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## Słowo wstępne

W prezentowanym numerze 61. „Zeszytów Naukowych Politechniki Częstochowskiej. Zarządzanie” oddajemy w ręce Czytelników zbiór dziesięciu artykułów naukowych, które stanowią głos w dyskusji nad współczesnymi paradygmatami zarządzania. W dobie postępującej transformacji ekologicznej oraz głębokich zmian w strukturze społecznej kluczowym wyzwaniem dla organizacji staje się umiejętne balansowanie między efektywnością ekonomiczną a odpowiedzialnością etyczną i społeczną.

Publikacje zawarte w niniejszym numerze charakteryzują się interdyscyplinarnym podejściem, łącząc perspektywę teoretyczną z wynikami badań empirycznych. Szczególną uwagę poświęcono zagadnieniom z zakresu: zielonej gospodarki w firmach rodzinnych; wpływu zielonej orientacji przedsiębiorczej na wyniki konkurencyjne; cyfrowej transformacji placówek oświatowych; uwarunkowań kształtowania kultury organizacyjnej w niepublicznych uczelniach; wpływu pokolenia Z na inkluzywność w organizacjach; roli wolontariuszy w osiąganiu sukcesu przez podmioty gospodarki społecznej; wyzwań modelu plemion (tribes); własności intelektualnej jako elementu strategii ESG w MŚP; dyskryminacji ze względu na bezdzietność w miejscu pracy; prawa i etyki jako mechanizmów zarządzania opieką zdrowotną. Różnorodność podjętych tematów dowodzi, że współczesne zarządzanie nie ogranicza się jedynie do optymalizacji procesów, ale wymaga głębokiego zrozumienia wartości miękkich, uwarunkowań prawnych oraz specyfiki sektorowej. Wierzymy, że zaprezentowane analizy i wnioski z badań staną się inspiracją do dalszych poszukiwań naukowych oraz znajdą praktyczne zastosowanie w działalności menedżerskiej.

Jako Zespół Redakcyjny składamy serdeczne podziękowania wszystkim Autorom za ich wkład naukowy oraz Recenzentom i osobom zaangażowanym w proces wydawniczy za dbałość o ostateczny kształt publikacji. Wyrażamy nadzieję, że lektura tego numeru będzie dla Państwa cennym źródłem wiedzy i impulsem do merytorycznej debaty nad przyszłością nauk o zarządzaniu i jakości.

*Redakcja*

## Preface

The current 61st issue of “The Research Reviews of Czestochowa University of Technology. Management” provides readers with a collection of ten scientific articles that contribute to the discussion on contemporary management paradigms. In the era of advancing ecological transformation and profound changes in social structures, a key challenge for organisations is the skillful balancing of economic efficiency with ethical and social responsibility.

The publications included in this issue are characterised by an interdisciplinary approach, combining theoretical perspectives with the results of empirical research. Particular attention has been paid to issues in the fields of the green economy in family businesses, the impact of green entrepreneurial orientation on competitive performance, the digital transformation of educational institutions, and the determinants shaping organisational culture in private universities. Furthermore, the authors analyse the influence of Generation Z on inclusiveness in organisations, the role of volunteers in achieving success for social economy entities, the challenges of the tribal model, and intellectual property as an element of the ESG strategy in SMEs. The collection is completed by studies on discrimination based on childlessness in the workplace, as well as the role of law and ethics as mechanisms of healthcare management. The diversity of the topics addressed proves that modern management is not limited merely to process optimisation, but requires a deep understanding of soft values, legal conditions, and sector-specific characteristics. We believe that the presented analyses and research findings will serve as inspiration for further scientific inquiry and will find practical application in managerial activities.

As the Editorial Team, we would like to express our sincere thanks to all the authors for their scientific contributions, as well as to the reviewers and those involved in the publishing process for their care in shaping the final version of the publication. We hope that this issue will be a valuable source of knowledge and an impulse for substantive debate on the future of management and quality sciences.

*Editorial Board*

## **INTELLECTUAL PROPERTY AS AN ELEMENT OF ESG STRATEGY IN SMEs: A LITERATURE REVIEW AND RESEARCH DIRECTIONS**

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**Abstract:** Growing social and regulatory pressures to conduct sustainable business have intensified the integration of ESG (Environmental, Social, and Governance) principles into corporate strategies. Recognized as a strategic asset, Intellectual Property (IP) increasingly supports the implementation of sustainability goals, especially in small and medium-sized enterprises (SMEs). The main aim of this research is to identify how IP management contributes to ESG performance in SMEs. Using a comprehensive literature review and analysis of empirical examples from Polish and international SMEs, the study identifies five mechanisms linking IP and ESG: eco-patenting, open-source licensing, knowledge reporting, servitization, and inter-organizational collaboration. These mechanisms support the achievement of Sustainable Development Goals (SDGs) 4, 7, 10, 12, 13, 16, and 17. The results reveal that, despite the growing awareness of IP–ESG synergies, significant research gaps remain concerning their effectiveness in resource-constrained firms. The study concludes by proposing directions for empirical research and managerial practices aimed at integrating IP strategies with sustainability objectives to enhance competitiveness and global value creation.

**Keywords:** corporate strategy, development goals, ESG, intellectual property, SMEs, sustainable

**JEL Classification:** 031, L26, M14

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## **Introduction**

Over the past decade, growing social and regulatory pressures have pushed businesses to align with sustainable development principles (Eccles & Klimenko, 2019). ESG frameworks, centered on environmental responsibility, social inclusiveness, and transparent governance, have become integral to corporate sustainability. For resource-constrained SMEs, ESG implementation poses both challenges and opportunities to enhance resilience and competitiveness (Wang et al., 2025). Intangible assets, especially intellectual property (IP), are increasingly viewed not only as tools for protection and commercialization but also as strategic enablers of ESG-driven innovation and knowledge transfer (Holgersson & Aaboen, 2019; WIPO, 2024). Patents, trademarks, copyrights, trade secrets, and industrial designs can support eco-friendly technologies, improve transparency, and foster social innovation. However, the mechanisms linking IP to ESG in SMEs remain underexplored, limiting both theoretical insight and practical guidance. This article reviews the existing literature to examine how IP can function as a strategic asset for ESG integration in SMEs, identifies key mechanisms, presents practical case studies, and proposes directions for future research.

## **Theoretical background**

The relationship between intellectual property (IP) management and environmental, social, and governance (ESG) performance can be interpreted through several complementary theoretical perspectives, primarily the Resource-Based View (RBV), the Dynamic Capabilities Theory, and the Knowledge-Based View (KBV). Together, these frameworks conceptualize IP as a strategic resource and enabler of sustainable transformation within small and medium-sized enterprises (SMEs).

### **Intellectual property as a strategic asset**

According to the Resource-Based View (RBV), intellectual property (IP) is a key intangible asset that can generate a sustainable competitive advantage when it is valuable, rare, inimitable, and embedded within the organization (Barney, 1991; Dereń & Skonieczny, 2024). Beyond its protective role, strategic IP management supports commercialization, innovation partnerships, and alignment with corporate strategy (Lima & Santos, 2018). Well-managed IP portfolios help SMEs capture innovation value, attract investment, and strengthen market positioning. The Dynamic Capabilities Theory (Teece, 2007) complements this view by highlighting IP's role in organizational adaptability. Through the creation and reconfiguration of knowledge assets, firms can respond to technological and regulatory shifts. Patents, trademarks, and industrial designs act as dynamic capabilities that enable eco- and social innovations aligned with ESG goals (Holgersson & Aaboen, 2019). For example, patenting sustainable technologies or inclusive business models allows firms to protect and share ESG-oriented knowledge. From the Knowledge-Based View (KBV), IP serves as a repository and conduit for organizational knowledge, supporting its codification, transfer, and sharing across networks (Grant, 1996). IP tools structure innovation

processes and document know-how, facilitating collaboration and diffusion. Through joint R&D, IP-driven alliances, and open innovation platforms, firms can accelerate the spread of sustainable practices. Licensing low-emission technologies or using open-source models fosters cross-sector cooperation and amplifies environmental and social impact. Ultimately, IP is not just a legal safeguard; it is a strategic driver of ecosystemic innovation and collaborative, sustainable development.

### **ESG and SMEs**

The ESG framework assesses enterprise performance across three dimensions: environmental stewardship, social responsibility, and corporate governance. Initially driven by compliance requirements, ESG has evolved into a strategic imperative, shaped by increasing regulatory pressure, investor scrutiny, and stakeholder expectations. For SMEs, which constitute the backbone of most economies, ESG adoption presents both opportunities and challenges. Resource constraints, lack of formalized procedures, and limited awareness of IP management often hinder systematic integration of sustainability principles (Holgersson, 2013; Sakiewicz et al., 2024; Dereń & Skonieczny, 2024). Moreover, many SMEs face difficulties in measuring and reporting ESG impacts due to the absence of standardized tools and frameworks. Nevertheless, SMEs possess inherent strengths – flexible structures, close stakeholder relationships, and entrepreneurial orientation – that enable faster adaptation to ESG demands (Povolná, 2019). In this context, intellectual property becomes a catalyst for sustainable transformation. By protecting innovations, facilitating technology transfer and encouraging collaborative innovation, IP allows SMEs to align economic objectives with environmental and social responsibilities. For example, eco-patenting supports low-carbon transitions, open licensing fosters social inclusiveness and equitable access to technologies, and IP transparency contributes to responsible governance and ESG reporting. Integrating IP with ESG frameworks enhances SMEs' ability to generate shared value – economic, environmental, and social – while simultaneously strengthening their resilience, reputation, and competitiveness. This alignment not only supports the achievement of the Sustainable Development Goals (SDGs) but also underscores the role of IP as a strategic enabler of sustainable innovation ecosystems. Viewed through this lens, intellectual property management becomes a vital component of sustainable business strategy, embedding ESG considerations into the core of SME competitiveness and long-term growth.

### **Methodology**

This study is based on the principles of a systematic literature review (SLR), aimed at identifying, evaluating, and synthesizing current research on the relationship between intellectual property (IP) management and environmental, social, and governance (ESG) performance in small and medium-sized enterprises (SMEs). The methodological framework was developed in accordance with the PRISMA 2020 guidelines, ensuring the transparency and replicability of the research process.

## **Research objectives and questions**

The main objective of this review is to examine how IP management strategies influence ESG performance in SMEs and to what extent they align with the Sustainable Development Goals (SDGs). To address this aim, the following research questions were formulated:

- RQ1. How does strategic intellectual property management affect ESG performance in SMEs?
- RQ2. What mechanisms link IP management with environmental and social outcomes?
- RQ3. What research gaps exist in current studies on IP–ESG integration?

## **Inclusion and exclusion criteria**

To ensure relevance and quality, the review included peer-reviewed articles (2010-2025) in English, focused on IP management, ESG practices, or sustainability in SMEs – both conceptual and empirical. Excluded were non-peer-reviewed sources, unrelated studies, duplicates, and publications focused solely on large corporations. These criteria ensured the selection of high-quality, SME-relevant literature.

## **Search strategy and selection process**

The literature search was conducted in major academic databases such as Scopus, Web of Science, and Google Scholar, using combinations of the following keywords: “intellectual property”, “ESG”, “sustainability”, “SMEs”, “patents”, and “innovation governance”. The initial search identified 356 records. After removing duplicates, 294 unique articles remained. Based on title and abstract screening, 212 publications that did not meet the inclusion criteria were excluded. The full texts of the remaining 82 articles were reviewed in detail, resulting in a final sample of 47 studies included in the review. Although the selection process is not presented in a visual PRISMA diagram, the description above clearly reflects the stages of identification, screening, and inclusion of records.

## **Data extraction and analysis**

Key variables were extracted from each study: publication year, methodology, geographical context, type of intellectual property, ESG dimension addressed, and main findings. Thematic analysis identified mechanisms linking IP management with ESG outcomes, such as eco-patenting, open licensing, knowledge sharing, and servitization. To enhance reliability, source triangulation was applied by including case studies and reports from WIPO and OECD. The analytical framework covered concepts like “intellectual property”, “ESG”, “sustainable development”, “SMEs”, “patents”, and “open innovation”. Content analysis focused on the recurring mechanisms through which IP influences ESG, with particular attention to synergies between environmental, social, and governance dimensions in promoting sustainable SME development.

## Mechanisms linking intellectual property and ESG in SMEs

The integration of intellectual property (IP) with ESG objectives is becoming a core element of sustainable development strategies in SMEs. In response to rising stakeholder expectations, regulatory demands, and the need for resilience, SMEs increasingly seek tools that combine innovation with social and environmental responsibility. IP now functions not only as a protective asset but also as a strategic integrator of ESG values within business models, supporting both operational and strategic alignment with sustainable development goals. Research confirms the relevance of intellectual capital in this context. Gross-Gołacka et al. (2020) show that human and structural capital in Polish SMEs support sustainability strategies. Vimalnath et al. (2023) emphasize that a Responsible IP Strategy fosters inclusivity, value co-creation, and ESG alignment. Hernández-Chea et al. (2020) introduce the SBM-IP Canvas, linking IP forms to sustainable business model components. Hanel (2008) demonstrates that SMEs apply different IP tools depending on their resources and technological maturity. While limited financing or legal expertise may constrain patent use, even partial IP management enhances innovation, collaboration, and ESG-oriented adaptation. Five key mechanisms emerge from the literature and case studies. Collaboration with universities, NGOs, research institutions, and corporations strengthens SMEs' absorptive capacity and access to resources (Suchek & Franco, 2024; Zahoor & Al-Tabbaa, 2020; Wang et al., 2025). Joint IP management – via co-ownership, cross-licensing, and open platforms – facilitates knowledge exchange, risk reduction, and innovation scaling, contributing to SDG 9 and SDG 17. Table 1 summarizes these mechanisms, illustrating how IP advances ESG goals in SMEs.

**Table 1. Mechanisms linking intellectual property and ESG in small and medium-sized enterprises**

Mechanism	Description	Examples	Supported SDGs	Key ESG functions	References
Patenting Environmentally Friendly Technologies	Protecting and commercializing eco-friendly innovations, e.g., energy efficiency, renewable energy, and circular economy solutions	ML System S.A. – solar-generating glass for building-integrated photovoltaic; Bioelektra Group – RotoSTERIL waste processing technology	SDG 7, 12, 13	Environmental impact, technological innovation, corporate reputation	Tundang (2025); PAP Biznes (2024); Bioelektra Group (2024)
Open-Source Licensing and Knowledge Sharing	Providing free access to technologies and knowledge to promote social inclusion, innovation, and technology diffusion	Migam.org – open-source tools for sign language translation	SDG 4, 9, 10	Social inclusion, innovation ecosystem development, cost reduction	Holgersson & Aaboen (2019); Migam.org (2025)

Mechanism	Description	Examples	Supported SDGs	Key ESG functions	References
Knowledge Management and IP Reporting	Systematic management of IP-related knowledge and integration with ESG reporting, including lifecycle monitoring and environmental impact assessment	Innovation lifecycle tracking, technology impact reports	SDG 16	Transparency, ethical governance, corporate responsibility, strategic decision support	WIPO (2024); Chen & Wang (2024)
Product and Service Servitization	Transforming product sales into service models (e.g., rental, subscription, pay-per-use) to extend product lifecycle and reduce resource consumption	Rental of energy-efficient machinery, subscription-based software	SDG 12	Resource efficiency, long-term customer relationships, innovative business models	Chen & Wang (2024)
Interorganizational Collaboration and Technological Alliances	Partnerships with universities, NGOs, research institutions, and corporations to enhance absorptive capacity and jointly manage IP	Co-ownership of patents, cross-licensing, joint innovation platforms	SDG 9, 17	Knowledge transfer, risk reduction, innovation ecosystem building, resilience to market and systemic changes	Suchek & Franco (2024); Zahoor & Al-Tabbaa (2020); Wang et al. (2025)

Source: Own study based on research

### Patenting environmentally friendly technologies

Intellectual property, especially patents, is a vital tool for protecting technological innovations and enabling their commercialization. From an ESG perspective, patenting sustainable technologies like energy-efficient systems, renewables, or circular economy solutions allows SMEs to actively support ecological transformation. Well-managed patent portfolios enhance transparency, value creation, and alignment with the Sustainable Development Goals (Tundang, 2025). Polish SMEs increasingly combine IP with ESG strategies, generating measurable business, social, and environmental benefits. ML System S.A. develops patented solar glass for building-integrated photovoltaics, contributing to SDG 7 and SDG 13 (PAP Biznes, 2024).

