and organizational context have less significant effects on the adoption of green IT.
(Römer et al., 2014)	Theory of Reasoned Action and Technology Acceptance Model	Attitude towards ESS, Social Norm, Concern about Security of Supply, Autarky Affinity	Intention to Purchase ESS	Mediator: Attitude towards ESS	PLS-SEM	The relationship between customers' attitude and their intention to purchase IS-enhanced ESS is significant. Moreover, PV adopters have higher purchase intentions towards ESS than non-PV adopters. The autarky factor has a strong influence on participants' intention to purchase ESS.
(Ainin et al., 2015)	Institutional theory	Institutional Pressure, Consideration of Future, Consequences, and Openness	Economic Performance, Environmental Performance, Customer Satisfaction	Mediator: Adoption Intensity of Green IT Practices Control Variables: Industry & Size	SEM	Institutional pressure, consideration of future consequences, and openness are positively related to the adoption intensity of green IT practices. Adopting GIT practices ensures tangible (economic performance) and intangible benefits (environmental performance and customer satisfaction).
(Akman & Mishra, 2015)	Technology Acceptance Model (TAM)	External Factors [Subjective Norms (SN) & Level of Awareness (LA)], Perceived Ease-of-Use (PEU), Perceived Usefulness (PU)	Actual Usage (AU) and Behavioral Intention to Use (BIU)	Mediator: Attitude Towards Use [ATU] (b/w PU, PEU, and BIU), Behavioral Intention to Use [BIU] (b/w ATU and AU)	SEM	The TAM model has been extended to include two external factors, SN and LA, which both exhibit similar perspectives on the usage of GIT in the public and private sectors. All other factors yield the same result for both the public and private sectors, except for the impact of PEU on GIT use.

(Deng & Ji, 2015)	Diffusion of Innovation Theory, Institutional Theory, Organizational Culture Theory, RBV & NRBV Theory	External Drivers- (Technological Context & Institutional Pressures) Internal Motivations- (Top Management Support, Greening of Organizational Culture & Strategic Intent)	Sustainable Competitive Advantage	Mediator: Organizational Green IT Adoption (OGITA)	Literature Review	This paper presents a framework for "organizational green IT adoption" (OGITA). The model suggests that OGITA is driven by both internal and external motivations, leading to a sustainable competitive advantage.
(Koo et al., 2015)	Motivation Theory and Reference Group Theory	Intrinsic Motivator: Perceived Enjoyment in a Smart Green IT Device, Perceived Environmental Problem Extrinsic Motivator: Saving Money, Legislative Pressure	Continued Use of a Smart Green IT Device	Mediator: Perceived Usefulness in a Smart Green IT Device Moderator: Social Influence, Media Influence	PLS-SEM	Intrinsic and extrinsic motivations play a significant role in determining the perceived usefulness of smart green IT devices. Social and media influences are found to be the critical factors that affect motivation.
(Hu et al., 2016)	Institutional theory and competitive dynamics	Contextual Factors (Environmental Awareness and Governmental Regulations)	Firm's Green IT Practices	Mediator: Firm-Specific Considerations (Customers' and Equity Holders' Attitudes and Internal Readiness for Green Practices)	PLS-SEM	Environmental awareness, industry norms, customers' and equity holders' attitudes, and internal readiness influence GIT practices. Contextual factors (environmental awareness and industry norms) influence GIT practices both directly and indirectly.
(Bohas&Po ussing, 2016)	Eco-Innovation Theory	Strategic CSR and Responsive CSR	Green IT Adoption	—	Probit and Logit Models	Firms that adopt strategic CSR have a high chance of adopting 'reduce' and 'transform' types of green IT. Meanwhile, firms that adopt responsive CSR have a high chance of adopting 'substitute' and 'transform' types of green IT.
(Nanath& Pillai, 2016)	IT-Enabled Organizational Capabilities Perspective Resource-Based View Theory	Extent of Green IS Practices	Competitive Advantage	Mediator: Green Product Innovation Performance and Green Process Innovation Performance	PLS-SEM	Green product and process innovation performance is positively associated with green IS. A firm's green innovation performance positively mediates the relationship between its green IS and competitive advantage.
