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Do Sustainability Practices Shape AI Adoption? Evidence from Czech Enterprises

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ABSTRACT

Research background: This topic is relevant because it links corporate sustainability and the adoption of generative AI – two major trends shaping contemporary organisations. The study suggests that firms with stronger sustainability practices perceive greater benefits from generative AI while also recognising more implementation challenges. This makes the topic salient for both theory and practice, particularly in supporting more responsible and strategically grounded AI adoption.

Purpose of the article: The aim of this study is to examine how sustainability- and ethics-oriented management practices shape organisational perceptions of generative artificial intelligence adoption. Specifically, the study investigates the relationships between social performance, green performance, reward systems, and environmental corporate strategy, and two key dimensions of AI adoption—perceived relative advantage and perceived complexity—among firms operating in the Czech Republic.

Methods: The study adopts a quantitative, cross-sectional design using data collected via an online survey. A purposive sample of 344 firms operating in the Czech Republic was selected, focusing on organisations familiar with sustainability practices. Variables were measured using seven-point Likert scales capturing sustainability dimensions and perceptions of generative AI. Descriptive statistics were used to summarise the data and identify general patterns. Group differences (e.g., by gender and education) were examined using mean comparisons. Pearson correlation analysis was then applied to assess relationships between sustainability practices and perceived AI advantages and complexity. All analyses were conducted in IBM SPSS.

Findings & Value added: The paper contributes by linking corporate sustainability with generative AI adoption and providing empirical evidence that ethical and environmental practices are associated with technological readiness. From an economic-policy perspective, the findings underscore the importance of integrating sustainability and digital strategies to support responsible innovation. From a societal perspective, the results suggest that sustainability-oriented firms may be more likely to adopt AI in an ethical and accountable manner. The paper aligns with the journal's scope by addressing sustainability, business ethics, and innovation, thereby contributing to the understanding of responsible economic development.

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INTRODUCTION

Corporate sustainability has shifted from a peripheral concern to a strategic imperative as firms face intensifying stakeholder expectations, regulatory scrutiny, and competitive pressure to demonstrate credible environmental and social performance. In Europe in particular, the transition from voluntary disclosure to mandatory, standardised sustainability reporting has accelerated the institutionalisation of sustainability as a management domain, requiring firms to formalise targets, governance, and performance measurement rather than treating sustainability as an ad hoc communications exercise (EU, 2022). At the same time, organisations are undergoing a parallel transformation driven by rapid digitalisation and the diffusion of advanced analytics and artificial intelligence (AI). For many firms, the strategic question is no longer whether to pursue sustainability and digital transformation, but how to integrate them without creating contradictory incentives, fragmented governance, or reputational and compliance risks.

This integration challenge is particularly visible in the emergence of generative AI. Unlike earlier waves of automation that primarily optimised routine processes, generative AI can support knowledge-intensive work—such as content creation, summarisation, ideation, customer interaction, and decision support—often at relatively low marginal cost once deployed. Empirical and conceptual research increasingly treats generative AI as a general-purpose technology with broad cross-functional applicability, while also highlighting new organisational concerns: data and intellectual property risks, governance and accountability, employee capability gaps, and uncertainty regarding value realisation beyond pilot projects (Ali et al., 2024). These opportunities and risks create a managerial need to understand the "readiness" conditions that shape how firms evaluate AI's potential benefits and anticipate implementation challenges.

A growing body of sustainability research suggests that ethics-oriented management systems may constitute such readiness conditions. Corporate sustainability is not only a portfolio of environmental initiatives; it is also a normative and strategic orientation reflected in corporate purpose, leadership priorities, and internal governance mechanisms. Ethical leadership and ethical climate have been linked to employees' voluntary pro-environmental behaviour and broader dimensions of sustainable performance, implying that moral framing and integrity-based governance can shape how organisational members interpret and engage with sustainability goals (Dey et al., 2022). In parallel, Liang et al. (2022) emphasise that sustainability becomes consequential when embedded in corporate strategy—through the integration of environmental issues into planning, product development, and goal alignment—rather than treated as a compliance add-on. Evidence also indicates that environmental strategy and ESG-oriented capabilities can function as organisational resources supporting sustained performance and adaptive change.

Bindeeba et al. (2025) identify human resource management (HRM) as an important operational pathway through which ethics and sustainability become embedded in organisations. Green human resource management (GHRM) translates sustainability commitments into employee selection, training, evaluation, incentives, and participation mechanisms, thereby linking environmental objectives to everyday behaviour and decision-making. Recent reviews and meta-analytic evidence suggest that GHRM is consistently associated with green innovation, employee green behaviours, and multiple dimensions of organisational performance, although effect sizes and boundary conditions vary across sectors and contexts. However, many firms still struggle to institutionalise sustainability in performance management and reward systems—precisely the mechanisms that align sustainability with operational accountability. In practice, the distinction between symbolic and embedded sustainability often depends on whether sustainability objectives are integrated into appraisal and incentive structures and whether employees receive the training and support needed to enact those objectives.

These ethical and sustainability infrastructures are increasingly relevant because the governance of generative AI is rapidly evolving from a purely technical issue into a socio-technical management challenge. Research on responsible AI governance emphasises that organisations require structural, procedural, and relational practices to operationalise "responsible AI" beyond high-level principles, including monitoring, accountability, risk management, and lifecycle governance. Standardisation efforts reflect this shift. ISO/IEC 42001 provides an AI management system standard intended to help organisations embed responsibility, transparency, and continuous improvement in AI use (ISO, 2023). At the regulatory level, the European Union has introduced a harmonised legal framework for AI systems—based on risk-tiered obligations and including provisions relevant to general-purpose and generative AI—further increasing the importance of governance readiness and responsible deployment practices (EU, 2024). Together, these developments imply that firms adopting generative AI will increasingly be evaluated not only on productivity outcomes but also on whether adoption is responsible, compliant, and aligned with societal expectations.

However, the intersection between ethical/sustainability drivers and organisational perceptions of generative AI adoption remains underexplored. Research in business ethics and corporate sustainability has examined how ethical orientation supports social and environmental outcomes (Kumar et al., 2025), while research on AI ethics often focuses on fairness, transparency, privacy, and risk mitigation at the system or policy level. Less is known about whether—and how—organisational ethics and sustainability practices shape how firms evaluate generative AI as an innovation. Emerging evidence suggests that adoption intentions and outcomes may depend not only on technological characteristics but also on managerial perceptions and governance conditions, including leadership and ethical climate.

From an innovation-diffusion perspective, two perceptions are particularly salient: relative advantage (i.e., whether the technology is expected to improve performance, quality, or cost efficiency compared with alternatives) and perceived complexity (i.e., the degree of difficulty, cognitive effort, and organisational learning required for implementation). In the context of generative AI—where use cases spread rapidly and employees may begin using tools informally—an organisation's ethical maturity may influence both perceptions. Ethics- and sustainability-oriented firms may be better positioned to identify high-value and legitimate applications, but they may also be more attentive to risks, constraints, and implementation burdens.