### Open-source licensing and knowledge sharing

Open-source licensing offers an alternative to traditional IP protection by enabling free access to technologies and knowledge, fostering broad dissemination. For SMEs, this model supports social inclusion, innovation, and technology diffusion aligned with ESG principles (Holgersson & Aaboen, 2019). A notable example is Migam.org (2025), which provides open-source sign language translation tools,

contributing to SDG 4 (Quality Education) and SDG 10 (Reduced Inequalities). Beyond brand visibility, open licensing serves strategic and operational roles, accelerating innovation, reducing R&D costs, and shortening the time-to-market. It enhances knowledge transfer among firms, academia, and user communities, boosting SMEs' absorptive capacity and innovation ecosystems. It also mitigates legal risks in niche tech areas and reinforces corporate social responsibility. Firms adopting open licenses are seen as responsible innovators, especially when sharing eco-friendly or educational technologies. This approach expands the market reach without high investment, builds engaged user communities, and supports SDGs like education (SDG 4), reduced inequalities (SDG 10), and industrial innovation (SDG 9). Ultimately, open licensing strengthens SMEs' strategic positioning while embedding ESG values into daily operations.

### **Knowledge management and IP reporting**

Effective IP-related knowledge management goes beyond documentation and protection; it includes monitoring innovation use, assessing environmental impact, and integrating IP data into ESG reporting. This involves systems that track the full lifecycle of innovations, from invention to commercialization and evaluation of social and environmental outcomes. Incorporating data such as patent counts, license types, technology applications, and environmental contributions into ESG frameworks enhances transparency. Demiraj (2025) found that intellectual capital mediates ESG–financial performance links in U.S. IT firms, while Chen & Wang (2024) showed that digital transformation and servitization in Chinese SMEs improve ESG outcomes. Such practices help stakeholders assess a company's sustainability contributions (WIPO, 2024; Chen & Wang, 2024) and foster a culture of openness and accountability – especially vital for SMEs with limited resources. Systematic IP data analysis supports strategic decisions, identifies improvement areas, and forecasts innovation benefits. These efforts directly support SDG 16 by promoting ethical governance and transparency, while improving coordination across R&D, legal, and risk functions. Integrating IP into ESG reporting builds stakeholder trust and strengthens access to financing, partnerships, and market positioning.

### **Product and service servitization**

Servitization – the shift from selling products to offering services like rental, leasing, or subscriptions – is a strategic approach to sustainable resource management. By providing access to product functionality rather than ownership, companies can extend product lifecycles, reduce overproduction, and optimize resource use. Intellectual property plays a crucial role in enabling servitization. Patents protect technologies for monitoring, maintenance, and automation; copyrights and industrial designs secure user interfaces and documentation; trademarks build brand trust and signal service quality. These IP tools support scalable, secure, and competitive service delivery. For SMEs, servitization offers practical pathways to implement ESG principles. Wang et al. (2025) highlight how IP protection in service-based models

strengthens innovation and sustainability. For example, renting energy-efficient machinery instead of selling it reduces raw material consumption, waste, and logistics emissions – directly contributing to SDG 12 (Responsible Consumption and Production). Servitization also fosters long-term customer relationships through personalized services and co-development. It improves lifecycle management by facilitating upgrades, maintenance, and recovery, while lowering environmental costs and enhancing operational efficiency. Additionally, service models often rely on advanced IT systems, creating new opportunities to leverage IP in software, algorithms, and data management. For resource-constrained SMEs, servitization is not only a sustainable alternative to traditional sales but also a driver of innovation, flexibility, and social responsibility. By aligning business models with the ESG goals, SMEs can strengthen their market position and contribute meaningfully to sustainable development.

### **Interorganizational collaboration and technological alliances**

Collaboration with universities, NGOs, research centers, and large corporations is a key enabler for SMEs to implement social and environmental innovations aligned with ESG principles. These partnerships enhance SMEs' absorptive capacity – their ability to identify, assimilate, and apply external knowledge and technologies (Suchek & Franco, 2024; Zahoor & Al-Tabbaa, 2020; Wang et al., 2025). Given limited resources, such alliances provide access to expertise, infrastructure, and competencies that SMEs often cannot develop independently. Joint IP management plays a strategic role in these collaborations. Models like patent co-ownership, cross-licensing, shared innovation platforms, and open technology repositories facilitate knowledge exchange, reduce implementation risks, and ensure fair IP governance. This allows SMEs to actively engage in innovation while protecting their interests and improving their negotiation position with larger partners. From a sustainability perspective, interorganizational collaboration supports SDG 9 (Industry, Innovation, and Infrastructure) and SDG 17 (Partnerships for the Goals). Initiatives such as joint R&D projects, technology incubators, and regional innovation clusters help build resilient ecosystems that promote responsible innovation and local economic development. Moreover, these partnerships strengthen SMEs' adaptability to market shifts and systemic challenges, such as energy transition, digitalization, and regulatory changes. Joint IP strategies can also foster new business models that integrate economic goals with social and environmental values. Ultimately, interorganizational collaboration, supported by thoughtful IP management, helps SMEs embed ESG principles into their practices and contributes to broader systemic change toward more sustainable and inclusive business practices.

### **Integration of intellectual property and ESG in SMEs**

Effective integration of intellectual property (IP) with ESG principles requires both strategic intent and operational infrastructure. While research on intellectual capital and innovation in SMEs is expanding, systematic studies directly linking IP

protection with ESG performance remain scarce (Gross-Gołącka et al., 2020; Demiraj, 2025; Zhang & Xu, 2025; Wang et al., 2025). At the strategic level, SMEs should identify IP assets with potential for positive social and environmental impact – such as low-emission technologies, inclusive solutions, or innovations that enhance transparency in governance. This allows IP investments to be aligned with sustainable development priorities. Operationally, integrating IP with ESG involves implementing systems to monitor the lifecycle of innovations, frameworks for reporting technological impact, servitization models, and mechanisms for interorganizational collaboration (Holgersson & Aaboen, 2019; Wang et al., 2025). These tools help SMEs manage intangible assets more effectively and contribute to achieving the Sustainable Development Goals. Empirical studies support this approach. Hall and Helmers (2024) show that companies in the clean energy sector using open licensing and industry partnerships accelerate innovation diffusion and environmental impact, supporting SDG 7 (Affordable and Clean Energy) and SDG 13 (Climate Action). Seebode (2012) highlights Philips' use of IP to scale medical technologies, such as mobile diagnostics and telemedicine, thereby expanding healthcare access and contributing to SDG 3 (Good Health and Well-being) and SDG 10 (Reduced Inequalities). Start-ups in the cleantech sector also demonstrate flexible IP strategies, combining patent protection with open licensing to scale innovations, attract partners, and increase accessibility (Chesbrough, 2020; Bogers et al., 2018). These practices foster innovation ecosystems where IP acts as a catalyst for collaboration and transformation rather than a barrier. In summary, integrating IP with ESG should be viewed not as a parallel process but as a unified strategy for value creation. When strategically managed, IP can support environmental, social, and governance goals while enhancing SME competitiveness, resilience, and reputation in a dynamic market environment.

## Discussion

The reviewed literature and case studies highlight intellectual property (IP) as a strategic enabler of ESG integration in SMEs. Its role extends beyond protecting innovations and enabling commercialization; it also supports social responsibility, governance transparency, and environmentally sustainable solutions. IP thus acts as a bridge between technological goals and sustainable development values, helping SMEs build a long-term competitive advantage through innovation and accountability. Despite the growing recognition of this potential, several research limitations remain. There is a lack of comprehensive empirical data on how IP strategies influence ESG outcomes in SMEs. Measuring the social and environmental effects of IP management is challenging, especially given SMEs' limited analytical and organizational resources. Many firms also lack tools to integrate IP data into ESG reporting, which hinders their ability to document and communicate the impact of innovation. From a theoretical standpoint, redefining IP as a value-creation tool aligns with the evolution of the Resource-Based View (RBV), Dynamic Capabilities Theory, and Knowledge-Based View (KBV). These frameworks emphasize the strategic role

of intangible assets in building adaptability and resilience. IP, as a knowledge repository and transfer mechanism, supports interorganizational learning, technological alliances, and collaborative innovation ecosystems. In practice, SMEs can use IP to enhance transparency, promote inclusiveness, and improve environmental performance. Tools such as patent lifecycle monitoring, open licensing for socially beneficial technologies, and servitization models help translate ESG goals into concrete business actions. This strengthens reputation, improves risk management, and facilitates access to financing and strategic partnerships. Therefore, integrating IP with ESG in SMEs should be seen as a multidimensional process – requiring both a shift in management thinking and the development of appropriate analytical and institutional tools. Further empirical, comparative, and sector-specific research is essential to better understand how IP–ESG strategies contribute to SME sustainability and resilience in a dynamic economic environment.

### **Directions for future research on IP–ESG integration in SMEs**

Although existing studies provide valuable insights into the role of intellectual capital and innovation in supporting ESG performance in SMEs, they often address only selected mechanisms. Prior research has largely focused on individual dimensions of intellectual capital, such as human or structural capital, without fully exploring the diverse forms of intellectual property (IP) and their differentiated impact across environmental, social, and governance pillars. Recent contributions (Gross-Gołącka et al., 2020; Giampaoli et al., 2025; Demiraj, 2025; Chen & Wang, 2024; Wang et al., 2025) emphasize the strategic relevance of intangible assets and innovation capabilities, yet stop short of offering a holistic assessment of how specific IP instruments contribute to ESG outcomes in SMEs.

This growing recognition of IP as a lever for sustainable transformation underscores the need for more robust and targeted empirical research. Future studies should aim to clarify the tangible influence of IP strategies on the realization of Sustainable Development Goals (SDGs) and the broader sustainability performance of SMEs. To advance this agenda, several key research directions emerge. First, the composition and structure of IP portfolios – encompassing patents, trademarks, copyrights, and industrial designs – should be examined in relation to ESG performance. Identifying which types of IP assets generate the greatest social and environmental value, and under what organizational or sectoral conditions, would provide critical insights for both scholars and practitioners. Second, the role of open innovation and technology diffusion deserves deeper investigation. Open-source licensing, knowledge-sharing platforms, and public–private partnerships may significantly enhance eco-innovation, particularly in sectors with a high environmental impact. Research should explore not only firm-level benefits but also the systemic outcomes related to sustainable industrial transformation. Third, there is a pressing need to develop quantitative indicators that capture IP’s contribution to ESG. Metrics such as innovation durability, accessibility of green technologies, and reductions in environmental externalities would enable a more precise evaluation and cross-sectoral comparison of IP strategies. Finally, the use of methodological triangulation, combining

quantitative, qualitative, and longitudinal approaches, would allow for a more nuanced understanding of how IP management practices influence ESG implementation. This would also help identify enabling factors that foster lasting synergies between innovation, social responsibility, and sustainable growth. By addressing these areas, future research can deepen our understanding of the dynamic interplay between IP and ESG in the SME context. Such insights will be essential for developing evidence-based recommendations for business leaders, policymakers, and other stakeholders seeking to harness intellectual property as a driver of sustainable development.

## Conclusions

The conducted literature review confirms that intellectual property can serve as a critical resource supporting the implementation of ESG strategies in small and medium-sized enterprises. Mechanisms such as patenting environmental technologies, open innovation, knowledge management, servitization, and interorganizational collaboration provide operational frameworks that enable the achievement of environmental, social, and governance objectives. At the same time, they strengthen SMEs' ability to build a competitive advantage based on innovation, flexibility, and responsibility. From a theoretical perspective, redefining IP as a tool for creating sustainable value represents a significant step toward integrating innovation management with concepts of social and environmental responsibility. From a practical standpoint, implementing IP strategies oriented toward ESG can enable SMEs to participate more effectively in global sustainable development agendas, such as the UN 2030 Agenda. Further research in this area, supported by collaboration between academia, the business sector, and public institutions, can contribute to the development of tools that facilitate the transformation of SMEs toward more responsible, innovative, and resilient business models.

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## WŁASNOŚĆ INTELEKTUALNA JAKO ELEMENT STRATEGII ESG W SEKTORZE MŚP – PRZEGLĄD LITERATURY I KIERUNKI BADAŃ

**Streszczenie:** Rosnąca presja społeczna i regulacyjna na prowadzenie działalności zgodnie z zasadami zrównoważonego rozwoju przyspieszyła integrację ESG (Environmental, Social, Governance) w strategiach przedsiębiorstw. Własność intelektualna (IP), jako kluczowy zasób strategiczny, coraz częściej wspiera realizację celów zrównoważonego rozwoju w małych i średnich przedsiębiorstwach (MŚP). Celem artykułu jest identyfikacja sposobów, w jakie zarządzanie IP przyczynia się do wyników ESG w MŚP. Na podstawie przeglądu literatury i analiz empirycznych wyróżniono pięć mechanizmów łączących IP i ESG: ekopatentowanie, licencjonowanie open-source, raportowanie wiedzy, serwicyzację oraz współpracę międzyorganizacyjną. Mechanizmy te wspierają realizację SDG 4, 7, 10, 12, 13, 16 i 17. Wyniki wskazują, że mimo rosnącej świadomości synergii między IP a ESG wciąż istnieją istotne luki badawcze dotyczące ich skuteczności w firmach o ograniczonych zasobach. Artykuł kończy się propozycją kierunków badań i praktyk menedżerskich wspierających integrację strategii IP z celami zrównoważonego rozwoju w sposób wzmacniający konkurencyjność i tworzenie wartości globalnej.

**Słowa kluczowe:** strategia korporacyjna, cele rozwoju, ESG, własność intelektualna, MŚP, zrównoważony rozwój

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## CHILDLESSNESS AS A HIDDEN REASON FOR UNEQUAL TREATMENT OF EMPLOYEES – PILOT STUDY RESULTS

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**Abstract:** The contemporary workplace increasingly emphasizes the importance of equality and inclusiveness, yet there are still areas of discrimination that remain poorly understood. One such area is childlessness, rarely analyzed as a potential indicator of unequal treatment. The results of the pilot study show that although childlessness is not formally recognized as a basis for discrimination, it can impact professional perceptions and workplace relationships. The aim of the study was to identify mechanisms that may lead to the marginalization of this group, including manifestations of so-called "family privilege," which involves favoring individuals with children in terms of job assignments, promotions, and access to flexible work arrangements. This article serves as a starting point for a broader reflection on the need to incorporate the perspectives of childless individuals into equality policies and diversity management strategies.


**Keywords:** childlessness, diversity management, family privileges, HR policies, unequal treatment of employees, workplace discrimination


**JEL Classification:** A13, A14

### Introduction

The contemporary workplace places increasing emphasis on equality and inclusiveness, yet many forms of discrimination remain hidden or insufficiently researched. One such factor may be childlessness, a personal characteristic rarely considered as a potential factor in unequal treatment. Although Polish labor law and EU

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regulations (see Council Directive 2000/78/EC of 27 November 2000, OJ L 2000, 303.16) provide a broad range of protection against discrimination, the list of grounds is not exhaustive, opening the possibility of analyzing less obvious forms of exclusion.

The purpose of this article is to present the results of a pilot study aimed at identifying potential mechanisms of unequal treatment of childless employees in Polish organizations. This article attempts to fill this research gap and invites a broader discussion on the inclusiveness of HR policies in the workplace.

### **Childlessness as an “invisible” category in the equality policies of the labor market**

The issue of equal treatment in employment and occupation is firmly rooted in the legal system at both the national and international levels. In Poland, the fundamental legal act is the Constitution of the Republic of Poland of 2 April 1997, which, in Article 32, guarantees equality before the law for all and prohibits discrimination in political, social, or economic life “for any reason.” Article 33, in turn, specifies the principle of equality between women and men in family, social, political, and professional life (Journal of Laws of 1997, No. 78, item 483; of 2001, No. 28, item 319; of 2006, No. 200, item 1471; of 2009, No. 114, item 946). In labor law, these principles are developed by the provisions of the Labor Code, which guarantee equal treatment and prohibit discrimination on the basis of personal characteristics (Art. 11<sup>3</sup> of the Act of 26 June 1974 – Labor Code, consolidated text: Journal of Laws of 2025, item 277, 807).

At the EU level, Directive 2000/78/EC of 27 November 2000, establishing a general framework for equal treatment in employment and occupation, is of key importance. Its scope includes, among others, protection against discrimination based on sex, age, disability, sexual orientation, belief, and religion. The literature emphasizes that the list of discriminatory grounds is open-ended, allowing Member States to include additional grounds in their interpretation of the law (Chalmers et al., 2019). This means that childlessness could potentially qualify as a ground that requires protection against unequal treatment.