(Yang et al., 2016)	Task Technology-Fit Theory	Green SCM Implementation, Operational Fit, Green IT Implementation	Economic, Operational, Environmental, and Social Performance	—	PLS-SEM	The strategic fit of GSCM-GIS is good for fulfilling short-term organizational goals, whereas their operational fit is good for fulfilling long-term goals. The operational fit helps enhance social and environmental performances, not necessarily operational and economic ones.
(Carberry et al., 2017)	Institutional Theory	Social Movement Activism	Green IS Practices Adoption	Mediator: Management Commitment Institutional Pressures	SEM	By creating organizational field-level pressures, environmental activists have a stronger impact on green IS adoption than their direct influence. Green IS has been considered a social innovation.

(Dalvi-Esfahani et al., 2017)	Upper Echelon Theory (UET)	Eco Strength Locus of Control, Monetary Cost-benefit assessment, Self-transcendence, Openness-to-change, Green IT/IS attitude, Self-efficacy, Positive effect, Ascription of Responsibility, Personal Norm, Awareness of Consequences, Ethical Climate, and Subjective Norm	Green IS/IT Adoption	—	Interpretive Structural Modelling – Analytic Network Process (ISM-ANP) approach	Among all the factors, ‘monetary cost-benefit assessment,’ ‘Green IT/IS attitude,’ and ‘awareness of consequences’ were the most influential factors for the managers that motivated them to adopt Green IT/IS.
(Dalvi-Esfahani et al., 2017)	Norm Activation Model, Schwartz's Theory of Refined Value	Awareness of Consequences (AC), Ascription of Responsibility (AR)	Intention to Adopt Green IS	Mediator: Personal Norms Moderator: Personal Values	PLS-SEM	The moral obligation of managers affects their intention to adopt Green IS. The AC and AR towards the environment influence the personal norms of the managers to adopt Green IS. For personal values, self-transcendence values have a significant impact on the intention to adopt Green IS, whereas self-enhancement values have an insignificant impact.
(Gholami et al., 2017)	Uses and Gratification Theory	Content Gratification, Environmental Concerns	Intention to Continue Using the Website	Mediator: Performance Gratification, Social Gratification (Mediates the relationship of Content Gratification and Intention)	PLS-SEM	Content gratification is positively associated with both social and performance gratification. The result highlights the importance of content gratification in determining the intention to use the eco-localization website over social and performance gratification, emphasizing the significance of the quality of content on the website. Environmental Concerns were directly linked to the intention to use the website.
(Loeser et al., 2017)	Belief–Action–Outcome BAO Framework	Belief: Environmental Orientation	Outcome: Organizational Benefits	Action (act as mediator): Green IS Strategy and Green IS/IT Practices	PLS-SEM	Green IS strategies mediate the relationship between environmental orientation and green IT/IS implementation, leading to benefits such as cost reductions, corporate reputation enhancement, and green innovation capabilities.
(Yang et al., 2017)	General Alignment Theory	Green Culture, IS-Culture Fit, and Green IS Infrastructure	Economic Performance, Operational Performance, and Environmental Performance	Mediator: Green Innovation Effectiveness Moderator: Size and Age	SEM	The results indicate that green culture and GIS infrastructure have a direct impact on the effectiveness of green innovation—Innovation-IS, IS-culture, and innovation-culture fit act as positive, non-significant, and negative mediators, respectively. Organization size moderates mediating more than direct relationships.
(Yang et al., 2017)	BAO Framework	Strategic: GIS Strategy Operational: GIS Motivation <i>*Note: Relationship b/w strategic and operational variables not mentioned here.</i>	Strategic: Competitive Advantage Operational: Environmental Performance	Mediator: Strategic: Green Image Operational: GIS Collaborative Effort	PLS-SEM	The result of this paper reveals that all the relationships involved in this study, i.e., direct and mediated relationships, are supported by the study's empirical findings.
(Anthony et al., 2018)	Unified Theory of Acceptance and Use of Technology	Performance Expectancy, Effort Expectancy, Facilitating Conditions, and Social Influence	Green IS Diffusion Intention	Moderator: Gender, Age, Education, Experience Control	PLS-SEM	Human infrastructure, administrative policies, IS infrastructure, institutional pressure, IS strategy, and knowledge accessibility significantly influence IT executives' behavior towards Green IS diffusion.

	OR UTAUT Theory			Variables: Size, Sector, Revenue		
(Zeng et al., 2018)	BAO Framework	Strategic Belief Formation, Strategic Action Formation, Operational Belief Formation, Operational Action Formation	Implementing Green IT Transformation for Sustainability		Case study	This study extends the BAO framework based on GIT transformation activities and presents an action plan for green IT transformation for sustainability. The BAO framework has been explained at two levels: strategic and operational.