This question is especially important in Central Europe, where firms operate under EU sustainability and AI regulatory trajectories but may face resource constraints, uneven digital maturity, and capability gaps that shape adoption patterns. Digitalisation and sustainability transitions in European business contexts are influenced by both internal organisational factors and broader ecosystem conditions, indicating that context-sensitive evidence is needed rather than assuming that patterns observed in large multinational firms generalise to smaller or regionally embedded companies (Quttainah & Ayadi, 2024). Yet empirical research that explicitly links organisational sustainability practices to perceptions of generative AI in Central European settings remains limited, leaving researchers and practitioners with insufficient guidance on how ethical and sustainability infrastructures translate into AI readiness.

To address this gap, the present study integrates corporate sustainability, ethical management, and generative AI adoption into a unified empirical framework focused on organisations operating in the Czech Republic. Building on the premise that ethics-oriented sustainability practices can function as enabling mechanisms for responsible innovation, the study examines how three sustainability-related dimensions—(i) perceived social performance benefits of environmental activity, (ii) green performance and reward practices that embed environmental objectives into evaluation and incentives, and (iii) environmental corporate strategy reflecting the strategic integration of environmental issues—relate to two dimensions of generative AI adoption attitudes: perceived relative advantage and perceived complexity. By focusing on managerial perceptions rather than objective adoption status, the study captures an important early stage of innovation diffusion in which expectations about benefits and implementation challenges shape whether firms invest in, scale, and govern generative AI effectively.

THEORETICAL BACKGROUND

Sustainability is increasingly conceptualised as an organisation's value-based and normative orientation that shapes long-term managerial priorities and stakeholder-related behaviour (Kumar et al., 2021). Sustainability also influences the importance organisations attribute to the long-term social and environmental impacts of their business activities (Mignon & Bankel, 2023). Research indicates that firms with stronger ethical orientations adopt more systematic approaches to transparency, accountability, and alignment between economic and societal objectives (Konadu et al., 2021). From this perspective, sustainability is understood as a broader framework of corporate responsibility that extends beyond environmental considerations to include social and governance dimensions (Li & Jin, 2024). Ethical orientation, strategic integration, and institutionalised HR mechanisms jointly contribute to organisational capabilities for managing complex, long-term initiatives. Taken together, these arguments suggest that an organisation's sustainability orientation creates foundational preconditions for subsequent strategic and organisational actions related to transformation and innovation (Saunila et al., 2023).

Sustainability becomes strategically relevant when environmental considerations are integrated into corporate strategy, enabling firms to align marketing, innovation, and investment logics with long-term value creation (Risitano et al., 2021). Accordingly, organisations increasingly align corporate strategies with the Sustainable Development Goals (Sheehy & Farneti, 2021), balancing economic prosperity with social and environmental responsibilities (Varzaru et al., 2021). Such alignment may strengthen stakeholder trust and provide clearer strategic direction (Nishitani et al., 2021; Yamane & Kaneko, 2021). In efforts to achieve environmental legitimacy, firms implement environmental management systems (Baah et al., 2021). To ensure transparency and alignment of strategic objectives with stakeholder interests, organisations also undertake systematic assessments of sustainability practices (Pranugrahaning et al., 2021).

Strategic sustainability orientation is reflected in day-to-day practice primarily through formalised governance and HR processes (Li & Jin, 2024). In this way, it helps bridge the gap between strategic statements and everyday organisational behaviour (Kumar et al., 2021). In particular, HR processes related to selection, appraisal, rewards, and development constitute key mechanisms for translating environmental objectives into managerial and employee accountability (Maniora, 2018). Without such mechanisms, sustainability often remains largely confined to formal documentation (Konadu et al., 2021). These practices—commonly referred to as green HRM—shape employee behaviour and organisational performance and support the development of a sustainability-oriented culture (Ababneh, 2021; Ren et al., 2021). Sustainable development within organisations also depends on systematic employee development through training, involvement, and the establishment of performance indicators that align environmental objectives with everyday work practices (Schaltegger et al., 2024). Large-scale cross-country evidence further indicates that environmental management training can strengthen the relationship between profitability and engagement in climate-action initiatives, suggesting that structured training is not only a compliance mechanism but may also support profitability-aligned sustainability strategies (Raza et al., 2025). Employee involvement typically occurs through participatory decision-making and recognition of contributions to sustainability initiatives (Amjad et al., 2021). The level of employee involvement is closely linked to leadership style, which influences both the effectiveness of green HRM practices and the development of a green organisational culture (Yan & Hu, 2021). Transformational leadership, in particular, has been associated with stronger support for sustainable practices, notably through managers' role modelling of pro-environmental behaviour and the alignment of organisational values with environmental objectives (Darvishmotevali & Altinay, 2021). In the Czech context, survey evidence from medium-sized and large enterprises indicates that HR managers most strongly endorse the implementation of modern HRM technologies and systems, while overall agreement with HRM-related statements remains moderate; gender differences between female and male HR managers are relatively small (Skypalova et al., 2025). Overall, green HRM can be understood as a key institutional mechanism that links sustainability, skill development, and technological transformation through systematic training, performance management, and employee involvement (Singh & Singh, 2025).

A sustainability-oriented approach is also required in digital transformation. This is not merely a question of technologies, but primarily of developing specific organizational capabilities in people management and cross-functional collaboration, as well as in human capital development (Singh & Singh, 2025). The success of digital transformation further depends on organizational dynamic capabilities, digital leadership, and the strategic management of resources. Organizations with stronger levels of these capabilities manage change more effectively, reduce the risk of failure, and increase their digital maturity (Rizana et al., 2025). A necessary condition for successful transformation is management that adopts a participatory leadership style and can align digital strategies with core business objectives (Porfirio et al., 2020). Management must also ensure the development of organizational learning and knowledge management, which strengthen a culture of continuous improvement and innovation (Gonzalez-Varona et al., 2021). In this process, selected internal "ambassadors" serve as important partners for management by explaining, legitimizing, and translating abstract strategic goals into understandable and actionable steps (Schaltegger et al., 2024). Without this bundle of capabilities, it is difficult to integrate AI technologies effectively into organizational processes and thereby enhance sustainable performance (Li & Jin, 2024).

How organizations perceive the benefits and demand of transformational innovations is strongly influenced by their strategic and organizational maturity, which determines their capacity to work with complexity, uncertainty, and the long-term consequences of change (Mignon & Bankel, 2023). Perceptions of AI's benefits and risks are also shaped by the level of HR readiness, the ethical framework, and an organization's ability to reconcile technological efficiency with social sustainability (Singh & Singh, 2025). Firms with more developed sustainability and strategic orientations more often view intelligent automation as a source of long-term value (Bag et al., 2023). At the same time, these organizations tend to exhibit greater sensitivity to implementation complexity, the need for change management, and employee-related impacts (Bag et al., 2023). Whether digital technologies are perceived as an opportunity or a burden depends on an organization's digital maturity and the degree of sociotechnical integration (Setyadi et al., 2025).