It should be noted that the practice of applying labor law in Poland focuses on protecting parents and those with family responsibilities. This is reflected, among other things, in an extensive system of maternity and paternity leave, parental leave, care allowances, and regulations regarding flexible working hours for parents of children under eight (Suwada, 2021).

Recently, there has been an increasing emphasis on the need to include this category of employees in equality policies, which has not yet been adequately protected. According to the European Commission's recommendations, the principle of equal treatment should encompass both traditionally protected groups and new categories of people at risk of exclusion (European Commission, 2019). In this sense, childlessness, although rarely perceived as a premise of inequality, falls within an area that requires further legal and political reflection.

Traditional narratives regarding the role of family and parenthood are still strongly present in Polish society. Sociological research shows that motherhood and fatherhood are considered a “natural” and desirable stage of adulthood, embedded in the socially constructed model of “normal life.” Childlessness is often interpreted as a deviation from this norm, which translates into the valuation of social and professional roles. In practice, this means that parenthood is associated with maturity, responsibility, and stability, while childlessness may be viewed as a manifestation of selfishness, immaturity, or a lack of full fulfillment (Suwada, 2021).

Childlessness is a multidimensional social phenomenon, the analysis of which requires drawing on various research perspectives: demographic, sociological, psychological, cultural, and economic. The literature emphasizes that childlessness is not a homogeneous category but encompasses a range of diverse situations and experiences (Szukalski, 2004).

Recent analyses confirm the complexity of this phenomenon in the labor market as well. They show that childless workers remain an “invisible” group and are marginalized in organizational policies (Andrews, 2024a; Andrews, 2024b).

The most frequently cited typology distinguishes two basic types of childlessness: voluntary (childfree) and involuntary (childless) (McAllister & Clarke, 1998). Voluntary childlessness is the result of a conscious choice, motivated by lifestyle, personal preferences, values, worldviews, etc. As R. Gillespie notes, individuals declaring a childless life often perceive the decision as part of their identity, rejecting the social coercion of parenthood (Gillespie, 2003). Involuntary childlessness, on the other hand, is associated with independent causes such as health factors, biological limitations, and economic situation that prevent having children (Letherby, 2002).

In the context of professional work, both groups may experience similar social consequences. Childless individuals face various forms of marginalization and stigmatization, although the sources of exclusion vary. Individuals who are childless by choice often face moral judgments such as “selfishness,” “lack of maturity,” or “failure to fulfill social obligations” (Park, 2002). Conversely, childless individuals, contrary to their own plans, may experience pity, sympathy, or even taboo regarding their situation, resulting in a lack of open discussion and isolation in social and professional environments (Stegen et al., 2023). This phenomenon is reflected in the concept of “parenthood norms,” or parenting norms, which in strongly family-oriented societies define the framework of adulthood and responsibility primarily through the prism of having children. Normative expectations of parenthood mean that childlessness in any form is perceived as a deviation from the socially accepted model. As Hakim points out, in the context of the theory of preferences regarding family and professional roles, people who consciously choose a life without children fit into the career-oriented group, which is often depreciated in cultures with a strong dominance of the traditional family model (Hakim, 2002).

Analyzing the functioning of contemporary organizations, a number of mechanisms of indirect discrimination against childless people can be identified:

- employee benefits – in many companies, the benefits system is primarily aimed at families with children, such as subsidies for summer camps and preschools, Christmas gifts for children, etc. As a result, childless individuals do not benefit

from some benefits, even though they formally participate in their financing (Lewis, 1997; Crompton, 2006),

- working time flexibility – organizations more often grant parents privileges such as remote work, early departures, or flexible start times. Childless employees, on the other hand, are required to “compensate” for this flexibility, for example, by working longer hours or taking on the tasks of colleagues (Suwaga, 2021; Kelly et al., 2010),
- task burden – the stereotypical belief that childless individuals “have more time” results in excessive workloads, such as assigning them additional projects, weekend work, or shifts during holiday periods. Such practices lead to an imbalance in the division of responsibilities and foster a sense of injustice (McDonald et al., 2008),
- promotion and career development – there is a tendency to perceive childless employees as less stable and less committed to the organization. These beliefs influence decisions about promotions and the referral of employees to specialized training and strategic projects. It has been suggested that childless individuals are not as socially embedded as their parents, and therefore their loyalty to the organization may be lower (Park, 2002).

These mechanisms are part of a broader framework of so-called covert discrimination, in which seemingly neutral criteria favor certain groups of employees over others. Although difficult to clearly identify and legally regulate, their consequences are real. They lead to perpetuation of inequalities and limit the career opportunities of childless individuals (Acker, 2006).

Experiencing unequal treatment due to childlessness has multifaceted psychosocial consequences. Research indicates that childless individuals experience a sense of isolation, reduced job satisfaction, and an increased risk of burnout (Gillespie, 2003; Park, 2002). Lack of recognition of their life situation contributes to deepening social exclusion and, consequently, leads to lower self-esteem and decreased professional motivation (Letherby, 1999).

The psychological costs of this discrimination affect not only the individual but also team relationships. Childless individuals are more likely to report a lack of a sense of belonging within their co-workers and difficulty building relationships in an environment dominated by parenting-related activities (Shapiro, 2014). In the long term, this leads to marginalization, reduced engagement, and limited creativity for employees who do not conform to the dominant “parenting norm.”

From an organizational perspective, the consequences of this process are measurable. Marginalizing childless employees leads to a loss of innovative potential and a reduction in diversity within teams (Shore et al., 2011). Organizations that ignore the exclusion of childless individuals risk losing valuable employees, especially in the context of global demographic trends, where the percentage of childless individuals is steadily increasing (Rowland, 2007).

The psychosocial consequences of unequal treatment of childless individuals should therefore be considered at both the individual and organizational levels.

While for individuals, they often result in emotional burden and a sense of marginalization, for organizations, they pose a barrier to building an inclusive work culture and the effective utilization of human resources.

In response to the challenges related to the unequal treatment of childless people, it is necessary to develop inclusive personnel policies.

Key practical solutions include:

- designing benefits that are neutral to family status – organizations should offer benefits available to all employees, rather than limiting support solely to family-friendly benefits (Kossek et al., 2011),
- flexibility in work time and location – flexibility policies should be available to all employees, not just parents. Inclusive work time solutions increase employee satisfaction, engagement, and retention (Hill et al., 2008),
- educating managers and employees about biases – training programs on unconscious bias can help identify and reduce stereotypes associated with childlessness (Kalev et al., 2006),
- promoting diverse lifestyles and work-life balance – work-life balance policies should go beyond parenthood and consider various forms of self-fulfillment (Greenhaus & Allen, 2011).

Research indicates that organizations that implement inclusive HR policies reap tangible benefits in the form of greater innovation, a better organizational climate, and greater employee loyalty. Creating a work environment that embraces diversity, including family status, is therefore not only an ethical and legal requirement but also a strategic element of competitive advantage (Roberson, 2006).

Taking the perspective of childless individuals into account in HR policies is a step toward a more inclusive labor market. This approach aligns with the concept of diversity management, which assumes that each employee's personal characteristic, including family status, can be both a source of barriers and an organizational resource (Shore et al., 2011). Integrating this perspective into HR policies is important not only from the perspective of ethics and labor law but also from the perspective of strategic benefits for the organization, such as increased innovation, a better organizational climate, and higher employee engagement (Roberson, 2006).

This discussion provides a basis for interpreting the results of a pilot study aimed at capturing early signs of unequal treatment of childless employees in Polish organizations. This research may contribute to opening academic and practical discussions on the need to consider diverse workplace models and create HR policies free from discrimination based on family status.

### **Pilot study methodology**

A pilot study on childlessness as a hidden reason for unequal treatment of employees was conducted between December 2024 and July 2025 in two formats: paper (38 participants) and online (16 participants). A total of 54 people participated in the study. The respondents justified their choice of the paper questionnaire with the need to maintain anonymity and a lack of trust in online forms in the context of such

a sensitive topic. Additionally, personal contact with the study's investigators enabled a brief conversation that enriched the research material with contextual information and emotional responses.

The decision to conduct a pilot study arose from the need to examine the scale of the problem, which had been highlighted by the respondents in other research areas conducted by the authors. The participants' comments confirmed that the topic is important, often overlooked, and for many, a source of psychological pain.

### **Characteristics of the study participants group**

The pilot study, which included 54 individuals, focused exclusively on childlessness among the childless group to examine the scale of the problem in this specific population. Currently, the study is being continued in an expanded format, involving two groups (childless and those with children), which will enable a comprehensive comparative analysis.

The questionnaire was constructed based on clearly defined research objectives, selecting simple and unambiguous questions and arranging them in a logical order – from general to specific. The pilot phase examined the comprehensibility of the questions, the time required to complete them, and potential interpretation difficulties. Standardization of the tool was ensured by the use of uniform response scales (e.g., Likert scales), consistent language and question structure, and clear instructions for respondents, which enabled comparability of results and assessment of the questionnaire's reliability.

The main goal of this pilot study was to verify the hypothesis that childlessness is a hidden cause of unequal treatment in the workplace. Due to the specific nature of the topic, a purposive sampling approach was chosen, allowing for precise targeting of individuals directly experiencing the phenomenon under investigation. Directing the study exclusively to childless individuals was a priority, aiming to determine the real extent to which the problem of discrimination or marginalization of this group exists within the professional structures of potential participants in future phases of the study.

The study included 54 individuals, all of whom (100%) confirmed their childlessness status (Table 1). This homogeneity of the sample in terms of this key characteristic guarantees high validity of the study and allows the analysis of the phenomenon from the perspective of those directly involved in the problem. Among the respondents, most women (72%,  $n = 39$ ) were noted compared to men (28%,  $n = 15$ ). The predominance of women may indicate both their greater willingness to share their experiences of childlessness in a psychological and social context and stronger social pressures regarding motherhood. This gender disparity is not accidental and can be interpreted in two ways:

- social perspective: women continue to be subjected to stronger pressure to procreate, which means their childlessness is more likely to be the subject of social and professional judgment,
- psychological perspective: women are statistically more willing to share difficult experiences and self-therapeutically analyze their life situation.

**Table 1. Characteristics of the research sample**

<b>PARTICIPANTS</b>		<b>NUMBER</b>	
<b>Sex</b>	WOMEN	39	<b>TOTAL 54</b>
	MEN	15	
– all study participants declared that they were childless			
<b>Age range</b>	18-25	0	
	26-35	4	
	36-45	24	
	46-55	12	
	56 years and over	14	
– the largest group were people aged 36-45			
<b>Domicile</b>	Village	5	
	City up to 20,000 inhabitants	16	
	City with 20,000 to 100,000 inhabitants	12	
	City with over 100,000 inhabitants	21	
– respondents came from various types of localities			
<b>Education</b>	Basic	0	
	General averages	7	
	Secondary vocational education	2	
	Higher education – bachelor's degree	14	
	Higher – engineering	5	
	Higher – Master's degree	22	
	Higher – academic degree (PhD, Prof.)	4	
– the vast majority of respondents have higher education			
<b>Size of the company where respondents work</b>	Micro (up to 9 employees)	11	
	Small (10-49)	9	
	Medium (50-249)	18	
	Large (over 250)	16	
– respondents work in companies of various sizes			
<b>Reason for not having children</b>	Own decision	11	
	Partner's decision	5	
	Random event	7	
	Treatment errors	24*	
	Misdiagnosis	28*	
	Illness	7	
	Other	0	
* 24 people marked both “treatment errors” and “misdiagnosis”			

Source: Own study

The largest group consisted of respondents aged 36-45. This is the stage of life when childlessness ceases to be perceived as “deferred parenthood” and becomes a biological and social fact. The lack of participants under 25 confirms the thesis that very young people rarely define their childlessness as a permanent or identity-based state, making the problem of discrimination less acute or premature in their eyes.

The strongest group consisted of respondents aged 36-45, for whom the issue of childlessness is particularly important from a biological and social perspective, while the absence of people under 25 suggests that younger people do not perceive the problem of childlessness as a permanent condition affecting them.

The respondents came from various types of locations, and the predominance of people from large cities may indicate greater openness to participating in the research or easier access to information about them, which ensures a diverse social context.

Most respondents have higher education, which may indicate a greater awareness of the problem and a willingness to understand and work through it. This may also influence how they interpret their own experiences and their willingness to articulate them.

Respondents work in companies of varying sizes, which can indicate a wide range of professional environments where childlessness may be a topic of concern both personally and professionally. This may also impact access to psychological or medical support.

The most frequently cited causes of childlessness were medical in nature, such as misdiagnosis or treatment errors, suggesting the existence of systemic problems in healthcare leading to lasting life consequences. The small number of individuals who indicated their own decision indicates that, for most respondents, childlessness was the result of circumstances beyond their control, not a conscious choice.

### **Characteristics of the study participants group – substantive part**

All 54 participants in the study reported experiencing discrimination due to their childlessness. The unanimity of these responses indicates the widespread and systemic nature of the problem. Childlessness, while often considered a private matter, in practice impacts working conditions and professional relationships.

**Table 2. Characteristics of the research sample**

<b>PROFESSIONAL SITUATION</b>	<b>Discrimination by co-workers</b>	<b>Discrimination by management</b>
	<b>Number of people</b>	<b>Number of people</b>
<b>Vacation planning</b>	41 (76%)	37 (69%)
<b>Planning replacements</b>	38 (70%)	33 (61%)
<b>Holiday duty</b>	46 (85%)	48 (89%)
<b>Work schedule</b>	42 (78%)	47 (87%)
<b>Social benefits</b>	49 (91%)	49 (91%)
<b>Medical packages</b>	12 (22%)	5 (9%)
<b>Insurance programs</b>	39 (72%)	39 (72%)

Source: Own study

Table 2 presents the number of people who experienced discrimination from coworkers and management in various work situations. The data reveal clear patterns of unequal treatment of childless people.

Holiday shifts and work schedules – the biggest burden:

- most cases of discrimination concern holiday shifts (94 responses in total) and work schedules (80 responses),
- childless people are more often assigned to work during holiday periods, which may be due to the assumption that they are “more available.”

It is an informal practice that can lead to chronic overload and a sense of injustice.

Discrimination by management – a structural problem:

- there are significant instances of discrimination by management in each category, indicating that the problem is not limited to relationships between employees,
- this is particularly evident in the areas of social benefits and work planning.

Discrimination against childless people is also rooted in organizational decisions, not just in everyday interactions.

The analysis of the obtained results is presented in Table 3.

**Table 3. Differences between discrimination by coworkers and management**

<b>Analysis area</b>	<b>Co-workers</b>	<b>Management</b>
<b>Nature of activities</b>	Informal practices resulting from beliefs and stereotypes (“greater availability”)	Formal organizational decisions, rooted in company structures and policies
<b>Examples of situations</b>	Holiday shifts, replacement planning, and vacations	Work schedule, social benefits, insurance programs
<b>The scale of the problem</b>	It mainly concerns daily duties and interpersonal relationships	Covers key areas of employment and benefits, influencing long-term working conditions
<b>Consequences</b>	A sense of injustice, tensions within the team, isolation	Marginalization in access to benefits, work overload, lack of a sense of security
<b>Employee perception</b>	Often dismissed as a “natural” consequence of childlessness	Perceived as more serious because it stems from formal decisions and is more difficult to challenge
<b>Employee reactions</b>	Less frequently reported, fear of conflict in the team	More frequently reported, although 1/3 remains silent for fear of consequences
<b>The most affected areas</b>	Holiday shifts, vacation planning	Work schedule, social benefits, benefit structure

Source: Own study

Respondents viewed discrimination by coworkers as everyday and relational, while discrimination by management was systemic and structural. Both forms reinforce each other: informal practices within teams are perpetuated by organizational decisions.

The result is a double burden on childless people in both horizontal and vertical relationships.

Marginalization in access to benefits:

- fewer people report discrimination in healthcare packages and insurance programs, but these are still important signals,
- people without children may be overlooked in benefit structures that favor parents.

Benefit systems may unwittingly exclude childless individuals, reinforcing their sense of marginalization. The study shows that they are vulnerable to discrimination in both horizontal and vertical relationships, particularly in areas related to working hours and access to benefits. Therefore, organizations should implement equal treatment policies that consider the diverse life situations of all employees, not just parents.

Management's actions confirm that discrimination is not limited to horizontal relationships but also occurs within decision-making structures. Data regarding work schedules and holiday shifts, which can lead to overloading childless individuals, are particularly concerning.

Discriminatory situations: 35 individuals, 19 did not take this step. Although the majority decided to report the incident, nearly one-third of the respondents did not share their experiences, which may stem from a lack of trust in the institution or fear of repercussions (Table 4).