(Maity et al., 2019)	NAM, UTAUT	Ascription of Responsibilities (AR), Awareness of Consequences (AC), Social Influence (SI)	Behavior toward GIT	Mediator: Behavioral Intention (BI), Personal Norms (b/w AR, AC, and BI)	SEM Using AMOS	The personal norm (PN) of digital piracy users has a negative impact on their actual behavior (AB) and behavioral intention (BI), whereas the PN of GIT users has a positive impact on their AB and BI. The relationship between PN and BI is more robust than that between PN and AB for GIT users.
(Ojo et al., 2019)	BAO Framework	GIT Knowledge, Green Management, Social Influence	GIT Attitude & Green Computing Practices	Mediator: GIT Belief (b/w GIT Knowledge, Green Management Culture, Social Influence, and GIT Attitude) & GIT Attitude (b/w GIT Belief and Green Computing Practices)	PLS-SEM	The results support the direct effects of GIT knowledge, social influence (SI), and green management culture (GMC) on GIT attitude. However, hypothesized indirect effects through mediating GIT beliefs were supported for GIT knowledge and SI but not for GMC. The relationship between GIT attitude and engagement in green computing practices was supported.
(Asadi et al., 2019)	Norm Activation theory, the Theory of Planned Behavior	Personal Norm (PN), Awareness of Consequences (AC), Attitude to Green IT (ATT), Ascription of Responsibility (AR), Self-Efficacy (SE), Competitive Advantage (CA), Cost Saving (CSV), Subjective Norm (SN), and Managerial Interpretation (MI)	Intention to Adopt Green IT	Mediator: Managerial Interpretation (b/w CA and Intent to Adopt Green IT) Personal Norms (B/w AC, AR, SN and Intent to Adopt Green IT)	PLS-SEM	This study combines the theory of TPB and NAM to identify the factors influencing individual behavior in their intention to adopt green IT. Subjective norms are the most significant predictors of personal norms that impact the behavior of managers.
(Baggia et al., 2019)	BAO framework	Micro Factors- Personal Attitude Towards Future, Personal Attitude Towards Environment, Social Network, Organization Attitude Towards Green IS Macro Factors- Coercive & Mimetic Pressure	Organizational Benefits	Action: Existing Sustainability Actions: Strategy, Green IS Usage: Preventing Pollution, Product Stewardship, Sustainable Development	PLS-SEM	The study highlights the antecedents, consequences, and drivers of Green IS adoption in the context of SMEs. The findings of this paper will guide SMEs on the practical implications of Green IS adoption and implementation.
(Hankel et al., 2019)	—	Strategic Alignment, Culture & Leadership, Ownership, Knowledge & Experience, Technical Infrastructure	Adoption of Green ICT	—	Case Study	This is a case-based study, and five essential factors identified as affecting the adoption of Green ICT were discussed in three organizations. SGIMM is a tool that facilitates the adoption of Green ICT, a topic also discussed in this paper.
(Al-Zamil & Saudagar, 2020)		Internal Drivers (Top Management Support, Company Size, Company Image); External Drivers (Coercive, Mimetic, Normative, and	Green IT Adoption		Case Study	This study identifies the drivers and challenges considered while adopting green IT for sustainable agriculture. The drivers and challenges have been classified into internal and external drivers and challenges.

		Competitive pressure); Internal Challenges (Greening of Organizational Culture, Quality of HR, Strategic Intent); External Challenges (Relative Advantage, Technology Complexity, Technology Compatibility, Adoption cost).				
(Dalvi-Esfahani et al., 2020)	Theory of Planned Behavior	Green IT Attitude Subjective Norm (SN) Perceived Behavioral Control (PBC) Personal Norm (PN)	Intention to Practice Green IT	Moderator: Personality Traits	PLS-SEM	The green IT attitude, SN, PBC, and PN are significant factors in determining the intention to practice green IT. Conscientiousness was the only trait that significantly moderated the relationship toward behavioral intention. No significant relationship was reported between SN and intention to adopt green IT.