Digital transformation is frequently viewed as a high-risk investment, as a substantial share of initiatives fail because organizations underestimate the organizational and human aspects of transformation (Rizana et al., 2025). Poorly designed digital transformation can also disrupt sustainable operating systems if it is not aligned with existing processes and organizational readiness (Setyadi et al., 2025). Organizations recognize AI's strategic value, yet face challenges related to algorithmic bias and operational risks (Madanchian & Taherdoost, 2025). This complexity increases the importance of adaptive frameworks for managing AI-related risks (Wamba et al., 2025), ensuring ethical implementation (Enholm et al., 2021; Strauss, 2021), maintaining stakeholder trust (John-Mathews, 2021; Mökander et al., 2021), and addressing emerging AI risks while ensuring alignment with global sustainability standards (Rana et al., 2024).

AI demonstrates substantial potential to improve productivity, enhance quality, and reduce costs, yet it also raises concerns about opacity and the risk that-without clearly assigned accountability-AI ethics remains merely formal (Krijger, 2021). There is also a risk that uncritical reliance on AI can weaken human judgment and lead to erroneous decisions in complex situations with serious consequences (Gerdes, 2021). Organizations tend to view AI as beneficial where it increases decision accuracy and scalability, but adoption is often conditional on explainability and controllability (Zhang et al., 2021). Managers also highlight major barriers, including high upfront investments, integration complexity, skill shortages, and the need for trust and system explainability (Laghzal & Abdelmajid, 2025).

Evidence from other studies indicates that managers primarily perceive AI as highly valuable for routine, low-risk, operational decisions, where it improves efficiency and supports decision-making. In contrast, skepticism persists regarding AI use in domains requiring social interaction, expert judgment, and autonomous decision-making; key barriers include concerns about loss of control and the devaluation of human expertise (Stracke et al., 2026). Many organizations perceive AI as a means to improve decision-making, efficiency, and control across entire project life cycles, yet implementation is constrained by challenges in systems integration, data quality, capability levels, and resistance to change (Hashfi & Raharjo, 2023). For AI benefits to materialize, work habits also need to change, making investments in digital skills development and a supportive culture essential (Shaikh et al., 2025).

Beyond process optimization, some companies view AI as a catalyst for deeper organizational transformation that reshapes structures, actor roles, and even business models (Lahlali et al., 2021). A further potential benefit of AI lies in organizational learning through pilot use cases, A/B testing, and iterative model tuning based on data feedback. Learning occurs when these insights are systematically embedded in processes, decision-making, and competencies, positioning AI as a tool for organizational adaptation (Enholm et al., 2021). However, many firms encounter substantial difficulties in AI adoption due to the absence of a pragmatic managerial approach, unclear allocation of responsibilities between IT and business functions, and insufficient organizational preparedness for the change (Lahlali et al., 2021).

Perceptions and acceptance of AI also vary significantly depending on the context of use. In applications with higher systemic or societal impacts, perceived benefits may outweigh risk concerns (Grassini et al., 2025). Another study adds that AI perceptions are shaped not only by expected usefulness and ease of use, but also by emotions. These perceptual and emotional factors indicate that AI adoption in organizations should not be understood as a purely rational decision, but rather as a complex psychological and social process (Lee et al., 2024). Moreover, trust in AI and its acceptance do not arise automatically from technological efficiency; they develop through repeated human-AI interaction, understanding of AI's limitations, and the preservation of human accountability for decisions (Bhatt & Bae, 2023). In sum, organizational perceptions of AI reflect a combination of factors including strategic orientation, organizational maturity, ethical framing, and the capability to manage socio-technical change.

Although the literature on corporate sustainability and business ethics has developed substantially over the past two decades, most existing studies tend to analyze ethical management, environmental responsibility, and digital transformation in isolation rather than as interconnected phenomena. Previous research has provided rich insights into the role of ethical leadership, corporate social responsibility, and environmental management systems in promoting sustainable performance. However, these perspectives often overlook how ethical orientation shapes the organizational readiness for emerging technologies, particularly those with transformative potential such as generative artificial intelligence (AI).

Moreover, studies focused on Green Human Resource Management (GHRM) and ethical corporate strategy have predominantly addressed their environmental or social outcomes, yet seldom examined their influence on technological innovation adoption. As a result, there remains a limited understanding of whether ethically grounded sustainability practices contribute to firms' ability to integrate advanced digital tools responsibly and effectively. This gap is particularly evident in the Central European context, where empirical research on the intersection of ethics, sustainability, and AI-driven transformation is still emerging.

Another deficiency in the current literature lies in the lack of empirical evidence connecting ethical drivers to perceptions of AI benefits and challenges. While theoretical discussions on "ethical AI" are rapidly expanding, most of them approach ethics from the perspective of algorithmic fairness or data governance rather than from the standpoint of organizational ethics and culture. Few studies explore how ethical commitment, environmental strategy, and sustainability-oriented management practices may influence how firms evaluate the relative advantage and complexity of generative AI technologies.

To address these shortcomings, the present research combines the domains of corporate ethics, sustainability, and digital innovation within a unified empirical framework. By examining the relationships between social performance, green reward systems, environmental strategy, and AI adoption attitudes, this study provides new evidence on how ethical and sustainability-related factors shape firms' perceptions of generative AI. The research thereby contributes to bridging the conceptual and empirical divide between business ethics and technological transformation, highlighting the role of ethical foundations as enablers of both competitiveness and responsible innovation in Central European enterprises.

Development of hypotheses

The growing integration of sustainability principles into corporate strategy has transformed sustainability from a peripheral activity into a broader organizational orientation shaping long-term managerial priorities, governance mechanisms, and stakeholder relationships (Kumar et al., 2021; Mignon & Bankel, 2023). At the same time, organizations are increasingly adopting generative artificial intelligence (AI) technologies to improve decision-making, efficiency, and innovation capability (Ali et al., 2024). Existing research suggests that the successful implementation of advanced digital technologies depends not only on technical capabilities but also on organizational maturity, strategic alignment, and human-resource-related readiness (Singh & Singh, 2025; Rizana et al., 2025). However, empirical evidence linking sustainability-oriented management practices with organizational perceptions of generative AI adoption remains limited.

One important dimension of sustainability orientation is social performance associated with environmental activities. Previous studies indicate that organizations emphasizing stakeholder relationships, ethical climate, transparency, and employee well-being tend to develop stronger adaptive and innovation-related capabilities (Dey et al., 2022; Konadu et al., 2021). Firms perceiving environmental activities as beneficial for reputation, employee engagement, and community relations may therefore be more likely to recognize the strategic benefits of generative AI technologies. Since generative AI is often associated with productivity improvement, enhanced quality, and better organizational learning (Enholm et al., 2021; Kumar et al., 2025), socially and ethically oriented organizations may evaluate AI more positively due to their stronger long-term strategic orientation and openness to innovation.

At the same time, socially responsible organizations may also be more sensitive to the organizational and human challenges associated with AI adoption. Research suggests that ethically mature firms pay greater attention to employee readiness, governance requirements, accountability, and socio-technical risks during digital transformation processes (Bag et al., 2023; Madanchian & Taherdoost, 2025). Consequently, organizations with stronger social sustainability orientation may perceive generative AI not only as advantageous but also as relatively complex and demanding to implement.