**Table 4. Recipients of applications**

<b>Recipient of the notification</b>	<b>Number of people</b>
Immediate superior	11
Top management	7
Company owner	14
Personnel/HR department	21
Spokesman	9
Trade unions	32
Social labor inspector	2

Source: Own study

Trade unions were the most frequently chosen reporting channel, highlighting their role as institutions of trust in conflict situations. The low number of reports directed at superiors and management suggests a lack of effective response mechanisms within management structures.

The unanimous recognition of the limitation of support for childless people as a form of discrimination shows that the problem of unequal treatment in the workplace is real and requires systemic solutions and greater social sensitivity.

### **Research limitations**

When analyzing the study results, it is important to note its limitations, such as:

- small sample size – this is a characteristic feature of pilot studies, as they typically involve a small number of participants, which limits the ability to generalize the results to the entire population – in the case of this study, the sample consisted of only 54 respondents,
- lack of full representativeness – the sample selection was purposeful, not random. This means that the results may not reflect all contexts of the researched reality,
- limited statistical power – due to the small number of observations, it is difficult to obtain significant statistical results. The pilot study described was aimed at verifying the general state of the situation, not testing hypotheses,
- risk of methodological errors – although the aim of the pilot study is to detect errors, its limited scale may not reveal all problems,
- limited interpretability of the results – the obtained results are not considered clear scientific evidence. They serve as a guide for the authors to conduct the actual study.

A pilot study on a sample of 54 childless individuals allowed us to assess the scale of the issue under investigation, but at this stage of the study, it did not provide a basis for drawing broad conclusions about the entire population. The results should be considered indicative, serving to refine the methodology and prepare the main study.

### **Further research plan**

Analyzing the results obtained during the pilot, the following research phase was planned:

1. Expanding the sample size will allow for a larger number of participants to achieve greater representativeness. The sample design also included consideration of various industries, job levels, and regions.
2. Comparison between respondent groups to analyze differences between childless individuals and parents in terms of job satisfaction, work-life balance, and benefit utilization, as well as examining differences within the childless group (e.g., intentionally childless individuals vs. those planning to have children).
3. Applying mixed research methods, combining quantitative research (surveys, statistical tests) with qualitative research (in-depth interviews, focus groups). This will allow for the capture and analysis of both the quantitative context of the study and the narratives provided by the respondents.

4. Applying longitudinal analysis – panel studies to determine how the attitudes and needs of childless individuals change over time.

Future research plans include expanding the sample to include greater representativeness across industries, job titles, and regions. It also includes cross-group comparisons, mixed methods, and longitudinal analysis to capture both quantitative differences and qualitative narratives, as well as changes in attitudes among childless individuals over time.

### **Recommendations for HR practitioners**

Considering the diversity of experiences, the pilot results only paint a partial picture. HR should remember that childless individuals differ in terms of age, professional status, motivation, and life plans. HR policies must be flexible to address the diverse needs of employees:

- avoiding stereotypes – it should not be assumed that childless people always have greater availability or fewer workloads. HR should examine individual employee needs instead of relying on simplifications,
- balance in benefits – support programs (e.g., childcare, flexible working hours) should be designed so as not to exclude childless people. Neutral benefits (e.g., additional days off, mental health support) should be considered,
- building an inclusive organizational culture – HR should ensure that communication and practices do not suggest that having children is the “norm” or a condition for full acceptance within the company,
- monitoring satisfaction and engagement – it is worth implementing regular surveys and developmental conversations to ensure that childless people feel treated fairly and have equal access to development.

A pilot study with a sample of 59 childless individuals indicates that HR should avoid stereotypes and design policies and benefits that are inclusive and neutral to employees' diverse life situations. The results are indicative and serve as a signal for further broader research that will better tailor HR practices to the needs of the entire population.

### **Practical recommendations for organizations**

The research material obtained provides an important foundation for developing guidelines for organizations aimed at preventing covert discrimination in the workplace. Although overt discrimination is increasingly being identified and eliminated through legal regulations and equality policies, subtle forms of unequal treatment can still occur in everyday organizational practices. These can manifest themselves in the way responsibilities are assigned, access to benefits, internal communication, and organizational culture. The proposed actions include the following:

- developing a final report with guidelines for HR, including examples of good practices and implementation tools,
- testing pilot solutions in selected companies and assessing their effectiveness.

A pilot study on a sample of 59 childless individuals offers valuable insights but requires further investigation. HR should treat the results as a signal for further action, not as a complete picture of the situation. Expanded research will allow for the development of more equitable and inclusive HR policies.

### **Experiences of discrimination – summary**

Study participants reported a sense of unequal treatment related to childlessness, including additional responsibilities during vacation periods and less favorable employee benefits structures. It was emphasized that such practices are sometimes accepted by management and impact team relationships.

The results suggest that childlessness, although perceived as a private matter, can have professional consequences. The unanimity of the responses indicates that the issue is significant and requires further analysis. Due to the pilot nature of the study, the conclusions should be considered preliminary, indicating the need for in-depth research and reflection on organizational policy.

A pilot study conducted on a sample of 59 childless individuals revealed the limitations typical of this type of project – its small scale, limited representativeness, and the tentative nature of the results. Nevertheless, it provided valuable guidance for HR practitioners, emphasizing the need to avoid stereotypes, design neutral benefits, build an inclusive organizational culture, and monitor employee satisfaction.

The resulting evidence provides a foundation for developing guidelines for organizations to prevent covert discrimination and foster diversity in the workplace. The next phase of research should include sample expansion, cross-group comparisons (childless individuals vs. parents), mixed methods, and longitudinal analysis to capture both quantitative differences and qualitative narratives, as well as changes in attitudes over time.

The findings from the pilot indicate that further research is necessary to develop practical and equitable HR solutions that support all employees regardless of their family situation.

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## **BEZDIETNOŚĆ JAKO UKRYTY POWÓD NIERÓWNEGO TRAKTOWANIA PRACOWNIKÓW – WYNIKI BADANIA PILOTAŻOWEGO**

**Streszczenie:** Współczesne środowisko pracy coraz częściej podkreśla znaczenie równości i inkluzywności, lecz nadal istnieją obszary dyskryminacji, które pozostają słabo rozpoznane. Jednym z nich jest bezdietność, rzadko analizowana jako potencjalna przesłanka nierównego traktowania. Wyniki badania pilotażowego pokazują, że choć bezdietność nie jest formalnie uznawana za podstawę dyskryminacji, może wpływać na postrzeganie zawodowe oraz relacje w miejscu pracy. Celem badania było zidentyfikowanie mechanizmów mogących prowadzić do marginalizacji tej grupy, w tym przejawów tzw. „rodzinnego uprzywilejowania”, polegającego na faworyzowaniu osób posiadających dzieci w zakresie przydziału obowiązków, awansów czy dostępu do elastycznych form pracy. Artykuł stanowi wstęp do szerszej refleksji nad potrzebą uwzględniania perspektyw osób bezdietnych w politykach równościowych i strategiach zarządzania różnorodnością.

**Słowa kluczowe:** bezdietność, zarządzanie różnorodnością, przywileje rodzinne, polityki HR, nierówne traktowanie pracowników, dyskryminacja w miejscu pracy

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## GREEN ECONOMY AND FAMILY BUSINESS: BETWEEN CHALLENGES AND NEW OPPORTUNITIES

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**Abstract:** Family businesses play a crucial role in the global economy, and by adopting green economy principles, they can enhance both their competitiveness and sustainability. This involves the integration of environmentally responsible practices such as efficient resource use, reduction of pollutant emissions, and the adoption of renewable energy sources. The objective of the paper is to identify the opportunities and challenges that family businesses face when incorporating the green economy into their business strategies. A qualitative methodology was used, with semi-structured interviews conducted with 15 owners of family businesses from the agricultural, manufacturing, commercial and renewable energy sectors located in the central region of Coahuila, Mexico. Key findings reveal opportunities such as strengthening corporate reputation and differentiation in a highly competitive environment. However, family businesses face substantial obstacles, including a lack of financial support, limited knowledge of sustainable technologies, and resistance to change, which may hinder the transition. To address these challenges, it is essential to have government support through fiscal incentives and clear regulations, foster an organizational culture oriented toward sustainability, and leverage the potential of public-private partnerships to overcome financial and technical barriers.

**Keywords:** family businesses, green economy, opportunities and challenges

**JEL Classification:** O10, O16, M10, M14

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## **Introduction**

Family businesses constitute an essential part of the global business fabric, representing approximately 70% worldwide (Calabrò, 2019). These companies not only contribute significantly to job creation and wealth generation, but also have a profound impact on the communities in which they operate. Today, the concept of the green economy represents one of the responses to environmental and social challenges, as it promotes an economic model aimed at reducing carbon emissions, increasing resource-use efficiency, and fostering social inclusion (UNEP, 2019).

By implementing green economy practices, family businesses have a unique opportunity due to their organizational structure and the fact that they often inherit values and commitment across generations (Zellweger et al., 2013). However, they also face specific challenges resulting from their size, investment capacity, and potential resistance to change.

This study analyzes the main opportunities available to family businesses, such as accessing new markets, enhancing their reputation among clients and partners, and reducing operating costs through the implementation of sustainable technologies (Hernández-Perlines et al., 2022). Additionally, it explores the primary challenges they encounter when entering the green economy, such as difficulties accessing financing, employee training needs, and the necessity to comply with increasingly strict regulations (Calabrò, 2019).

The objective of this research is to identify opportunities and challenges faced by family businesses when integrating the green economy into their business strategies. To achieve this objective, the following research questions will be answered: What are the main opportunities that family businesses perceive when incorporating green economy practices into their business strategies? And what challenges do family businesses face in the implementation of initiatives aimed at the green economy? The research is structured as follows: theoretical framework, methodology, analysis and discussion of results, conclusions and proposals.

## **Literature review**

### **Family business**

The origin of family businesses dates back to ancient times and has remained a lasting form of economic organization throughout history. Family businesses have played a significant role in the economic and social development of communities across various cultures and civilizations, being one of the oldest types of business organizations (Naude, 2010).

Family businesses are those in which ownership and management are controlled by members of the same family, granting them a particular organizational structure (Gómez-Mejía et al., 2001). According to Putritamara et al. (2023), the defining characteristics of a family business include having family members in key positions, overseeing business operations, and being majority shareholders.

Over time, the concept of family business has become more consolidated and is now recognized globally as a legitimate form of organization. Leach (1993) defines a family business as one influenced by a family or family ties that control the corporation's operations.

In these businesses, decision-making is heavily influenced by family dynamics, which can either be an advantage or a challenge (Zellweger et al., 2010). Decision-making is often faster due to ownership and management typically being concentrated in fewer hands, yet this can also lead to family conflicts that threaten long-term sustainability (Litz, 1995).

Family businesses are more likely to survive and grow over time due to their distinctive resilience, which allows them to better adapt to market changes and pursue business continuity across generations (Ahmad et al., 2021).

### **Green economy**

Green economy is defined as the outcome of improving human well-being and social equity while significantly reducing environmental risks and ecological scarcity (UNEP, 2011). This economic model promotes efficient use of natural resources, lower carbon emissions, and social inclusion through sustainable employment. It stands in contrast to traditional economic growth models, which have historically been linked to environmental degradation and the indiscriminate exploitation of natural resources (Sachs, 2015).

The green economy fosters economic development through environmental sustainability, aiming to minimize negative impacts on ecosystems and encourage more responsible resource use (UNEP, 2011). It focuses on sectors designed to improve energy efficiency, reduce carbon footprints, and promote the conservation of natural resources (OECD, 2011). Although the transition to a green economy is a global challenge, it also presents opportunities for companies of all sizes, including family businesses, to innovate and enhance their competitiveness in a market increasingly driven by sustainability.

Sustainability is a key principle within the green economy, as it seeks to balance environmental, economic, and social dimensions (Brundtland, 1987). The World Commission on Environment and Development (WCED) defined sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987). The green economy embodies this principle through the advancement of renewable energy, circular economy practices, and biodiversity conservation (Alvarez, 2023).

The green economy constitutes a development paradigm that seeks to reconcile economic growth, social equity, and environmental sustainability (Núñez-Cacho et al., 2018). In the business sphere, its implementation involves the adoption of clean production practices, the incorporation of environmental innovations and the transition to circular economy models.

In the case of family businesses, the literature recognizes that their operating logic differs from non-family businesses due to the influence of socio-emotional richness, understood as the set of intangible values linked to family identity, continuity and

legacy (Li et al., 2023). This long-term orientation, based on the preservation of the family's name and reputation, can become a facilitating factor in the adoption of sustainable practices.

Various studies confirm that family ownership and control can be associated with greater commitment to environmental sustainability. Gómez-Mejía et al. (2025) showed that family businesses in 22 European countries implement more substantive environmental actions than non-family ones, reflecting an ethical dimension linked to family control. In a complementary way, Doucet et al. (2025) showed that family SMEs, especially those with strong local roots, are more likely to adopt circular economy practices, although this effect is conditioned by contextual factors such as environmental awareness of the socio-spatial environment.

However, the relationship between family and sustainability is not homogeneous. Miroshnychenko et al. (2025) analyzed companies from 29 countries and concluded that the “family effect” on environmental management varies according to the type of firm and the institutional context, which poses important challenges to generalize the results and to design differentiated public policies.

In summary, family businesses have a double dimension with respect to the green economy: on the one hand, they have advantages associated with their intergenerational orientation, their commitment to the community and their search for social legitimacy; but, on the other, they face barriers derived from financial limitations, resistance to change and sectoral heterogeneity. This tension between opportunities and challenges forms the basis of the analysis in this study.

### **Climate opportunities for family businesses in the green economy**

Family businesses can seize the opportunities offered by the green economy due to their flexible structure and long-term commitment. Among these opportunities, there is the potential to enhance corporate reputation through responsible practices, access new markets, and develop innovative products and services based on sustainable solutions (Hart & Milstein, 1999). Moreover, adopting clean technologies and implementing sustainable practices can help reduce long-term costs and improve operational efficiency (Porter & Kramer, 2006).

The green economy, as defined by the United Nations Environment Programme (UNEP, 2011), is an economy that results from improvements in human well-being and social equity while significantly reducing environmental risks and ecological scarcities. This model represents a major paradigm shift for businesses.

Due to their unique nature, family businesses are well-positioned to adopt sustainable models with greater flexibility and long-term commitment (Zellweger et al., 2013). These businesses often maintain close ties with their communities and prioritize sustainability as a legacy for future generations, giving them a distinct competitive edge (Hernández-Perlines et al., 2022).

Table 1 presents a synthesis of the international studies on family businesses and the green economy carried out by various authors, presenting, by author, the objective of the study, the context, the research method, the main findings, the opportunities and the challenges of the implementation of the green economy in family businesses.

**Table 1. Synthesis of international studies on family businesses and the green economy**

<b>Authors and year</b>	<b>Objective of the study</b>	<b>Context</b>	<b>Method</b>	<b>Main findings</b>	<b>Opportunities</b>	<b>Challenges</b>
Núñez-Cacho et al. (2018)	Propose a transition model towards the circular economy in family businesses	Case of a Spanish family business	Qualitative Case Study	Identify internal and external factors that favor the transition	Family values and community engagement as drivers	Financial constraints and resistance to change
Li et al. (2023)	Analyze the effect of socio-emotional wealth (SEW) on environmental strategy	Family businesses in China	Quantitative (statistical analysis)	SEW promotes proactive environmental strategies	Long-term orientation, reputation and continuity	Possible over-focus on non-financial goals
Gómez-Mejía et al. (2025)	Examining the relationship between family control and environmental performance in Europe	22 European countries, family and non-family businesses	Comparative quantitative	Family-owned firms show more substantive environmental actions	Family legacy and ethics as competitive advantages	Heterogeneity of results by country and sector
Doucet et al. (2025)	Studying the adoption of circular economy practices in family SMEs	13,319 SMEs in various socio-spatial contexts	Multivariate Empirical Analysis	Family ownership increases adoption of circular practices	Local roots and community environmental awareness	Socio-spatial context conditions the results
Miroshnychenko et al. (2025)	Assess whether family businesses are greener than non-family businesses	Sample companies in 29 countries	Multinational comparative study	Family effect on environmental management is not uniform	Long-term potential and intergenerational vision	

Source: Own study based on research

## **Challenges for family businesses in the green economy**

Family businesses face several challenges when implementing the green economy. One of the primary obstacles is resistance to change, as these firms tend to be more conservative and less inclined to take risks (Sharma & Nordqvist, 2008). Another major challenge is the lack of financial resources and limited access to capital for investing in green technologies, which can hinder the implementation of sustainable practices. Additionally, family conflicts can influence strategic decision-making and delay the adoption of a greener business model (Sundaramurthy, 2008).