(Anthony et al., 2020)	Perceived Organizational e-readiness Theory (POER Theory), Process Virtualization Theory (PVT Theory)	Awareness (IT Practitioners) Governance (IT Governance) Commitment (Motivating Forces) Resources (Technologies and Systems, IT Strategy, Information Availability)	Green Creation Green Distribution Green Sourcing Green Usage End of Life	Mediator: Green IT/IS Practice Deployment	PLS-SEM	Factors identified from the POER theory support the deployment of green IT/IS in Collaborative Enterprises and significantly impact the perceptions of IT professionals and IT managers regarding green IT/IS deployment. For sustainability attainment, CEs must implement eco-friendly initiatives, including green creation, distribution, sourcing, usage, and end-of-life management.
(Ojo & Fauzi, 2020)	Belief Action Outcome Framework	Environmental Awareness (EA) and Leadership Commitment (LC)	Environmental Performance	Mediators: GIT Belief & GIT Attitude (b/w EA, LC, and Engagement in GIT practices), GIT Attitude (GIT Belief and Engagement in GIT practices), and Engagement in GIT practices (GIT Belief and Environmental Performance)	PLS Technique	Leadership commitment (green culture) helps shape employees' attitudes and beliefs toward environmental sustainability. GIT attitude and practices are strongly related to environmental performance. GIT practices influence environmental performance.
(Singh & Sahu, 2020)	—	Economical forces, Organizational forces, Technological forces, Political forces, Regulatory forces, Ecological forces, Other External forces, and Motivational Factors	Green IS Adoption	—	Systematic Literature Review	This paper articulates the green IS literature in a clear and concise manner. It has explained the green IS concept, the critical success factors of green IS adoption, the impact of green IS initiatives, measures, policies, and research globally.
(Lembcke et al., 2021)	TAM, TPB, and Blended Environment Framework	TAM-Perceived Usefulness & Perceived Ease of Use TPB-Attitude towards BTRS, Subjective Norm, Perceived Behavioral Control	TAM: Green IS Continued Usage Intention and TPB: BTRS Real World Behavior	Mediators: TAM: Attitude Towards Green IS Usage & TPB: BTRS Behavioral Intention	CB-SEM & PLS-SEM	In the context of BTRS (Business Trip Ridesharing), this study extends the TAM model and examines the linkage between the TAM, TPB, and BE frameworks to facilitate an understanding of the interface between real-world behavior and Green IS. Perceived usefulness and ecological customary beliefs

						positively influence attitudes towards Green IS usage.
(Ali et al., 2021)	TAM, UTAUT, and Decomposed Theory of Planned Behavior (DTPB)	Attitude Subjective Norm Perceived Behavior Control	Intention (Towards Green IT products)	—	PLS-SEM	This study analyzes three established models to explain customers' behavioral intentions towards green IT. The findings report that DTPB has a greater impact on explaining customers' behavioral intentions. Attitude has a strong association with behavioral intention.
(Asadi et al., 2021)	Normative Activation Model (NAM)	Managerial Interpretation, Awareness of Consequence, Ascription of Responsibility, Personal Norm, and Subjective Norm	GIT Adoption	—	SEM and Artificial Neural Network (ANN)	Managerial interpretation and ascription of responsibility significantly influence the adoption of Green IT in the manufacturing sector.
(Buba et al., 2021)	Theory of Planned Behavior & Norm Activation Model	Green-IT attitude, Perceived behavior (PB), Subjective Norm (SN), Environmental concern (EC), Personal Norm (PN), Awareness consequences (AC), Ascription of responsibility (AR)	Intention to adopt Green IT	—	PLS-SEM	PB, SN, manager's attitude, PN, AC, and AR positively influenced the intention to adopt green IT. Furthermore, managers' intention to adopt green IT is positively influenced by their perception of the benefits of green IT.
(Butler & Hackney, 2021)	Theory of Informational Mechanisms Mechanism-Based Institutional Theory	Regulatory Instrument	Comprehension, Adoption, and Implementation of Green IS	Mediator: Policies, Plans, Reports, and Commitment	Exploratory Study (Based on the findings of Case Studies)	To achieve eco-sustainability targets, the institutionalization of Green IS is required through informational mechanisms that link the institutional environment to the organizational field.