Based on these arguments, the following hypotheses are proposed:

H1: Social performance is positively associated with the perceived relative advantage of generative AI.

H2: Social performance is positively associated with the perceived complexity of generative AI.

Another important sustainability-related dimension concerns Green Performance and Rewards systems. Green HRM practices operationalize sustainability objectives through employee evaluation, rewards, training, and performance management mechanisms (Ababneh, 2021; Ren et al., 2021). These institutionalized mechanisms strengthen employee accountability and organizational learning capability, both of which are considered critical for successful digital transformation and AI implementation (Schaltegger et al., 2024; Shaikh et al., 2025). Organizations with more developed green appraisal and reward systems may therefore be more capable of recognizing the potential strategic and operational benefits of generative AI technologies.

Simultaneously, firms with more structured HR and evaluation systems may also demonstrate greater awareness of the complexity associated with AI adoption. Prior studies indicate that organizations with stronger governance and performance management mechanisms are more attentive to implementation challenges, employee capability gaps, training requirements, and organizational resistance to technological change (Setyadi et al., 2025; Lahlali et al., 2021). As a result, organizations emphasizing environmental performance evaluation and sustainability-oriented rewards may perceive generative AI as a technologically beneficial but organizationally demanding innovation. Accordingly, the following hypotheses are formulated:

H3: Green Performance and Rewards practices are positively associated with the perceived relative advantage of generative AI.

H4: Green Performance and Rewards practices are positively associated with the perceived complexity of generative AI.

Finally, sustainability integration at the strategic level may also influence organizational perceptions of generative AI. Environmental corporate strategy reflects the degree to which environmental goals are embedded into strategic planning, product development, and long-term organizational decision-making (Liang et al., 2022; Risitano et al., 2021). Organizations with stronger strategic sustainability integration are typically characterized by higher dynamic capabilities, stronger innovation orientation, and greater ability to manage transformational change (Saunila et al., 2023; Porfírio et al., 2020). Such firms may therefore perceive generative AI as a valuable strategic technology capable of improving competitiveness, innovation capability, and long-term organizational performance.

However, previous research also demonstrates that strategically mature organizations are often more aware of the risks and implementation challenges associated with transformational technologies (Mökander et al., 2021; Wamba et al., 2025). Firms integrating sustainability into strategic management may therefore recognize the governance complexity, ethical implications, and organizational adaptation requirements associated with generative AI more strongly than less mature organizations. Based on this reasoning, the final hypotheses are proposed:

H5: Environmental corporate strategy is positively associated with the perceived relative advantage of generative AI.

H6: Environmental corporate strategy is positively associated with the perceived complexity of generative AI.

RESEARCH OBJECTIVE, METHODOLOGY AND DATA

The research objective of this article is to analyze how sustainability- and ethics-oriented management practices influence organizational perceptions of generative artificial intelligence adoption. Specifically, the study aims to examine the relationships between social performance, green performance and reward systems, and environmental corporate strategy, and two key dimensions of AI perception: perceived relative advantage and perceived complexity in firms operating in the Czech Republic.A total of 451 HR managers participated in the initial phase of the research. At the beginning of the questionnaire, respondents were asked whether they consented to the use of their attitudes and opinions for scientific research purposes. Four respondents declined to provide such consent and were consequently excluded from the dataset. The final research sample thus consisted of 447 HR managers who explicitly agreed to the scientific use of their responses.

The study adopted a quantitative, cross-sectional survey design to examine associations between sustainability- and ethics-related organizational practices and perceptions of generative AI adoption. Data were collected via a structured online questionnaire distributed to organizations operating in the Czech Republic across multiple sectors. The outreach focused on firms that had implemented elements of Green Human Resource Management (GHRM) or were familiar with the broader concept of corporate sustainability, in order to ensure that respondents were able to meaningfully evaluate the ethical, strategic, and environmental dimensions addressed in the instrument.

The target population consisted primarily of medium-sized and large organizations operating in the Czech Republic that had at least partial experience with sustainability-related management practices or environmental initiatives. The study focused on organizations where formalized HR processes, environmental activities, or broader sustainability-oriented management systems were expected to exist, since such firms were considered more capable of meaningfully evaluating both sustainability practices and generative AI adoption. Respondents were primarily HR managers and other managerial employees because these individuals typically possess cross-functional knowledge regarding organizational strategy, employee development, performance management systems, and digital transformation initiatives. Organizations from both manufacturing and service sectors were included, while micro-enterprises were not specifically targeted due to their generally lower level of formalized sustainability governance and limited implementation of structured Green Human Resource Management practices.

A seven-point Likert scale was employed because it provides greater sensitivity and variability in responses compared to shorter scales, allowing respondents to express more nuanced perceptions regarding sustainability orientation and AI adoption attitudes. Such scales are widely used in organizational and behavioral research examining managerial perceptions and technology adoption. Given the exploratory nature of the study and the objective of examining associations between sustainability-related practices and perceptions of generative AI, a quantitative correlational approach based on descriptive statistics and Pearson correlation analysis was considered appropriate for identifying the direction and strength of relationships among the examined constructs.

A non-probability, purposive sampling approach was applied. A total of 7,250 organizations were contacted through electronic channels, including e-mail invitations and professional networks. After data screening and the removal of incomplete or inconsistent questionnaires, 344 valid responses were retained for analysis, corresponding to an effective response rate of approximately 4.7%. The unit of analysis was the organization, with responses provided by managerial respondents. Basic respondent characteristics were captured using three identification variables (gender, age, and education) and are reported in the Results section.

All construct items (expect demography) were measured using seven-point Likert-type response scales ranging from 1 (completely disagree) to 7 (completely agree). Scale items and coding are provided in the measurement table. Internal consistency of the multi-item constructs was assessed as part of the analysis. Prior to hypothesis-relevant analyses, the dataset was screened for missing data, response inconsistencies, and out-of-range values. Questionnaires that were incomplete or contained inconsistent patterns were excluded from further processing. Descriptive checks were conducted to confirm plausibility of distributions and to support interpretation of group-based comparisons.