The literature highlights several barriers faced by these firms, such as their focus on resource conservation, which may make them hesitant to adopt innovative technologies due to high initial costs and uncertainty about long-term benefits (Calabrò, 2019). Resistance to change and lack of knowledge about sustainable practices are also significant obstacles (Alayón et al., 2022). Recent studies emphasize the need to create a favorable regulatory environment and offer financial incentives as key strategies for supporting the transition to a green economy in family businesses.

To overcome these challenges, family firms must invest in sustainability education and build an organizational culture that values green innovation (Eddleston & Kellermanns, 2007). Furthermore, establishing strategic partnerships with governments, financial institutions and key actors in the green sector is essential to gain access to resources and expertise (Berrone et al., 2012).

## **Research methodology**

The research follows a qualitative approach, using semi-structured interviews as the method of data collection. The interviews were conducted between October 2024 and January 2025 with 15 owners of family businesses from the agriculture, manufacturing, commerce and renewable energy sectors in the central region of Coahuila, Mexico.

Semi-structured interviews follow a predetermined structure but allow flexibility to deeply explore the perceptions and experiences of the interviewees (González-Vega et al., 2022). It is essential to design an interview guide that steers the conversation toward topics of interest while allowing the exploration of emerging insights during the interview. This guide must include open-ended questions that encourage detailed and reflective responses (Díaz-Bravo et al., 2013).

In this research, a pilot study was developed with a sample of 15 family businesses, with the aim of evaluating the relevance and effectiveness of the semi-structured interview as an information collection technique. This exploratory nature made it possible to identify the clarity of the questions, the depth of the answers obtained and the possible methodological difficulties that could arise in a larger-scale application. The choice of a small sample is appropriate in this initial phase, since it allows a preliminary approach to the object of study and provides input for the improvement of the methodological design in subsequent research of greater scope and representativeness.

The family businesses were selected through purposeful sampling, applying a thematic approach to identify patterns and trends in the responses. The selection was designed to ensure diversity in terms of size, productive activity, and geographic location.

The selection of the 15 family businesses was made according to previously defined criteria that guarantee the relevance of the sample for the study. Firstly, the size of the company was considered, prioritizing small- and medium-scale economic units, given that they represent the majority of the business fabric and are the most susceptible to the challenges of the transition to green economy models. Secondly, seniority and continuity in the market were considered, selecting companies with a minimum of five years of operation, which ensures a certain organizational stability and accumulated experience in their production or commercial processes. Likewise, legal formalization and commercial registration were established as a criterion, in order to guarantee the availability of reliable information and the comparability of the data. Finally, the willingness and openness to participate in the research was considered, an essential condition for the application of the interview where the data were collected and for access to internal information related to environmental and sustainability practices.

Therefore, the delimitation of the study to a total of 15 companies responds to the need to balance analytical depth and methodological feasibility. This number of units of analysis allows a comparative approach between sectors, facilitates the application of qualitative techniques and ensures the identification of common patterns and sectoral particularities in the adoption of the green economy.

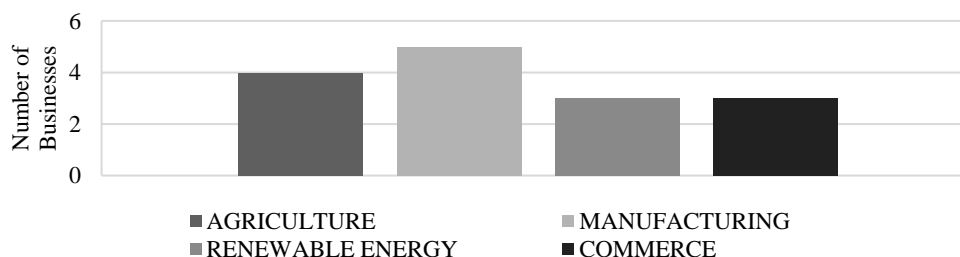
Consequently, the selected sample guarantees both the internal validity of the study and the possibility of obtaining relevant conclusions for academic debate and the formulation of public policies aimed at sustainability.

The semi-structured interview questions are found in Appendix 1, and were divided into the following aspects:

- characteristics of the family business,
- knowledge and perception of the green economy,
- motivations and perceived benefits,
- challenges and barriers,
- current practices.

## Results

Below are the results of the 15 family businesses that participated in the study.



**Figure 1. Economic sector of family businesses**

Source: Own study based on research

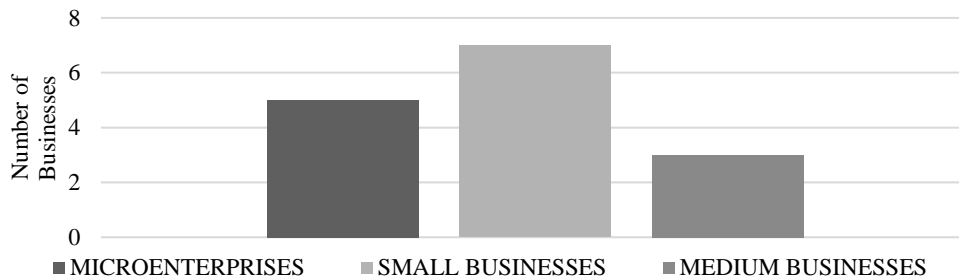
Figure 1 shows the results of the number of family businesses that were surveyed by economic sector: 4 agricultural companies, 5 manufacturing companies, 3 renewable energy companies and 3 commercial companies.



**Figure 2. Geographic location of the businesses**

Source: Own study based on research

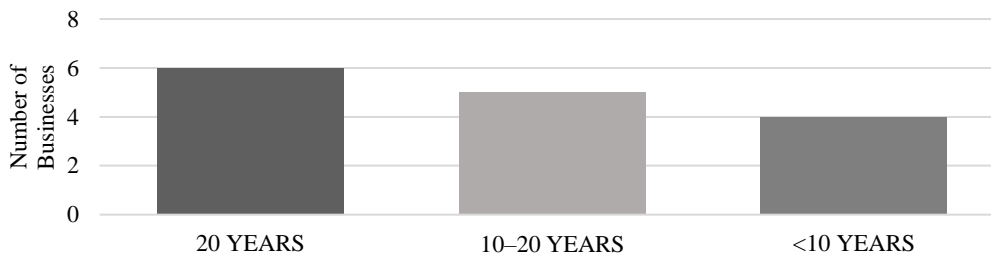
Figure 2 shows the distribution of the family businesses interviewed, with 8 corresponding to rural areas and 7 to urban areas, which ensures a representation of different contexts.



**Figure 3. Size of family businesses**

Source: Own study based on research

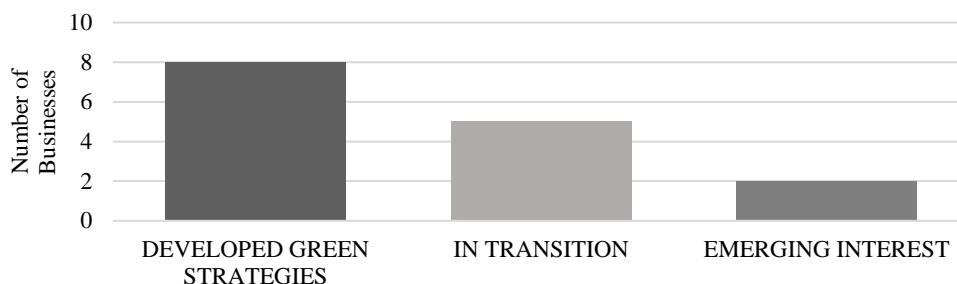
Figure 3 shows the distribution of the 15 family businesses according to the size of the companies interviewed, where 5 are microenterprises, 7 are small, and 3 are medium-sized.



**Figure 4. Age of family businesses**

Source: Own study based on research

Figure 4 shows the results of the age of the family businesses interviewed: 6 companies with more than 20 years of operation, 5 companies with between 10 and 20 years and 4 companies with less than 10 years.



**Figure 5. Businesses with adoption of green practices**

Source: Own study based on research

Figure 5 shows the distribution of the adoption of green practices by the family businesses interviewed, showing that 8 companies have developed green strategies, 5 companies in transition to the green economy and 2 companies with an incipient interest in sustainable practices.

Table 2 presents the results of the characteristics of the 15 family businesses that participated in the interviews. The general characteristics are: location, activity, size according to the number of employees, seniority, green practices and the challenges they face. To guarantee the confidentiality and privacy of the participating companies, fictitious names are used.

**Table 2. Characteristics of the participating family businesses**

Enterprise	Location	Activity	Size	Antiquity	Green Practices	Challenges
A	Southern Region	Organic coffee production	Small (25)	18 years	Composting solar energy, organic certification	Financing to expand sustainable operations
B	Northern Region	Tropical fruit production	Median (50)	22 years	Efficient water management, reduction of agrochemicals	Resistance to change of family partners
C	Central Region	Vegetable production	Microenterprise (10)	8 years	Regenerative agriculture, direct-to-consumer	Low initial profitability
D	Southern Region	Organic avocado production	Small (20)	15 years	Reforestation, drip irrigation	Lack of government incentives
E	Central Region	Sustainable clothing manufacturing	Small (30)	12 years	Organic cotton, natural dyes	Competition with cheaper products

Enterprise	Location	Activity	Size	Antiquity	Green Practices	Challenges
F	Southern Region	Furniture production with recycled wood	Microenterprise (12)	5 years	Wood recycling, eco-friendly finishes	Limited access to regional customers
G	Northern Region	Recycled Building Materials	Median (50)	20 years	Debris recycling, emission reduction	High costs in transporting recyclable materials
H	Central Region	Eco-friendly decorative items	Microenterprise (8)	7 years	Biodegradable materials, renewable energy	Low international visibility
I	Northern Region	Energy-efficient lamps	Small (22)	10 years	LED technology, component recycling	High costs in Research and development
J	Central Region	Solar Panel Installation	Small (18)	6 years	Recyclable materials in facilities	Educating clients about long-term benefits
K	Southern Region	Wind systems for rural areas	Microenterprise (10)	4 years	Technology adapted to low resources	Limited funding
L	Northern Region	Hybrid renewable energy systems	Median (45)	12 years	Custom designs for businesses	Changing regulations
M	Central Region	Sale of bulk products	Microenterprise (6)	8 years	No plastics, alliances with local producers	Increased operating costs
N	Northern Region	Organic Food Distribution	Small (15)	14 years	Low-emission logistics, biodegradable packaging	Product seasonality
O	Southern Region	Marketing of sustainable handicrafts	Microenterprise (8)	10 years	Recycled materials in handicrafts	Limited export

Source: Own study based on research

The comparison between the specialized literature and the findings of this pilot study allows us to observe significant coincidences, as well as nuances of the context analyzed. First, the results obtained coincide with what was pointed out by Núñez-Cacho et al. (2018) and Doucet et al. (2025), in terms of family values, community roots and environmental awareness as driving factors for the adoption of green practices in family businesses. The family businesses participating in this research reflected this trend through actions such as regenerative agriculture, composting, reforestation, recycling of materials and the implementation of renewable energies, which confirms the importance of family identity as a driver of sustainability.

Likewise, the findings are aligned with the contributions of Li et al. (2023) and Gómez-Mejía et al. (2025), who highlight that long-term orientation and socio-emotional richness favor more proactive environmental strategies. In the case of the companies studied, this vision was evidenced in initiatives related to organic certification, the reduction of the use of agrochemicals and the adoption of energy efficiency technologies, all of which require an intergenerational perspective and business continuity.

However, challenges also emerge that are related to what has been documented in previous research. These include the financial constraints to scale sustainable operations (Núñez-Cacho et al., 2018), the resistance to change of some members of the business family (Li et al., 2023), and the heterogeneity of results according to the sociocultural and sectoral context (Gómez-Mejía et al., 2025; Doucet et al., 2025). In this regard, the participating companies faced specific challenges such as high transportation costs of recyclable materials, low initial profitability, competition with cheaper products, and lack of government incentives, reflecting that the local environment plays a crucial role in the viability of green practices.

Consistent with Miroschnyenko et al. (2025), the results of this study confirm that the impact of family ownership on environmental management is not uniform. Factors such as the size of the company, the sector of activity, the geographical location and public policies condition the results achieved, generating a diversity of trajectories towards sustainability.

Overall, these findings suggest that although the family business is an actor with particular advantages for the transition to a green economy, due to its legacy, long-term orientation and community commitment, there are still structural limitations that must be considered in the design of public policies and in the planning of business strategies that seek to promote sustainability in this type of organization.

## Conclusions

The objective of the paper was to identify the opportunities and challenges that family businesses face when incorporating the green economy into their business strategies.

The results of the semi-structured interviews revealed the main current practices of the green economy used by family businesses in each of the different activities:

- agricultural companies present a focus on sustainable agricultural practices;
- manufacturing companies are implementing green processes;
- renewable energy companies are focused on solar panel installations and energy efficiency systems;
- family-owned retail businesses are employing strategies to reduce plastics and manage sustainable waste.

The main challenges and opportunities encountered in the interviews with the 15 family businesses are presented in Table 3.

**Table 3. Main challenges and opportunities of the family businesses interviewed**

<b>Opportunities</b>	<b>Description</b>	<b>Challenges</b>	<b>Description</b>
1. Reduced operating costs	The implementation of green technologies, such as renewable energy systems, makes it possible to reduce energy costs	1. Limited funding	The owners pointed out difficulties in accessing credits for green projects
2. Access to new markets	Family businesses that adopt sustainable practices have been successful in attracting environmentally conscious customers	2. Lack of knowledge	Training in sustainable technologies and regulations is insufficient
3. Reputation enhancement	Sustainability is perceived as an added value by customers and partners	3. Resistance to change	Family businesses often face internal resistance to modifying established processes

Source: Own research

Based on the findings presented, it can be concluded that family businesses play a key role in the transition toward a green economy. While this shift presents important challenges and barriers, it also offers opportunities for these businesses to become leaders in the move toward more sustainable models. Achieving this transformation requires government support through fiscal incentives and clear regulations, the promotion of an organizational culture oriented toward sustainability, and the strategic use of public-private partnerships to overcome financial and technical hurdles.

To support family businesses in embracing the green economy, the following actions are proposed (recommendations):

- Strengthen green financing mechanisms: given that financial constraints are one of the main obstacles to the implementation of sustainable practices, it is recommended to promote preferential credit programs, green investment funds, and public-private cooperation schemes that facilitate access to capital.
- Promote awareness processes and intergenerational training: the resistance to change observed in some family members can be mitigated through training spaces in sustainable management, as well as succession programs that integrate sustainability as part of the family legacy.
- Design differentiated public policies by sector and territory: considering that the results vary according to the context, it is suggested that tax incentives, subsidies and environmental regulations contemplate the heterogeneity of family businesses, so that they respond to the needs of agricultural, manufacturing or renewable energy sectors in a specific way.

- Encourage the creation of collaborative networks: the establishment of alliances between family businesses and other actors (cooperatives, universities, environmental NGOs) can contribute to reducing operating costs, expanding markets and promoting innovation in green practices.
- Promote marketing strategies and international visibility: several of the companies face barriers related to competition and access to markets. In this sense, certification, participation in international fairs and the incorporation of digital platforms can improve the competitiveness and reach of their sustainable products.
- Support research and development (R+D) applied to small family businesses: given that the costs of innovation are high, it is pertinent to encourage collaborative applied research projects that allow micro and small enterprises to access green technologies in a more affordable way.

These recommendations seek not only to address the challenges identified, but also to capitalize on the strengths of the family business, such as its community roots, long-term orientation and intergenerational commitment, in order to consolidate them as key actors in the transition to a green economy.

For future research, it is proposed to carry out this interview with a larger number of family businesses to have a greater scope of the research.

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## Appendix 1

The questions asked in the interview were the following:

### *Characteristics of the family business*

1. Economic sector to which it belongs:
  - a) Agricultural;
  - b) Manufacturing;
  - c) Renewable energies;
  - d) Trade.
2. Geographical location of the company:
  - a) Urban;
  - b) Rural.
3. Company size:
  - a) Medium;
  - b) Small;
  - c) Micro.
4. Age of the company
  - a) Over 20 years old;
  - b) Between 10- and 20-years old;
  - c) Less than 10 years old.

### *Knowledge and perception of the green economy*

5. Has knowledge about the green economy
6. The company adopts green practices
  - a) Applies green strategies;
  - b) In transition;
  - c) Incipient interest.
7. What kind of green practices do you apply in the company?

### *Benefits, challenges and barriers*

8. What challenges have arisen when implementing the green economy in the company?
9. What barriers have been presented when implementing the green economy in the company?
10. What benefits have you perceived with the implementation of the green economy in the company?