(Nanath & Radhakrishna Pillai, 2021)	Resource-Based View (RBV) and Natural-Resource-Based View (NRBV)	Variables recognized from RBV: Organizational Size, Technological Resources, and Organizational Base; Variables recognized from NRBV: Organizational Green IT systems, Green IT service adoption, and Green IT process innovation	Continuity of Green IT Initiatives	—	Discriminant Analysis	This study identifies the factors from NRBV and RBV theories that impact the continuity of Green IT initiatives. Factors recognized from NRBV theory significantly impact the continuity of Green IT initiatives, while factors of RBV theory have an insignificant impact.
(Nash & Wakefield, 2021)	Theory of Planned Behavior & Identity Theory	Green Identity, Attitude, Subjective Norm, PBC	Green IT Behavior	Mediator: Green IT Intention	PLS-SEM	Green identity has both direct and indirect effects on intention towards green IT through its influence on attitude. The effect of subjective norms on intention is insignificant. Green identity qualifies as a strong predictor of green IT intention and behavior.
(Ahmad et al., 2022)	Institutional Theory Resource-Based Theory	Green Manufacturing, Green Purchasing, Cooperation with Customers (CC), Eco Design, Green Information System (GIS)	Sustainable Performance	Moderator: Institutional Pressure	SEM	Green manufacturing, GIS, eco-design, and green purchases significantly impact the organization's sustainable performance, whereas the relationship between CC and sustainable performance is insignificant. Institutional pressures significantly moderate the relationship between GIS, CC, and sustainable performance.
(Alsdorf, 2022)		Drivers: Current and Future Drivers (further	Adoption of Green IS/IT		Qualitative,	Potential drivers and hindrances to the adoption of sustainable

		categorized into societal, organizational, and individual level drivers). Hindrances: Technical or Infrastructural Hindrances, Economic Hindrances, and Individual-level Hindrances		—	Interview Approach	innovation, such as green IS/IT, are highlighted. The risks and challenges of corporate sustainability interventions, as well as the factors that negatively affect the adoption of sustainable practices within an organization, were discussed.
(Cordero et al., 2022)	Theory of Planned Behavior (TPB) and Norm Activation Theory (NAT)	Organizational, Environmental, and Technological Context, GIT Drivers, Ascription of Responsibility (AR), and Motivation for GIT	GIT Adoption Intention	Mediator: Attitude towards GIT	PLS-SEM	GIT drivers, motivation for GIT, attitude towards GIT, and AR significantly impact the intention to adopt GIT. While AC predicts AR. Organizational, environmental, and technological contexts determine attitude toward GIT.
(Hejri et al., 2022)	GITAM	Green IT Context and Green IT Readiness	Green IT Adoption	Mediator: GIT Drivers and Intention to Adopt Green IT (B/w GIT drivers and GIT adoption)	PLS-SEM	Factors affecting GIT adoption have been identified. The GIT context and GIT readiness significantly affect GIT adoption, with the mediating factor being the GIT driver.
(Isensee et al., 2022)	Grounded Theory	Use of Mobile Apps	Sustainability-Oriented Corporate Culture	—	Qualitative Method: Expert Interviews, App, and Literature Analysis	This study proposes the use of mobile apps to foster a sustainability-oriented corporate culture by presenting a framework that outlines meta-requirements, design principles, interventions, and maturity levels.
(Salles et al., 2022)		Organizational, Technological, Economic, Environmental, Social, and Marketing	Green IT Identification and Implementation of Practices	—	Systematic Literature Review and Content Analysis	A Green IT maturity framework consisting of six dimensions is proposed, on which organizations could work to improve their level of acceptance and implementation of different Green IT practices.
(Verdecchia et al., 2022)		Technology Readiness, Ease of Integration, Digitization and Digitalization, Support for Trade-off Decision Making, and Holistic Paradigm Shift	Sustainable Digital Infrastructures	—	3 Phase Mixed Method: Focus Group, Interview, and Plenary presentation and Working Groups	Sustainable digital infrastructures are the future, and they will experience ever-growing demand in the years to come. It is composed of 4 impediments, five adoption factors, 13 open problems, and 30 solutions.
(Singh et al., 2022)	Modified Unified Theory of Acceptance and Use of Technology (UTAUT-2)	Performance Expectancy, Effort Expectancy, Facilitating Condition, Social Influence, Habit, Hedonic Motivation, and Ecological Beliefs	Behavioral Intention	Mediator: Attitude Towards Conference Apps	SEM	Ecological beliefs and attitudes were the key influencers of green IS adoption. Social influence had the most negligible impact on the behavioral intention to use conference apps (GIS adoption).

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