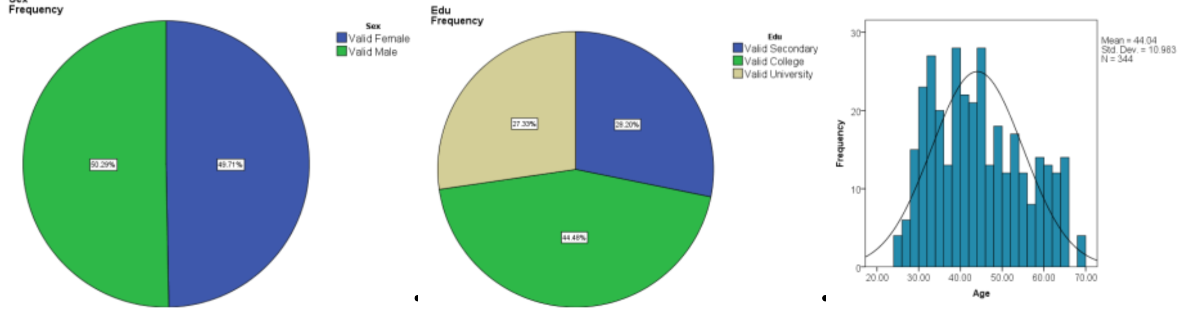
Statistical analyses were conducted using IBM SPSS Statistics following a sequential procedure. First, descriptive statistics were computed to summarize central tendency and dispersion for all study variables and to describe the respondent sample. Second, construct-level patterns were explored for the sustainability-related constructs (SOCP, GPaR, CSTR) and for the generative AI constructs (AIRA, AICO), and mean profiles were examined across gender and education categories; these comparisons were visualized using interval charts. Third, bivariate correlation analysis was performed to evaluate the strength and direction of associations among the key constructs. Given the widespread use of Likert-type scales in organizational research, correlations were computed using Pearson's r on scale scores, treating the measures as approximately interval for analytical purposes. Statistical significance was evaluated at conventional alpha levels, and the interpretation focused on the magnitude and consistency of relationships across theoretically related indicators.

RESULTS

This section reports the main empirical findings following the analytical sequence described in the methodology. First, the demographic composition of the respondent sample is summarized by gender, education, and age (Fig. 1).

Overall descriptive statistics indicate moderate agreement with statements capturing sustainability and ethics-oriented management. Across the sustainability-related indicators, mean values were typically in the mid-range of the seven-point scale, approximately between 3.7 and 4.6, suggesting an average to moderately positive sus-

Figure 1: Sample characteristics



Source: own elaboration

Table 1: Variables

Code	Question	Scale	Variable Type
Sex	Gender	Male / Female	Nominal
Age	Age	Numeric value	Numeric
Edu	Education	Primary / Secondary / College / University	Ordinal
SOCP	**Social Performance**		
SOCP1	Environmental activities have improved our image in the eyes of our customers.	1–7	Ordinal
SOCP2	Environmental activities have increased our investment in social projects (e.g. education, culture, sport).	1–7	Ordinal
SOCP3	Environmental activities have improved our relationships with community stakeholders (e.g. NGOs and community activists).	1–7	Ordinal
SOCP4	Environmental activities have improved the health and safety of our employees.	1–7	Ordinal
SOCP5	Environmental activities have led to the design of better services and the involvement of employees in decision-making processes.	1–7	Ordinal
GPaR	**Green Performance and Rewards (GPaR)**		
GPaR1	Specific environmental goals are adopted by every manager and employee in the organization.	1–7	Ordinal
GPaR2	Employees who have achieved or exceeded environmental goals are rewarded with non-cash equivalents or other cash awards.	1–7	Ordinal
GPaR3	Leaders reward employees in their departments when they improve environmental programs.	1–7	Ordinal
GPaR4	One of the criteria for evaluating employee performance is the achievement of environmental goals.	1–7	Ordinal
GPaR5	We have internal mechanisms in place to evaluate work performance after completing training on environmental topics.	1–7	Ordinal
CSTR	**Environmental (Corporate) Strategy (CSTR)**		
CSTR1	Our company integrates environmental issues into our strategic planning process.	1–7	Ordinal
CSTR2	In our company, we include quality and reducing the environmental impact of products and processes.	1–7	Ordinal
CSTR3	In our company, we make every effort to link environmental goals with other corporate goals.	1–7	Ordinal
CSTR4	Environmental issues are always considered when we develop a new product.	1–7	Ordinal
CSTR5	Our company integrates environmental issues into the strategic planning process.	1–7	Ordinal
AIRA	**Generative AI – Relative Advantage (AIRA)**		
AIRA1	Generative AI technology improves business performance more than other technologies.	1–7	Ordinal
AIRA2	Generative AI technology enhances the quality of business more than other technologies.	1–7	Ordinal
AIRA3	Using generative AI will bring cost savings.	1–7	Ordinal
AICO	**Generative AI – Complexity (AICO)**		
AICO1	I think that the use of generative AI in our company will be difficult.	1–7	Ordinal
AICO2	Using generative AI in our company's business will be difficult for employees because they have no prior experience with the technology.	1–7	Ordinal
AICO3	Using generative AI requires more mental effort.	1–7	Ordinal
AICO4	The concept of generative AI and its practical benefits are not known to the company's management and employees.	1–7	Ordinal

Source: own elaboration

tainability orientation among the surveyed organizations (Figure 2).

Within Environmental/Corporate Strategy, the highest mean "M" values were observed for items capturing strategic alignment and product-development integration, particularly question 3 ("We make every effort to link environmental goals with other corporate goals," M = 4.45) and question 4 ("Environmental issues are always considered when we develop a new product," M = 4.45). This pattern suggests that environmental considerations are relatively well embedded in strategic and innovation-related processes. Within Social Performance, the highest average score appeared for question 1 ("Environmental activities have improved our image in the eyes of our customers," M = 4.24), indicating that reputational benefits are among the most salient perceived outcomes of environmental activities.

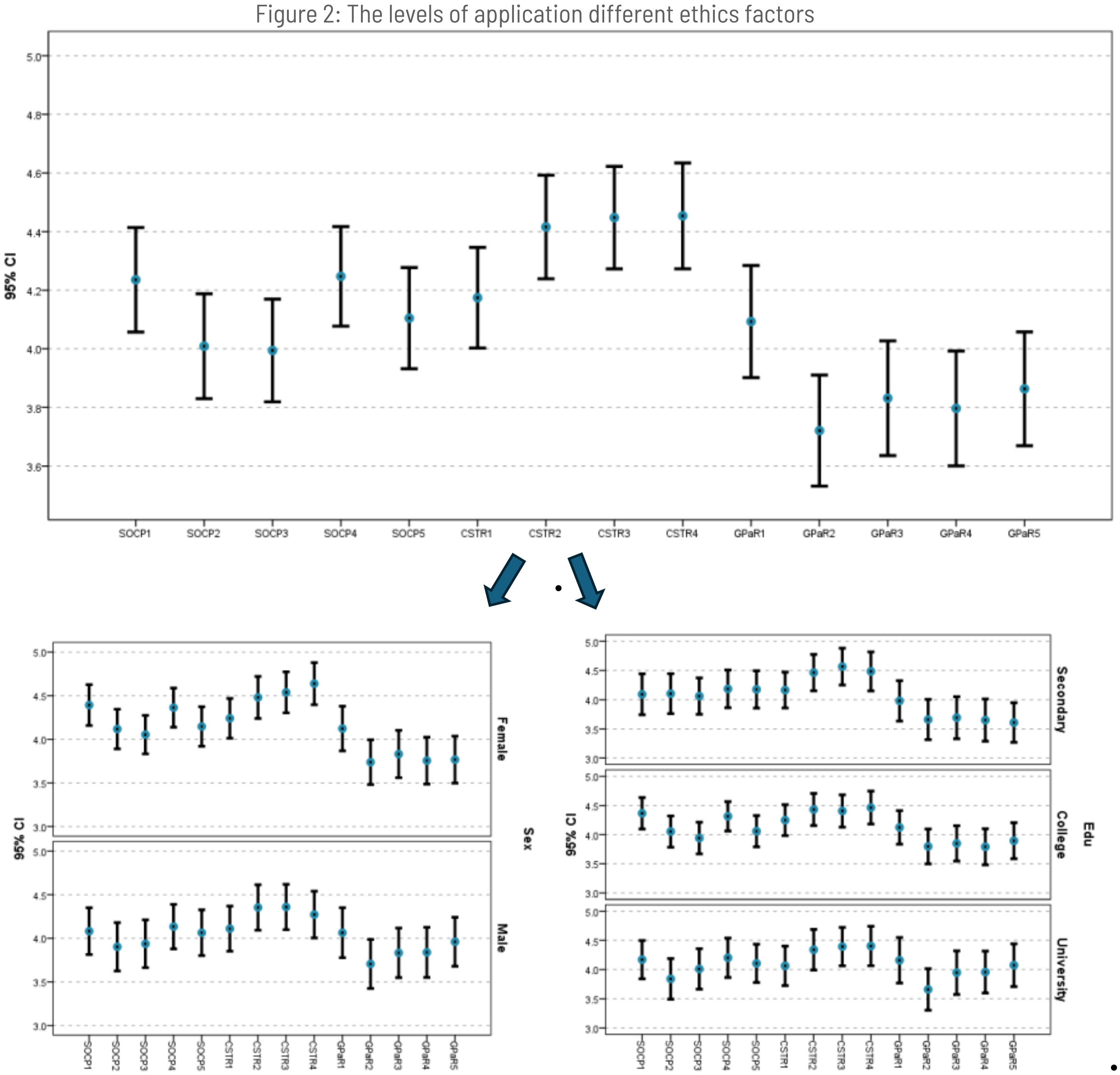
By contrast, the Green Performance and Rewards items achieved somewhat lower mean values (approximately M = 3.7–4.1), implying that formal mechanisms linking environmental goals to appraisal, post-training evaluation, and reward systems remain less developed across organizations.