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## ZIELONA GOSPODARKA I FIRMA RODZINNA: MIĘDZY WYZWANIAM I NOWYMI MOŻLIWOŚCIAMI

**Streszczenie:** Firmy rodzinne odgrywają kluczową rolę w gospodarce światowej, a przyjmując zasady zielonej gospodarki, mogą zwiększyć zarówno swoją konkurencyjność, jak i zrównoważony rozwój. Wiąże się to z integracją praktyk odpowiedzialnych za środowisko, takich jak efektywne wykorzystanie zasobów, redukcja emisji zanieczyszczeń i przyjęcie odnawialnych źródeł energii. Celem jest zidentyfikowanie szans i wyzwań, przed którymi stoją firmy rodzinne, włączając zieloną gospodarkę do swoich strategii biznesowych. Zastosowano metodologię jakościową, w ramach której przeprowadzono częściowo ustrukturyzowane wywiady z piętnastoma właścicielami firm rodzinnych z sektora rolnictwa, produkcji, handlu i energii odnawialnej zlokalizowanych w centralnym regionie Coahuila w Meksyku. Kluczowe wnioski wskazują na takie możliwości jak wzmocnienie reputacji firmy i zróżnicowanie w wysoce konkurencyjnym środowisku. Firmy rodzinne napotykają jednak na poważne przeszkody, jak np. brak wsparcia finansowego, ograniczona wiedza na temat zrównoważonych technologii oraz opór przed zmianami, które mogą utrudnić transformację. Aby sprostać tym wyzwaniom, niezbędne jest wsparcie rządowe w postaci zachęt podatkowych i jasnych regulacji, wspieranie kultury organizacyjnej zorientowanej na zrównoważony rozwój oraz wykorzystanie potencjału partnerstw publiczno-prywatnych w celu pokonania barier finansowych i technicznych.

**Słowa kluczowe:** firmy rodzinne, zielona gospodarka, szanse i wyzwania

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## ASSOCIATION MANAGEMENT: THE ROLE OF VOLUNTEERS IN ACHIEVING SUCCESS IN A SOCIAL ECONOMY ENTITY

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**Abstract:** Currently, the number of social initiatives is increasing, and social economy entities are becoming more important. Therefore, a study of associations has been conducted. The main objective of the study is to review and verify the information and concepts related to association management. The second objective is to identify the motivations for participating in voluntary activities. These goals can be achieved on the basis of a review of the literature and a pilot study. It can be concluded that there are various concepts of non-governmental organization management and that their implementation is important for the efficient functioning of these entities. The pilot study indicates that volunteers' motivations include a desire to help others and that their effectiveness is based on the support of other volunteers.

**Keywords:** association, management, social economy, volunteering


**JEL Classification:** A13, L31

### Introduction

Today, we observe a trend towards being more socially active by participating in different social enterprises and participating in charity. The increasing awareness of our impact on the lives of others leads us to focus more on the needs of people. In addition, dramatic events around the world have led to a growing number of community-minded initiatives.

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Within the economy, there is a sector in which people come first: the social economy. It focuses on achieving goals related to improving the quality of life of citizens. One type of organization operating in this sector is an association. Many associations rely on volunteer work to carry out their mission.

The main objective of the study is to review and verify the information and concepts related to association management. The second objective is to identify the motivations for participating in voluntary activities.

## Literature review

Based on the source literature, the social economy can be seen as a theoretical concept shaped by civic awareness and societal needs. The social economy originated in France in the nineteenth century as a term referring to entities that pursued social goals alongside, rather than solely, profit maximization. In the same century in Poland, we can find references to the social economy connected with foundations, associations, and cooperatives. Interest in this sector increased as a result of the systemic transformation that reduced the role of the state as an employer. New jobs were created mainly by private enterprises, while the scope of social care for employees decreased (Brzuska et al., 2017).

According to the Act on Social Economy of August 5, 2022, the social economy is an activity for local society in the field of professional and social reintegration, creating new jobs for people at risk of social exclusion, and providing social services. Those tasks are carried out by public benefit activities, business activities, and other paid activities (Ustawa o ekonomii społecznej, 2022).

The core of a social economy is human, and profits are used to achieve social goals. The target group includes people who cannot fully participate in social and professional life due to disability, age, mental illness, long-term unemployment, and poverty. The consequences of social exclusion affect communities and families. Entities of social economy are cooperative entities, non-governmental organizations, socio-professional reintegration units, and other similar entities such as foundations, associations, church entities, non-profit companies, rural housewives unions, and local government units' associations (Department of Social Economy, n.d.).

One of the social economy entities is an association whose operation is regulated by the Act of Law on Associations of April 7, 1989. An association is a self-governing, voluntary, permanent, non-profit organization. This unit independently states its aims, organizational structures, programs of action, and adopts internal acts. The operations are based on the social work of the association members. This entity can hire employees to conduct its affairs. Employees can also be association members (Ustawa Prawo o stowarzyszeniach, 1989).

An association is established by a group of people who share a common goal. It is a non-profit corporation, that is, a voluntary, self-governing, and permanent organization. It operates on the principle of continuity of purpose, which means that the association continues to exist regardless of changes in its membership (Brzuska et al., 2017).

An association can be established by at least seven people who elect the founding committee or the organization's authorities and adopt the statute. The association's assets consist of donations, bequests, inheritances, membership fees, income from the association's assets, income from its own activities, and public donations. The entity is entitled to conduct business activities in accordance with the principles set out in separate regulations. Income from these activities is allocated to achieve statutory goals and cannot be divided among the organization's members (Ustawa Prawo o stowarzyszeniach, 1989).

The association's activities may be based on the work of volunteers who are natural persons providing services voluntarily and without remuneration. The volunteer should have appropriate qualifications and meet the requirements specified for the given type and scope of services (Ustawa o działalności pożytku publicznego i o wolontariacie, 2003).

In the first quarter of 2016, 8.5% of people aged 15 and over engaged in volunteering in various organizations. These individuals most often were involved in activities for associations, similar entities, and foundations (Statistics Poland, 2016).

Additionally, in the first quarter of 2022, 28.4% of people aged 15-89 volunteered. Most of these people were people with higher education (Statistics Poland, 2022).

Like all organizations, the association must also properly manage the entity and, therefore, conduct appropriate activities to achieve its goals. It includes organizing, planning, motivating, making decisions, and controlling. An essential feature of the process is the efficient management of finances, people, physical, and intangible resources. However, management primarily concerns human resources. It involves providing them with appropriate resources, organizing their work, and motivating them (Brojak-Trzaskowska, 2024).

Motivating is the process of evoking and maintaining attitudes through the use of material and non-material incentives. Much attention is paid to the importance of factors other than remuneration on the level of motivation of the organization's members (Brojak-Trzaskowska, 2023).

Until recently, the concept of NGO management was not a popular theory. It was seen as a potential loss of ideas, voluntariness, and human connection. However, as the importance of the sector grew, so did the role of NGO management. The challenge is modern management without losing the mission, innovation, elasticity, and cooperative spirit. However, the need to use management tools results from many issues. First, external financial support requires the rational management of funds. Second, increasing demands from public and private funders require organisations to report on programme results, making strategic planning and budgeting essential. Third, relationships with the organisation's external environment must also be taken into account. The dilemma of managing NGOs concerns whether these organisations differ sufficiently from commercial and public entities to warrant the use of distinct management techniques (Bogacz-Wojtanowska, 2006).

There are four management concepts for NGOs (Bogacz-Wojtanowska, 2006):

- holistic concept of an organization – the main point is the relationship between the organization and its environment;

- normative concept of an organization – focuses on value development in addition to economic aspects;
- strategic and development concept – an organization is an evolving system with problems and opportunities that create management dilemmas;
- operational concept – focusing on everyday activities such as accounting and administration.

Additionally, there are four models of change in the management of non-governmental organizations (Bogacz-Wojtanowska, 2006):

- scientific management model – using the most effective models;
- war on waste – improving the organization’s operation through collaboration, mergers, amalgamations, and other techniques from the commercial sector;
- watchful eye – public control and analysis through transparency as a form of discipline;
- liberation management – reporting results regardless of their size and structure.

Most often, work in non-governmental organizations is performed by paid employees and volunteers. Different motivations of volunteers influence the management (Bogacz-Wojtanowska, 2006).

There are several reasons why people volunteer (Bogacz-Wojtanowska, 2006):

- value function – meeting value-related needs;
- comprehension function – the desire to understand the world and develop personally;
- extension function – increasing self-esteem;
- career function – gaining experience;
- social function – belonging to a social group;
- defensive function – a way to deal with internal conflicts and problems.

In addition, volunteering among young people can have a positive impact on their social relations. Supporting others is also a way to help yourself (Lanza et al., 2025).

However, there are risks associated with certain types of volunteering. In some cases, too much and too intense activities can negatively impact health (Merkin & Orenstein, 2025).

Table 1 presents the conditions for good management in associations according to the American Society of Association Executives (ASAE).

**Table 1. Conditions for good management in associations**

No.	Condition
1.	Clearly defined goals, reasons for being, and ways to evaluate action stages. A sense of mission among all the people involved in the organization. Goals are a challenge for the entity.
2.	Continuous evaluation and improvement of activities. Finding a niche.
3.	Having a 5- to 10-year vision and being prepared for new trends.
4.	Business resource management, which includes financial management, short- and long-term planning, communication with the environment, and marketing.

No.	Condition
5.	Looking for sources of financing that ensure stability.
6.	Open-door policy for newcomers.
7.	An existing strong group of volunteers who are involved in the activities and goals of the association. Determining the contribution of paid employees and volunteers.
8.	An organizational structure that responds to changes in the environment and supports goals.
9.	A new perspective thanks to periodic changes in the management and leadership.
10.	Respecting members' needs. Taking care of contacts between association members to foster a sense of community.
11.	Applying a reward system and motivational techniques to the administrative staff. Supporting employee development.
12.	Publicity in the media and endorsement.
13.	A clear system of financial management, accounting, and financial control.
14.	Cooperation with similar organizations without duplicating programs and services.
15.	Ethics represented by people associated with the organization.
16.	Cooperation with international organizations.

Source: (Bogacz-Wojtanowska, 2006)

Many organizations believe that highly motivated and active employees, members, and volunteers are sufficient to function. However, a lack of accountability, adaptability, and effectiveness can lead to insignificance and irrelevance. Entities fear losing values due to the adoption of management techniques from the private and public sectors. There are two ways: experimenting with management methods or introducing them gradually (Bogacz-Wojtanowska, 2006).

A holistic approach to goal setting and integrating digital tools is crucial. Additionally, data analysis can help predict donor behavior (Cipriano & Za, 2025).

International research points to the lack of an appropriate financial model among nonprofit organizations. Furthermore, these entities are significantly dependent on government support, which may pose a threat to long-term sustainability. Therefore, revenue diversification is important (Ba et al., 2024).

The association manages not only its employees, but also its volunteers. Often, it is the actions of volunteers that determine the achievement of the organization's goals. Volunteers are not only a free workforce, but also confirmation that the organization carries out activities that are socially accepted, needed, and appreciated. For young people, it is a supplementation of knowledge from studies and a confrontation of skills with real needs within the entity's activities. NGOs with diverse activities need volunteers with different skills (Gruca, 2009).

The identification of volunteers with the organization is influenced by the alignment of values. These values need to be clearly visible in strategies and processes. Recognition from the private sector and the variety of tasks are also significant factors. Volunteer engagement is influenced by values, but also by appreciation from the organization's employees, as well as having independence in making decisions. Proper information flow within an organization is a crucial point in achieving volunteer satisfaction. Moreover, there should be a coordinator who supports and encourages autonomy (Güntert et al., 2022).

The European sector, which includes social enterprise, social economy, nonprofit institutions, as well as civil society and volunteering, has enormous power and reach. It is achieved thanks to the fact that this sector employs a huge number of volunteers (Salamon & Sokolowski, 2018).

## Research methodology

The research methodology included a review of the subject literature, legal acts, and data from websites related to the theme of the article. Moreover, in order to achieve the aim of the article, a pilot study was conducted on a group of five volunteers of the WIOSNA Association and the Academy of the Future program who operate in the Silesian Voivodeship. The main objective of the study is to review and verify the information and concepts related to the management of associations. The second objective is to identify the motivations for participating in voluntary activities. The research was carried out in 2025.

The conducted study was a pilot study, intended as a preliminary verification of the question discussed and a preparation for further research in this area. The pilot study allowed me to verify the suitability of the type of study (survey), the correctness of the constructed questions, and provided assumptions for further questions. This will improve the effectiveness of the main study in the future.

The research tool used was an online survey prepared in the Microsoft Forms application. The survey consisted of a set of five questions that the respondents completed independently. Below is the survey used for the research.

Question 1. What motivates you to be a volunteer at the Academy of the Future?

- Willingness to help others.
- Willingness to get to know new people.
- Willingness to benefit from association events.
- Willingness to be part of the WIOSNA Association.
- Other.

Question 2. How long have you been at the Academy of the Future?

- This is my first edition.
- This is my second edition.
- This is my third edition.
- This is my fourth edition.
- I have more than four editions behind me.

Question 3. What is your age group?

- Under 20.
- 20-30.
- 30-40.
- 40+.

Question 4. What helps you the most to work efficiently as a volunteer?

- Materials from the association.
- Contact and support from other volunteers.

Question 5. What motivates you the most to perform and what do you consider the best form of encouragement and support from the association?

- Opportunity to gain experience and knowledge in many areas, such as project management, people management, etc.
- Events organized for volunteers.
- Events organized for those under our care, in which you can also participate as a volunteer.
- Gadgets, etc.

To analyze and evaluate the association's activities, five volunteers from the WIOSNA Association and the Academy of the Future program were asked to complete a survey. These individuals serve as volunteer coordinators in the Silesian Voivodeship by managing volunteer groups. I had access to this group of volunteers because I am a volunteer in the WIOSNA Association.

The WIOSNA Association, based in Krakow, is one of the largest non-governmental organizations in Poland. Its activities include projects such as the Noble Gift and the Academy of the Future. The organization states on its website that its activities are based primarily on the work of volunteers and financial support from donors (The WIOSNA Association, n.d. b).

The Academy of the Future was founded in 2003 to help children with low self-esteem and a lack of self-confidence. It is a space for children to meet with adults who are willing to dedicate their time to them and be wise companions (The Academy of the Future, n.d. a).

The program consists of several elements (The Academy of the Future, n.d. a):

- collaborating with schools to reach out to children who need support,
- recruitment and cooperation with volunteers,
- conducting regular volunteer-child meetings once a week,
- working on difficulties and developing the child's strengths.

The principles of working with children are (The Academy of the Future, n.d. a):

- motivation and appreciation,
- setting challenges,
- design, experience,
- understanding the cause and responding to it,
- giving the opportunity to co-decide,
- looking to the future and seeing the potential.

The management of the WIOSNA Association is based on encouraging and supporting its volunteers, who determine the organization's success. In addition, the entity has to take care of marketing and other initiatives to obtain financial support from donors. The association invites famous people to cooperative events to promote its programs. The Academy of the Future website provides extensive information about the project and examples of the outcomes of volunteering. The association conducts a professional recruitment process for volunteers consisting of an application, a recruitment interview, signing of a contract, training, and support (The Academy of the Future, n.d. b).

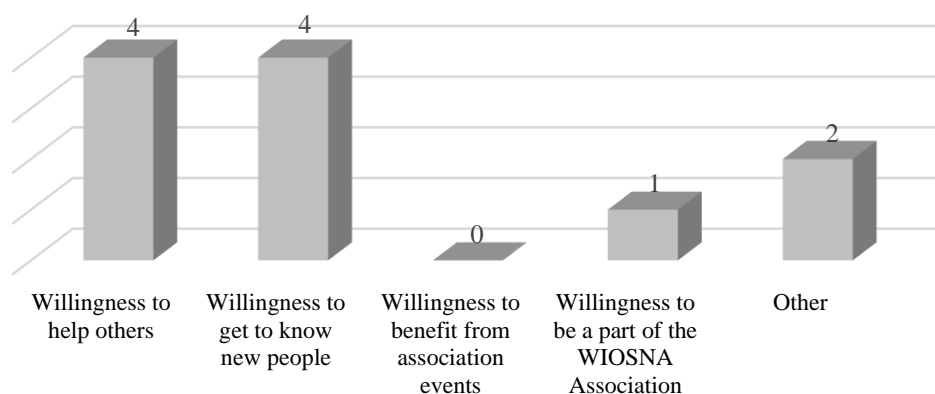
After the recruitment process, volunteers participate in a stationary or hybrid implementation. This is a form of workshop during which volunteers can learn the details of the program and meet other volunteers. Then the volunteer coordinator contacts new members to support them, but also to get to know them and be able to match them with a child. Integration meetings are also organized. During these events, volunteers can get to know the team. The association provides an e-learning system and other materials. Volunteers meet with children throughout the year during regular meetings. The association runs a system for reporting work with children. Volunteers must keep records of meetings with children and enter other required information into the system. In addition, various events are organized, such as visits to museums or workshops. The association also organizes large meetings where volunteers can meet members of the association and other volunteers. This includes team-building activities, workshops, and interesting conversations. There is also a special hotline, email box, and social media group for volunteers. Pedagogues and psychologists are also available (Basińska, 2025).

Volunteer coordinators lead a team of volunteers working with children, and together with this team implement the program in specific schools. Coordinators build teams and support volunteers. In addition, they delegate tasks, integrate, and motivate. Tasks include organizing meetings, recruiting children, and reviewing work. The coordinator is also a representative of the programme who cooperates with the school coordinator (The WIOSNA Association, n.d. a).

## Results

Based on the research conducted, the following results were obtained. The answers to the first question about the motivation to be a volunteer are shown in Figure 1.

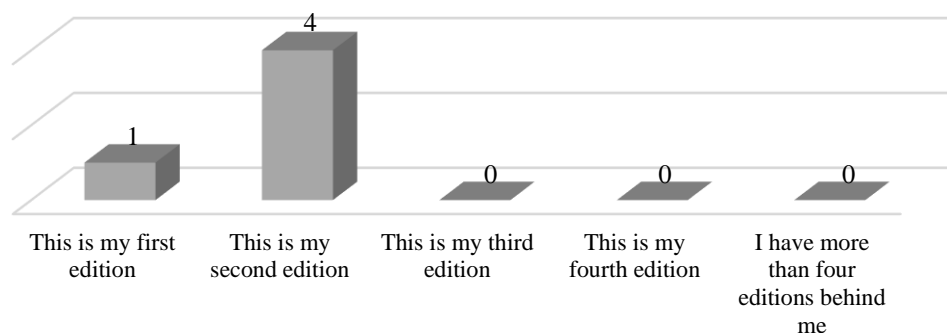
Question 1 has a multiple-choice option. According to the survey, the greatest motivations for volunteers are the desire to help others and meet new people. Attending association events is not a motivation for volunteers. Two volunteers indicated motivations other than those listed in the survey. They mentioned the desire to do something meaningful and the opportunity to learn more about themselves. An interesting finding from these results is the fact that only one of the participants indicated willingness to be a part of the WIOSNA Association as motivation. Therefore, it can be concluded that volunteers do not identify with the association and primarily focus on being part of the Academy of the Future program.



**Figure 1. Results of the research regarding question number 1: What motivates you to be a volunteer at the Academy of the Future?**

Source: Own study based on research

The second question concerns the duration of volunteering of the surveyed people. The results are presented in Figure 2.

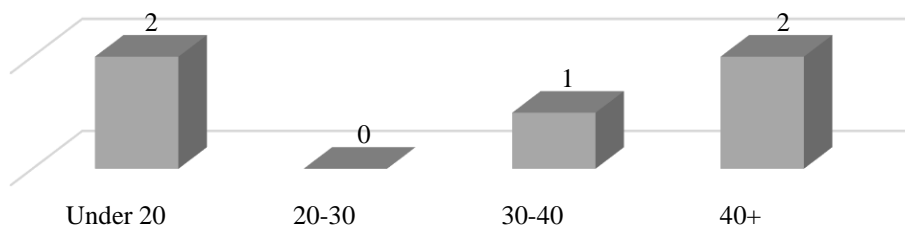


**Figure 2. Results of the research regarding question number 2: How long have you been at the Academy of the Future?**

Source: Own study based on research

Almost all research volunteers participate in the Academy of the Future for the second time. For one of the volunteers, it is the first edition of the program.

The third question concerns the age group of the respondents. The results are presented in Figure 3.

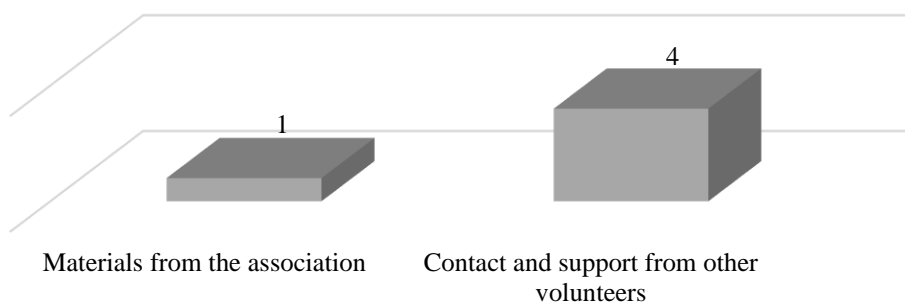


**Figure 3. Results of the research regarding question number 3: What is your age group?**

Source: Own study based on research

Two people were under 20 years of age, and two were over 40 years of age. One person was in the 30-40 age range. It can be concluded that volunteers are both very young and older people.

The fourth question concerns what helps volunteers the most to work efficiently. The results are presented in Figure 4.

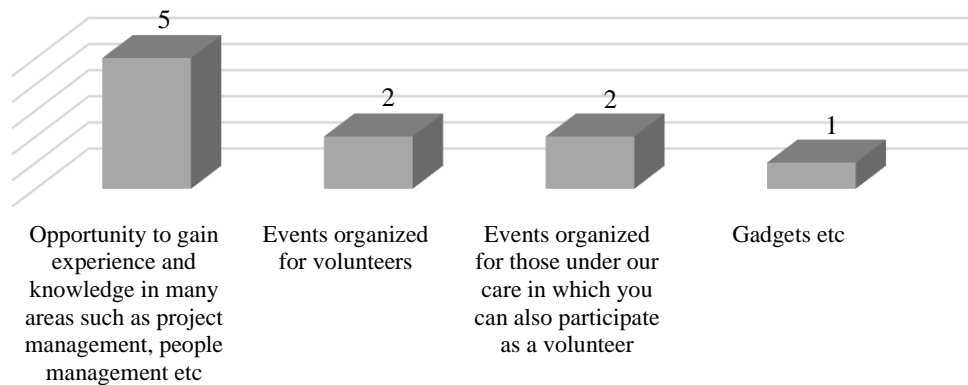


**Figure 4. Results of the research regarding question number 4: What helps you the most in working efficiently as a volunteer?**

Source: Own study based on research

Based on the results, it can be concluded that volunteers are much more helped by contact and support from other volunteers than by materials provided by the association.

The fifth question concerns the issue of what encourages volunteers the most to act and what they consider to be the best form of encouragement and support from the association. The results are presented in Figure 5.

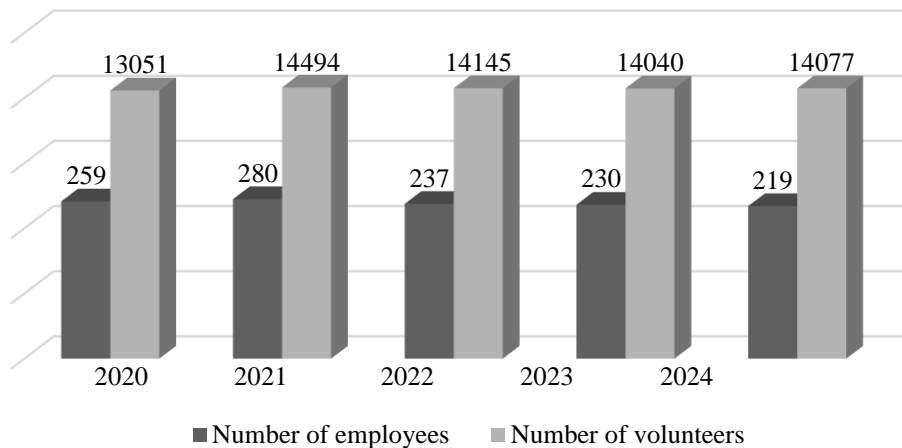


**Figure 5. Results of the research regarding question number 5: What motivates you the most to perform, and what do you consider the best form of encouragement and support from the association?**

Source: Own study based on research

Question 5 has a multiple-choice option. Based on the survey, it is clear that the greatest motivation for volunteers is the opportunity to gain experience and knowledge in many areas, such as project management, people management, etc. The least important are gadgets and similar tools.

Moreover, according to the reports of the association, definitely more people work in the association as volunteers (volunteering for more than six months) than as employees (employed under an employment relationship and civil law contracts). The picture of this structure is shown in Figure 6.



**Figure 6. Number of employees and volunteers in the WIOSNA Association**

Source: (The WIOSNA Association, n.d. c)

The results obtained by other researchers show interesting dependencies related to volunteering. First, one of the studies shows that volunteering plays an important role in the relationship between negative life situations and life satisfaction. However, this impact depends on time and context factors (Groß & Haffa, 2026).

Another study shows ways of behaving among people with long-term volunteering experience. The authors explored the potential participation of these people during social crises. The results of the study are crucial sources of information for volunteer leaders (Nowakowska & Pozzi, 2024).

A study published in 2024 presents the relationships between volunteering and changes in social needs (Tassi, 2024). Additionally, studies related to volunteering among older people and relations between paid jobs and volunteering are worth taking into account (Mao & Normand, 2022).

One of the studies also demonstrates the ability to volunteer in a situation of a natural disaster. There are some dependencies between the participation in these social activities and the personal experience of the disaster, contact with the media, understanding of the disaster, and religious factors (Benito et al., 2025).

## Conclusions

As the world has changed, the role of people-focused activities has grown. The social economy has emerged as a response to evolving needs. As a result, many initiatives have been created that improve people's lives. One of the social economy entities is an association that pursues its goals thanks to the support of volunteers. Also, for the association, management is an important point that is not clearly accepted due to the fear of losing the main purpose of the organization. However, there is an increasing emphasis on the importance of management in NGOs. In fact, a suitable entity management system can determine the success. Many management concepts and conditions have been created for this type of organization. In addition, foreign research shows the importance of proper management of the organization, which significantly affects volunteers in this entity.

Volunteers undertake their activities for various reasons, thanks to which non-governmental organizations can achieve their goals. International research points to the positive aspects of volunteering. However, it also highlights certain risks.

The operations of the Academy of the Future are based on volunteering. The association has built an efficient system that informs, encourages, acquires, motivates, and guides volunteers throughout the entire program. Based on the survey conducted by the author among several of the association's volunteers, it can be indicated that they engage in activities primarily out of a desire to help others and meet new people. Furthermore, they are mainly helped by contact and support from other volunteers, which may indicate that this association brings together people with similar values who support each other and strive to achieve the organization's goals. Volunteers value the most the opportunity to gain knowledge and experience through volunteering. Therefore, the association is an attractive place for development. Additionally,

according to the reports, there are significantly more volunteers than employees in the WIOSNA Association. This shows the huge role of volunteers in achieving the success of the association.

The following limitations occurred in the study conducted. First, the research was limited to one geographic region and a small group of respondents. Therefore, the results may not fully reflect the behavior of the larger population. Second, knowing the group of people under study can have an unconscious influence on the interpretation of the results. However, despite the limitations of the study, it is a valuable tool in providing information about methodological issues before the main study begins, which will help to increase the effectiveness of future studies.

Future research directions include ways to increase the commitment and motivation among the association's volunteers, methods to improve volunteer work tools, and ways to strengthen volunteers' identification with the association in order to attract long-term volunteers.

To sum up, association management is a very important process that allows improving its operations without losing its value and goals. In addition, volunteers play an enormous role in the association's success.

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**AI Declaration:** AI tools were not used in the creation of the paper.

## ZARZĄDZANIE STOWARZYSZENIEM – ROLA WOLONTARIUSZY W OSIĄGANIU SUKCESU PRZEZ PODMIOT EKONOMII SPOŁECZNEJ

**Streszczenie:** Obecnie rośnie liczba inicjatyw społecznych i znaczenie podmiotów ekonomii społecznej. Dlatego zostało podjęte badanie stowarzyszeń. Głównym celem badania jest przegląd oraz weryfikacja informacji i koncepcji dotyczących zarządzania stowarzyszeniami. Drugim celem jest zidentyfikowanie motywów podejmowania działalności wolontariackiej. Te cele mogą być osiągnięte z pomocą przeglądu literatury i badań pilotażowych. Można stwierdzić, że istnieją różne koncepcje zarządzania organizacjami pozarządowymi i ich wdrożenie jest ważne dla sprawnego funkcjonowania tych podmiotów. Badanie pilotażowe wskazuje, że motywacje wolontariuszy obejmują chęć pomagania innym, a ich skuteczność jest oparta na wsparciu innych wolontariuszy.

**Słowa kluczowe:** ekonomia społeczna, stowarzyszenie, wolontariat, zarządzanie

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## CORE CHALLENGE OF THE TRIBE MODEL – BALANCING AUTONOMY AND STRATEGIC ALIGNMENT

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**Abstract:** The Tribe Model is an Agile organizational architecture with the innate goals of accelerating innovation and achieving deep customer centricity. Its core challenge, however, is managing a fundamental paradox: the inherent tension between the high degree of team autonomy required for rapid innovation and the high degree of strategic alignment needed for a cohesive customer experience. The main aim of this paper is to deconstruct the model to analyze how this central paradox shapes an organization's ability to achieve its dual strategic goals. This study employs a systematic literature review, involving a meta-synthesis of academic articles, practitioner works, and expert analysis. The results confirm that while autonomous Squads effectively dismantle functional silos, they can also fragment the customer journey without robust strategic alignment mechanisms. The paper concludes that the model's success is not guaranteed by its structure alone, but is contingent on actively managing this inherent paradox through a conducive organizational culture, the right leadership approach, and the use of appropriate tools, such as OKR.

**Keywords:** Agile organizational design, customer centricity, innovation, organizational agility, Tribe Model

**JEL Classification:** L22, M10, M15, O31

### Introduction

Organizations today confront the dual imperative of achieving deep customer centricity while sustaining continuous innovation. The former demands the holistic alignment of functions to deliver value, whereas the latter requires transforming concepts into market-ready solutions. However, these objectives are often impeded by the inertia of traditional, siloed structures. Such hierarchies, characterized by

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self-contained departments that prioritize vertical coordination over horizontal collaboration, tend to fragment the customer experience (Scott & Gong, 2021). This structural rigidity fosters a “silo mentality”, where insular departments prioritize narrow functional goals over broader organizational objectives, stifling the cross-disciplinary cooperation essential for innovation. This insularity leads to resource duplication, delayed decision-making, and a failure to address cross-cutting challenges effectively (Scott & Gong, 2021). Consequently, the organization's ability to innovate and respond cohesively to customer needs is severely undermined.

In response to the limitations of these hierarchical structures, Agile methodologies emerged, initially within the software development sector, to promote flexibility, speed, and adaptability. The core principles of Agile, such as iterative development, continuous feedback, and empowered, cross-functional teams, were designed to help organizations respond more effectively to market changes. While its origins are in technology, the success of this mindset has led to the adoption of Agile principles in various business functions beyond IT as companies seek to increase responsiveness and break down operational silos across the entire enterprise.

A prominent manifestation of scaling these principles is the Tribe Model, an organizational architecture that structures work into small, autonomous teams known as Squads. These Squads, containing all the skills needed to execute their mission, are designed to operate like independent startups and are grouped into larger, mission-aligned Tribes. The model's primary intention is to dismantle traditional hierarchies and apply Agile ways of working to broader business challenges, not just software delivery. Nevertheless, despite its conceptual appeal and celebrated success stories, such as that of the Dutch bank ING which credits the model for improved time-to-market and employee engagement (Jacobs & Schlatmann, 2017), its practical implementation has yielded mixed results. The transformation journey is often a long, non-linear process fraught with challenges, as documented in a decade-long case study of a large IT services firm (Berkani & Causse, 2019). Many organizations struggle to balance the high degree of team autonomy central to the model with the strategic alignment necessary for coherent value delivery.

This paper addresses this gap by deconstructing the Tribe Model not merely as a catalyst, but as an organizational architecture defined by a core challenge: the inherent tension between team autonomy and strategic alignment. The analysis will demonstrate that the model's architectural principles constitute a powerful framework, but one whose success is ultimately contingent on an organization's ability to navigate this central paradox. Consequently, this study posits the following research hypothesis: The active management of the paradox between Squad autonomy and strategic alignment is a critical success factor in the implementation of the Tribe Model. The contribution of this work is therefore to move beyond prescriptive descriptions of the model and offer a nuanced analytical framework for understanding its implementation challenges and critical success factors.