Descriptive comparisons by gender showed that female respondents "F" reported slightly higher mean scores across most sustainability-related items. The most visible differences were observed for CSTR4 (F = 4.64, M = 4.27), SOCP1 (F = 4.39, M = 4.08), and SOCP4 (F = 4.36, M = 4.13), suggesting that women may place somewhat greater emphasis on strategic and social dimensions of sustainability.

Differences across education categories were generally small and did not indicate strong divergence in sustainability perceptions. In several items, particularly within Green Performance and Rewards, a mild upward tendency was observed with higher education, implying slightly stronger recognition of performance and reward-related sustainability mechanisms among more educated respondents. However, this pattern was not fully consistent across all indicators.

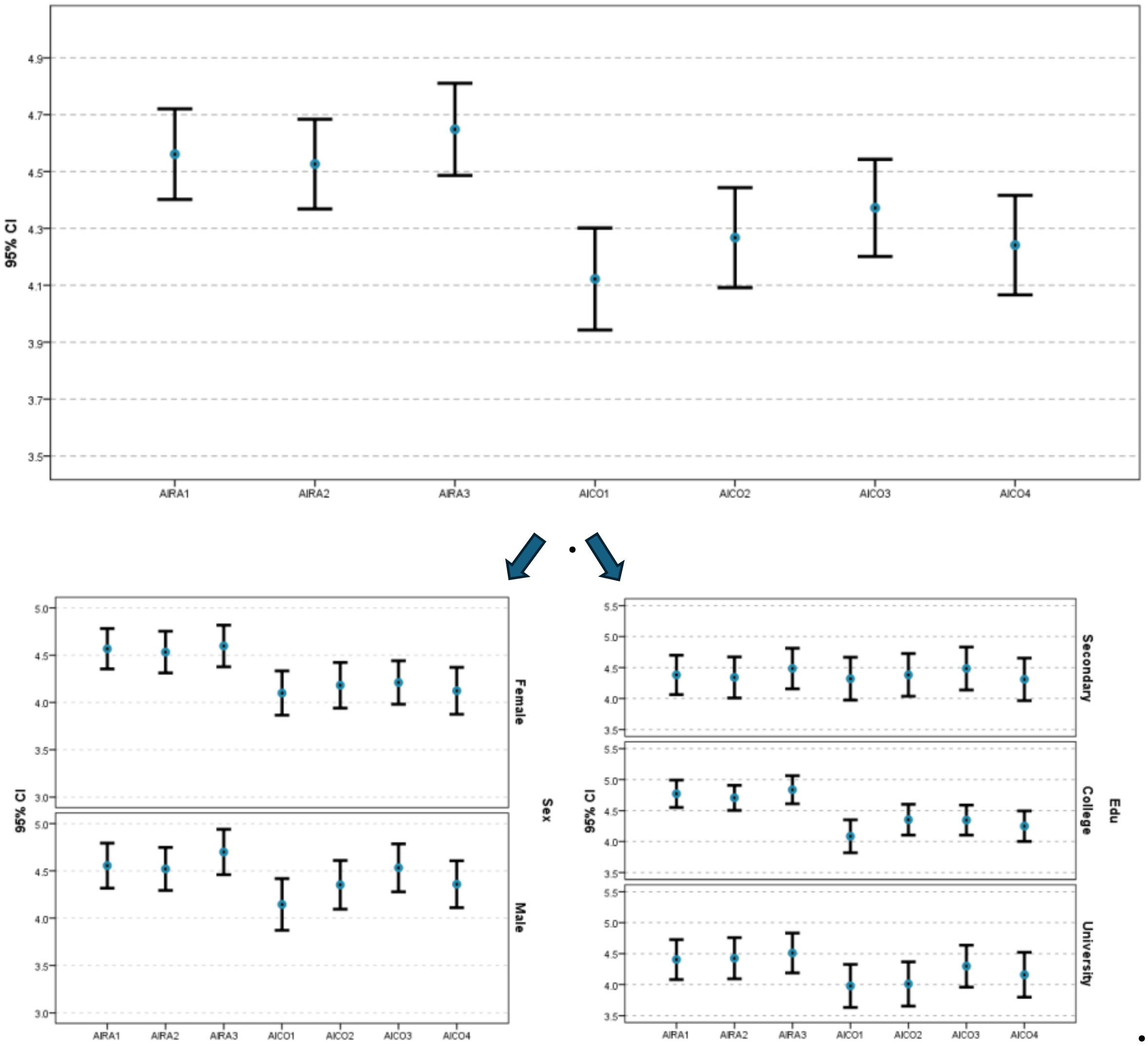
The descriptive results for generative AI constructs indicate an overall positive perception of the technology's potential (Fig. 3). Mean values for all Relative Advantage items exceeded 4.5, suggesting that respondents generally expect generative AI to improve business performance, enhance quality, and contribute to cost savings.

Figure 2: The levels of application different ethics factors



Source: own elaboration

Figure 3: Perception of the generative AI



Source: own elaboration

In contrast, the Complexity items were assessed at a moderate level, with mean values around 4.1–4.3, implying that organizations recognize implementation challenges but do not view them as prohibitive.

When examined by education, college-educated respondents expressed the most favorable perceptions of generative AI benefits, reporting the highest mean values across AIRA indicators. Respondents with university education were comparatively more cautious, particularly in their evaluation of AI complexity. The secondary-educated group tended to adopt a more moderate position, reflecting a balance between optimism regarding benefits and pragmatism regarding implementation effort.

Gender differences in generative AI perceptions were limited. Female respondents rated AI advantages marginally more positively, while male respondents evaluated complexity slightly higher, indicating somewhat greater awareness of technical and organizational adoption challenges among men.

The correlation analysis (Table 2) indicates moderate positive associations between sustainability-related constructs and perceptions of generative AI, suggesting that organizations with stronger sustainability engagement tend to report stronger perceived benefits of generative AI and, simultaneously, greater awareness of implementation demands.

The strongest associations were observed between generative AI Relative Advantage and Social Performance indicators, with correlation coefficients approximately in the range r = 0.41–0.44. This pattern suggests that organizations attributing greater reputational, stakeholder, and employee-related benefits to environmental activities are more likely to perceive generative AI as advantageous in terms of performance and quality.

A second consistent pattern was identified between Relative Advantage and Environmental/Corporate Strategy, especially for question 3 and question 4 (approximately r = 0.35–0.38). This indicates that organizations integrating environmental goals into strategic planning and product development tend to recognize greater strategic value in generative AI. Regarding perceived complexity, moderate positive correlations were identified between Complexity items (particularly questions 2 and 3) and Social Performance indicators (questions 3, 4 and 5), with coefficients around r = 0.32–0.38. This suggests that

Table 2: Relationships between ethical drivers and generative AI

	SOCP1	SOCP2	SOCP3	SOCP4	SOCP5	CSTR1	CSTR2	CSTR3	CSTR4	GPaR1	GPaR2	GPaR3	GPaR4	GPaR5
AIRA1	0.425	0.384	0.419	0.418	0.350	0.371	0.356	0.367	0.379	0.370	0.281	0.329	0.326	0.297
AIRA2	0.423	0.398	0.420	0.441	0.389	0.361	0.346	0.342	0.355	0.338	0.305	0.358	0.311	0.303
AIRA3	0.415	0.381	0.424	0.440	0.363	0.349	0.352	0.353	0.377	0.327	0.297	0.347	0.360	0.335
AICO1	0.193	0.199	0.207	0.197	0.187	0.187	0.209	0.174	0.156	0.165	0.188	0.179	0.212	0.177
AICO2	0.336	0.323	0.307	0.342	0.331	0.288	0.332	0.292	0.296	0.285	0.313	0.288	0.324	0.299
AICO3	0.358	0.402	0.347	0.383	0.382	0.368	0.374	0.334	0.348	0.307	0.331	0.333	0.373	0.371
AICO4	0.222	0.220	0.247	0.263	0.239	0.205	0.179	0.190	0.201	0.196	0.249	0.228	0.251	0.257

Source: own elaboration

socially and ethically engaged organizations are also more attentive to the learning requirements and implementation effort associated with generative AI.

Finally, Complexity showed relevant associations with Green Performance and Rewards mechanisms, around $r \approx 0.37$. This implies that organizations with more structured environmental appraisal and post-training evaluation mechanisms also tend to perceive generative AI as a more demanding technology requiring managerial oversight and employee competence development. Taken together, the results indicate that sustainability orientation and institutionalized sustainability-related management practices are associated with both higher perceived benefits and higher perceived complexity of generative AI adoption. This supports the interpretation that sustainability maturity may be linked to more nuanced and governance-aware evaluations of transformative digital technologies.

The correlation analysis provided support for all proposed hypotheses, indicating statistically significant positive relationships between sustainability-oriented organizational practices and perceptions of generative AI adoption. Overall, organizations with stronger sustainability orientation tended to perceive generative AI as both more advantageous and more complex. The strongest support was observed for hypotheses related to the perceived relative advantage of generative AI. In particular, Social Performance and Environmental Corporate Strategy showed moderate positive correlations with AI-related performance and quality expectations, supporting H1 and H5. Similarly, Green Performance and Rewards practices were positively associated with perceived AI advantages, supporting H3.

Positive relationships were also identified between sustainability-related constructs and perceived complexity of generative AI adoption. These findings support H2, H4, and H6, suggesting that organizations with more developed sustainability practices are simultaneously more aware of the organizational, managerial, and employee-related challenges associated with AI implementation. Taken together, the findings indicate that sustainability-oriented firms do not perceive generative AI uncritically. Rather, they appear to recognize both its strategic value and its implementation demands, reflecting a more mature and governance-aware approach to technological transformation.

Table 3: Results of hypotheses testing

Hypothesis	Relationship	Result
H1	SOCP ↔ AIRA	Supported
H2	GPaR ↔ AIRA	Supported
H3	CSTR ↔ AIRA	Supported
H4	SOCP ↔ AICO	Supported
H5	GPaR ↔ AICO	Partially supported
H6	CSTR ↔ AICO	Supported

Source: own elaboration

DISCUSSION

This study examined how sustainability- and ethics-related organizational practices relate to perceptions of generative AI adoption, focusing on perceived relative advantage and perceived complexity. Overall, the results indicate a consistent "benefit–complexity" pattern: organizations with stronger sustainability orientation and institutionalized mechanisms tend to perceive greater advantages of generative AI while also recognizing higher implementation demands. This duality is theoretically meaningful because it implies that sustainability maturity supports more differentiated innovation sensemaking—firms can see strategic value while remaining sensitive to socio-technical risks, governance requirements, and human-capital implications (Mignon & Bankel, 2023; Singh & Singh., 2025).

First, the strongest positive relationships emerged between Social Performance (SOCP) indicators and the perceived relative advantage of generative AI. Firms that associate environmental activities with improved reputation, stakeholder relations, and employee-related benefits are more likely to perceive generative AI as performance-enhancing and value-creating. One plausible explanation is that sustainability is not merely an operational practice, but a value-based and normative orientation that shapes managerial priorities and stakeholder-facing behaviour. Such firms may therefore evaluate generative AI through a longer-term value lens rather than short-term efficiency alone (Kumar et al., 2021; Konadu et al., 2021). This interpretation is consistent with the broader view of sustainability as corporate responsibility that extends beyond environmental considerations to encompass social and governance dimensions (Li & Jin, 2024).

Second, environmental corporate strategy (CSTR) was positively associated with perceived relative advantage. This supports the argument that sustainability becomes strategically consequential when embedded in strategy, planning, product development, and goal alignment (Risitano et al., 2021). Organisations that integrate environmental objectives into strategic processes may possess transferable capabilities for coordinating cross-functional priorities and aligning investments with long-term goals—capabilities that are likewise relevant when evaluating generative AI as an enabling, organisation-wide technology (Sheehy & Farneti, 2021; Varzaru et al., 2021). Mechanisms such as environmental management systems and systematic assessment practices may further strengthen the capacity to operationalise new initiatives through monitoring and accountability routines (Baah et al., 2021; Pranugrahaning et al., 2021). The findings may also indicate that sustainability-oriented organisations possess broader organisational capabilities that indirectly support generative AI readiness. In particular, firms that integrate environmental goals into strategic planning and governance processes may be accustomed to managing complex cross-functional initiatives, balancing long-term stakeholder expectations, and implementing formal accountability mechanisms. These organisational routines can reduce uncertainty associated with emerging technologies and improve the ability to assess AI not only from a technical perspective, but also in strategic and governance terms. In this sense, the study extends prior sustainability and digital transformation research by suggesting that sustainability maturity may function as a form of organisational preparedness for responsible AI adoption, rather than merely as an environmental or ethical orientation. This contribution is important because previous studies have largely examined sustainability and AI adoption separately, with limited attention to how sustainability-related organisational capabilities shape managerial perceptions of generative AI.

Third, sustainability engagement was also positively correlated with perceived complexity. Rather than reflecting resistance, this pattern likely indicates heightened realism and responsibility in adoption evaluations: organisations with stronger ethical framing and sustainability maturity may be more attuned to change-management effort, capability gaps, and stakeholder implications (Bag et al., 2023; Setyadi et al., 2025). This aligns with evidence that transformation initiatives often fail when firms underestimate organisational and human factors, and with the view that AI introduces additional governance challenges related to bias, transparency, and accountability (Rizana et al., 2025; Madanchian & Taherdoost, 2025; Krijger, 2021). Relatedly, explainability and controllability remain key preconditions for acceptance (Zhang et al., 2021), while uncritical reliance on AI can weaken human judgement (Gerdes, 2021).

Finally, the association between perceived complexity and green performance and rewards (GPaR) suggests that formal HR and performance mechanisms shape how seriously firms assess the effort required. Sustainability is operationalised through governance and HR processes that translate goals into accountability (Maniora, 2018; Li & Jin, 2024). Where green HRM is more developed, organisations may be better able to anticipate that generative AI adoption requires structured training, monitoring, and behavioural change rather than informal tool use (Ababneh, 2021; Ren et al., 2022; Schaltegger et al., 2024; Shaikh et al., 2025). Leadership is also relevant, as participatory and transformational styles can reinforce employee involvement and the institutionalisation of new practices (Amjad et al., 2021; Yan & Hu, 2021; Darvishmotevali & Altinay, 2021; Porfírio et al., 2020). An important theoretical implication is that stronger sustainability orientation does not lead to uncritical technological optimism. Instead, sustainability-oriented firms appear to develop a more balanced perception of generative AI, simultaneously recognising its strategic benefits and its organisational risks. This “benefit–complexity” pattern suggests that organisational maturity may increase both innovation readiness and sensitivity to implementation challenges. This interpretation differs from conventional technology-adoption perspectives, which often assume that more positive innovation perceptions are associated with lower perceived complexity. In contrast, the present findings imply that ethically and strategically mature organisations may evaluate generative AI more realistically because they are more aware of governance requirements, employee adaptation needs, and accountability expectations associated with responsible AI integration.

In sum, the findings suggest that sustainability- and ethics-related practices may strengthen perceptions of the strategic value of generative AI while simultaneously increasing awareness of implementation complexity. This implies that sustainability maturity can serve as an enabling foundation for responsible AI integration, but it also raises expectations regarding the governance and capability development required to achieve credible, scalable adoption (Lahlali et al., 2021; Bhatt & Bae, 2023; Lee et al., 2024)..

CONCLUSION

This study examined how sustainability- and ethics-related organisational practices relate to managerial perceptions of generative AI adoption among organisations operating in the Czech Republic. The findings indicate that firms with stronger sustainability orientation—reflected in perceived social benefits of environmental activities, the strategic integration of environmental goals, and formalised green performance and reward mechanisms—tend to perceive greater relative advantage of generative AI. At the same time, these organisations also report higher perceived complexity, suggesting a more realistic appraisal of the governance, capability, and change-management effort required for effective implementation.

Overall, the results imply that sustainability maturity may function as an important organisational readiness condition for responsible generative AI adoption. Rather than merely increasing technological optimism, it appears to support a more nuanced evaluation in which strategic benefits are recognised alongside implementation challenges. For managers, this underscores the importance of approaching generative AI not only as a technology deployment, but as a socio-technical transformation that requires clear accountability, structured capability development, and alignment with broader strategic and sustainability objectives.

The study also offers theoretical contributions. First, it adds to the emerging literature connecting sustainability management and generative AI adoption by demonstrating that sustainability-oriented organisational practices are associated not only with higher perceived technological benefits, but also with greater awareness of implementation complexity. This extends prior research on sustainability maturity and digital transformation, which has typically addressed these domains separately. Second, the findings suggest that sustainability orientation may function as a form of organisational readiness for responsible AI adoption, particularly through strategic integration, governance mechanisms, and HR-related sustainability practices. The identified benefit–complexity pattern also contributes to technology-adoption research by indicating that organisational maturity may simultaneously increase innovation readiness and sensitivity to socio-technical risks.

The findings also have practical implications for managers and organisations implementing generative AI. The results suggest that successful and responsible AI adoption depends not only on technological investments, but also on the existence of structured sustainability-oriented management systems. Organisations with stronger environmental strategies, formalised performance mechanisms, and sustainability-oriented HR practices appear better positioned to evaluate both the strategic value and the organisational demands of generative AI. Managers should therefore approach AI implementation as a broader organisational transformation requiring employee training, governance mechanisms, and alignment between digital and sustainability strategies, rather than as a purely technical initiative.

Several limitations should be noted. The study is cross-sectional and correlational and therefore cannot establish causality. Self-reported measures may also be subject to social desirability bias and common method variance, and the Czech context may limit generalisability. Moreover, the outcomes reflect perceptions (relative advantage and complexity) rather than realised adoption quality, governance maturity, or performance effects.

Future research should employ longitudinal and multivariate designs to test causal pathways and incorporate controls such as firm size, sector, and digital maturity. Studies could also link perceptions to objective indicators of adoption (e.g., scope, policies, training intensity, usage patterns, and incidents) and examine mechanisms that may explain the benefit–complexity pattern, such as organisational learning capability, governance orientation, and employee participation. Qualitative case studies would further help explain how HR, sustainability, and IT functions coordinate responsible generative AI integration..

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AUTHOR CONTRIBUTIONS STATEMENT

Conceptualization, R.S., Z.M. and V.H.; methodology, R.S. and Z.M.; formal analysis, R.S.; investigation, R.S.; data curation, V.H.; writing—original draft preparation, R.S.; writing—review and editing, Z.M.; visualization, V.H.; supervision, R.S. and Z.M. All authors have read and agreed to the published version of the manuscript.

DATA AVAILABILITY STATEMENT

The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

AI DISCLOSURE

During the preparation of this manuscript, the authors used ChatGPT to improve language quality, grammar, and stylistic clarity of the text. The authors also used AI-assisted literature support tools to facilitate the identification of relevant scholarly sources. After using these tools, the authors carefully reviewed, revised, and approved all content and take full responsibility for the accuracy and integrity of the published work.

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