## Literature review

### The imperative of customer centricity

Transitioning to a customer-centric strategy entails fundamental reorientation, placing the customer at the core of the organizational ecosystem (Burritt & Kilara, 2016). This paradigm is defined as a strategy that aligns an organization's architecture and processes to deliver a unique and valuable customer experience, thereby creating a strategic and managerial advantage (Al Sayed et al., 2022; Burritt & Kilara, 2016). Research indicates that while customer centricity drives innovativeness, its effect on business growth is largely indirect, mediated by this enhanced innovative capacity (Tuominen et al., 2023). This approach moves beyond traditional market orientation to a more profound integration of customer needs into the very fabric of the organization.

The success of a customer-centric model depends on several key factors, including a deep commitment to understanding customer needs and promoting an internal marketing culture that prioritizes customer satisfaction (Al Sayed et al., 2022). The case of Amazon exemplifies this, where a relentless focus on the customer experience has become a cornerstone of its competitive advantage (Baboolal-Frank, 2021). This strategic choice reflects a deeper philosophical shift, where the concept of the customer is reinterpreted in a way that challenges traditional business logic, allowing a more dynamic and responsive organizational posture (Mehramolan, 2016).

Consequently, success requires an ecosystem where every component supports the customer journey (Burritt & Kilara, 2016). This strategic choice is not merely tactical but also structural, yielding proven returns in loyalty and innovation (Tuominen et al., 2023). This inherent dependence of a customer-centric strategy on its structural foundation means that its successful implementation is, fundamentally, a matter of organizational design. Hence, understanding how specific organizational architectures can overcome the fragmentation of traditional, siloed structures is critical to translating the vision of customer centricity into a tangible reality.

### The role of organizational design in fostering innovation

Organizational design is a key lever for competitive advantage, directly shaping innovation capacity (Sengul, 2019). This is vital for business model innovation, which necessitates asset reconfiguration (Leih et al., 2015). Conversely, innovation acts as a catalyst for structural change; as firms encounter limitations during projects, they often redesign organizational components to better support experimentation (Brix & Peters, 2015). This iterative relationship underscores that organizational design is not a static blueprint but an evolving framework that both shapes and is shaped by a firm's innovative activities. The role of design in this context is measurable, with clear impacts on the growth and success of innovation within an enterprise (Galindo-Rueda & Millot, 2015).

The journey toward an Agile organization is a deliberate design choice aimed at enhancing responsiveness and innovation. This is especially critical for high-tech startups, where initial organizational design choices can significantly impact long-term

innovation outcomes and the ability to scale effectively (Grimpe, Murmann & Sofka, 2019). By viewing organizational design as a strategic choice, firms can proactively structure themselves to foster the collaboration, flexibility, and learning required to thrive in dynamic and competitive environments (Sengul, 2019).

### The Tribe Model as an Agile organizational architecture

Kniberg and Ivarsson (2012) detailed the Tribe Model as an architecture designed to scale operations while preserving innovation. Its foundation is the autonomous “Squad”, a cross-functional unit responsible for specific features, grouped into larger, mission-aligned “Tribes”. This modularity is supported by knowledge-sharing structures: “Chapters” unite specialists for skill development under a Chapter Lead (De Smet, 2018), while voluntary “Guilds” facilitate the cross-pollination of ideas to balance autonomy with strategic coherence (Trzaskowska-Dmoch et al., 2025).

**Table 1. Architectural components of Tribe Model**

Component	Composition & scale	Core purpose & focus	Key principle
Squad	A small, self-organizing, cross-functional team, typically comprising 5-8 members.	To take end-to-end responsibility for a specific feature area or mission. The Squad is designed to operate with minimal dependencies and handoffs, covering everything from design and development to deployment and maintenance of its designated area.	Autonomy. Functions like a “mini-startup”, empowered to decide how to best achieve its long-term mission.
Tribe	A collection of Squads working in a related business area, typically scaled to maintain close personal connections.	To provide strategic alignment and a supportive ecosystem for its Squads. The Tribe Lead ensures that the work of all the constituent Squads contributes to a broader, shared business objective and fosters an environment of collaboration and innovation.	Alignment. Acts as a “lightweight matrix” or an incubator, providing context and a shared mission without imposing rigid, top-down control.
Chapters	A group of specialists with the same competence (e.g. all UX designers, all database administrators) from the various Squads within a single Tribe.	To maintain and develop functional excellence within a specific discipline. It serves as a “home” for specialists to share knowledge, establish best practices, and engage in skill development. The Chapter Lead is typically the line manager for the members.	Competence. Functions as a formal “community of practice” that ensures high standards and prevents knowledge from becoming siloed within individual Squads.

Component	Composition & scale	Core purpose & focus	Key principle
Guild	A voluntary, organization-wide community of people who share a common interest. A Guild can span across multiple Tribes.	To facilitate the cross-pollination of ideas, knowledge, and practices across the entire organization. Guilds are formed organically around topics of interest, which can range from specific technologies (e.g. a programming language) to broader subjects (e.g. web performance).	Community of Interest. Acts as the “organic glue” of the organization, connecting people across formal boundaries and breaking down potential Tribe-level silos.

Source: Own elaboration based on Kniberg & Ivarsson (2012)

This model embodies several key trademarks of Agile organizations, including a networked structure that replaces traditional hierarchy and a focus on empowering teams to make decisions quickly. The effectiveness of such Agile teams is a subject of ongoing research, which seeks to understand how different architectural arrangements contribute to their success (Steeh et al., 2025). The core principle is to create an environment where small, focused teams have the autonomy and resources to deliver value iteratively, a practice that many large corporations are now seeking to implement in order to enhance their own agility.

The Tribe Model, therefore, should be understood not as a rigid framework to be copied, but as a case study in applying Agile principles to organizational design at scale. It provides a practical example of how to structure an organization to foster collaboration, empower employees, and accelerate innovation cycles (Kniberg & Ivarsson, 2012).

Despite its widespread discussion and adoption, however, much of the existing literature treats the model as a set of best practices rather than a complex system with inherent paradoxes. There remains a significant gap in research that deconstructs the model to analyze the fundamental tensions between its core tenets, such as high team autonomy, and the strategic alignment required for true customer centricity.

The successful implementation of such a model requires not only a deep commitment to Agile values (Trzaskowska-Dmoch et al., 2025), but also a nuanced understanding of these internal conflicts, which this paper aims to provide.

## Research methodology

This study employed a systematic literature review and qualitative synthesis. Since the Tribe Model is an evolving construct rather than a static framework, a systematic review was selected to integrate fragmented knowledge from diverse sources, offering a more comprehensive perspective than a single case study. The objective was to construct a holistic understanding of the model by analyzing its conceptual foundations, practical applications, and documented outcomes.

The research process was initiated with a structured search of academic and professional literature. To ensure a comprehensive scope, the search strategy utilized a range of keywords, including “Spotify Model”, “Tribe Model”, “agile scaling”, “organizational agility”, “squads, chapters, guilds”, and “customer centricity”. The analysis was intentionally grounded in a multi-source corpus designed to capture a variety of perspectives. This corpus included:

- Peer-reviewed academic articles from the fields of management, organizational design, and innovation, identified through scholarly search engines including Google Scholar, used to establish the theoretical context and review empirical findings concerning Agile organizational structures.
- Seminal practitioner-authored works, particularly the foundational whitepaper by Kniberg and Ivarsson (2012), analyzed to understand the model's original intent and core architectural principles.
- Expert critiques and implementation analyses from credible industry practitioners and consultants (e.g. Lee, 2020) provided critical, real-world insights into implementation challenges and deviations from the original concept.

The final stage of the research involved a thematic analysis of the selected material. This qualitative technique was used to systematically code the content and identify recurring concepts, arguments, and reported experiences. The process focused not merely on summarizing individual sources, but also on synthesizing disparate findings into a coherent conceptual framework. This synthesis enabled identification of the underlying mechanisms, inherent tensions, benefits, and critical failure points associated with the implementation of the model, which are presented in the Results section.

## **Results: analyzing the core challenge of the Tribe Model**

### **Dismantling silos, creating micro-silos: the paradox of the squad structure**

Analysis indicates that the Squad, the foundational unit of the Tribe Model, embodies a central paradox. Although designed to dismantle functional silos and accelerate value delivery (Kniberg & Ivarsson, 2012), its inherent autonomy can inadvertently foster “micro-silos”. While the cross-functional structure addresses the fragmentation typical of departmental divisions (Trkman et al., 2015), by embedding all the necessary skills within a single, mission-oriented unit, the model aims to eliminate the delays and communication overhead typical of siloed organizations, thereby accelerating value delivery (Trzaskowska-Dmoch et al., 2025). The inherent design of the Squad, as a self-contained “mini-startup”, directly addresses the structural impediments that prevent a holistic view of the customer journey.

Nonetheless, practitioner critiques reveal a counter-theme: highly autonomous Squads can inadvertently create “micro-silos”. When teams focus exclusively on their mission, they may fail to share knowledge, leading to duplicated work and a fragmented understanding of the broader product ecosystem (Segars, 2019). Empirical research confirms that organizations do not simply replicate the generic

Spotify template but actively adapt it to their needs. A multi-case study found that a common adaptation to mitigate these micro-silos is the creation of shared cross-product tribes (e.g. for security or infrastructure) that provide specialized services across multiple Squads, ensuring both efficiency and standardization (Gerster et al., 2020). This observation aligns with broader research on cross-functional teams. While such teams are designed to dismantle knowledge barriers, their potential can be undermined if they foster internal conflicts or a sense of isolation from the rest of the organization, a risk that effective management must mitigate (Blindenbach-Driessen, 2015).

The model's horizontal structures, Chapters and Guilds, are presented as the intended solution to this problem of secondary fragmentation. Chapters, that is groups of specialists of the same discipline across different Squads within a Tribe, are designed to maintain technical excellence and facilitate knowledge sharing within a specific competency (Kniberg & Ivarsson, 2012). They function as formal structures for competence development that prevent knowledge from becoming isolated within individual teams, a role complemented by Guilds, which the same research identifies as informal "communities of practice" (Trzaskowska-Dmoch et al., 2025). Guilds, as voluntary, cross-Tribe communities of interest, are meant to create even broader networks for cross-pollinating ideas and practices across the entire organization, acting as the "glue" that prevents knowledge fragmentation (Kniberg & Ivarsson, 2012). However, the successful implementation of such informal structures is not guaranteed; at ING for instance, Guilds failed to gain significant traction, demonstrating that even well-intentioned knowledge-sharing mechanisms can struggle to thrive within a specific corporate context (Kerr et al., 2018).

### **The contingent effect of autonomy on innovation**

Analysis confirms a strong thematic link between team autonomy and innovation capacity (Trzaskowska-Dmoch et al., 2025; Segars, 2019). The freedom to experiment is consistently identified as a key driver of creativity. This aligns with research demonstrating a significant negative relationship between high centralization and employee innovative behavior (Dedahanov et al., 2017). Furthermore, the model's cultural emphasis on treating failure as a learning opportunity creates the psychological safety necessary for radical innovation (Bäcklander, 2019). This decentralized approach is found to have a positive impact on both operational efficiency and employee engagement, which are precursors to sustained innovation (Trzaskowska-Dmoch et al., 2025).

Nevertheless, the synthesis of critical analyses reveals that autonomy alone is insufficient and can even be detrimental to organization-wide innovation. An overemphasis on autonomy without effective knowledge-sharing mechanisms leads to duplicated efforts and fragmented learning as different teams independently "reinvent the wheel" to solve similar problems (Lee, 2020). Both structural differentiation (autonomy) and integration (knowledge sharing) are necessary to execute complex innovation streams. The effectiveness of Chapters and Guilds is thus identified as a critical moderating factor. When these horizontal networks function well, they

amplify innovation by disseminating best practices and new ideas. When they are weak or ineffective, the innovative potential of autonomous teams remains localized and fails to scale.

This brings the model's core challenge directly into focus within the realm of innovation. The relationship between autonomous Squads and the horizontal structures of Chapters and Guilds is not merely supportive. It is the very manifestation of the tension between creative freedom and strategic coherence. While high autonomy is essential for fostering localized, bottom-up experimentation, scaling these individual innovations into a cohesive organizational capability requires the deliberate alignment that these knowledge-sharing networks are designed to provide. Therefore, the model's success in creating a truly innovative ecosystem hinges on actively managing this paradox by empowering teams to diverge in their explorations while ensuring their discoveries ultimately converge into collective, strategic progress. This tension demonstrates that the path to enterprise-wide innovation is defined by the delicate balance between enabling freedom and maintaining focus.

### **The central trade-off: reconciling autonomy with a cohesive customer experience**

The analysis reveals that the model's core challenge becomes most apparent when pursuing a truly customer-centric strategy. This goal requires managing a central trade-off: the inherent conflict between the high level of team autonomy granted for speed and the high level of strategic alignment necessary for a cohesive customer experience across all touchpoints. Academic research confirms that a truly customer-centric strategy requires a consistent and seamless journey across all product touchpoints, which is difficult to achieve when dozens of teams operate independently (Lemon & Verhoef, 2016). While Squads are empowered to respond quickly to customer needs within their specific domain, this can lead to a fragmented user experience if not guided by a unified vision (Lee, 2020). This tension represents a classic organizational paradox, where leaders must manage the competing demands of freedom and control to foster innovation.

The literature, particularly critiques of the model, indicates that overemphasis on autonomy without robust alignment mechanisms leads to divergence from strategic business goals. The success of the model in fostering customer centricity is therefore contingent on the effectiveness of its alignment mechanisms. These are identified as the leadership roles of the Tribe Lead and the Trio (a leadership group of product, design, and tech leads), who are responsible for communicating a clear strategic vision and ensuring that the work of all Squads contributes to that shared mission. In practice, this strategic alignment is often operationalized through frameworks such as objectives and key results (OKRs), which provide a structured methodology for setting clear, ambitious goals and formulating measurable action steps to achieve them (Wulff et al., 2024). Such tools allow the organization to cascade strategic intent without resorting to the top-down control that the model aims to replace, thereby connecting high-level business outcomes with the autonomous work of the Squads

(Wulff et al., 2024). This aligns with broader research on customer-centric transformations, which emphasizes the critical role of leadership in embedding a customer-first mindset across all functions.

### Synthesis of critical failure points and success factors

The meta-synthesis of practitioner critiques and implementation analyses (e.g. Carroll et al., 2023; Lee, 2020) reveals several recurring failure points. The most prominent is the attempt to copy the model's structure without adopting its underlying culture of trust and autonomy. This approach, often referred to as “Cargo Cult Agile”, is the ritualistic imitation of Agile practices without a full understanding of the underlying principles or the reasons behind them (Havstorm et al., 2025), which leads to superficial transformations where organizations simply relabel existing structures, for instance, calling departments “Tribes”, without granting teams the genuine autonomy required for success (Lee, 2020; Carroll et al., 2023).

Another critical failure point is the flawed implementation of the matrix structure, particularly the role of the Chapter Lead. Critiques from former employees highlight that when Chapter Leads act as traditional line managers responsible only for career development but not for delivery, it creates a vacuum of accountability and leaves the Product Owner without a single, accountable engineering counterpart (Lee, 2020). Finally, a consistent theme is the underestimation of the need to enable leadership. The model requires a fundamental shift from “command and control” management to a servant leadership style, a difficult transition that is often a major source of resistance (Bäcklander, 2019). From these failure points, a clear set of success factors emerges, as summarized in Table 2. This is further supported by the work of Carroll (2023), whose research on large-scale Agile transformations highlights that a focus on initial adoption without a strategy for long-term “normalization” is a primary reason for failure.

**Table 2. Synthesis of architectural principles and documented implementation challenges**

Architectural element	Intended purpose (catalyst)	Documented challenges (barrier)
Squads	Break down functional silos and accelerate value delivery through cross-functional autonomy (Kniberg & Ivarsson, 2012).	Can create “micro-silos”, leading to knowledge fragmentation and duplicated work if not properly connected to the wider organization (Segars, 2019).
Chapters	Maintain technical excellence, ensure engineering standards, and foster skill development across Squads (Trzaskowska-Dmoch et al., 2025).	The Chapter Lead role can create a flawed matrix structure with unclear accountability for delivery, hindering decision-making (Lee, 2020).
Guilds	Promote cross-organizational knowledge sharing and innovation through voluntary communities of interest (Kniberg & Ivarsson, 2012).	Can lack focus and lose momentum without clear goals or active coordination, becoming ineffective discussion forums.

<b>Architectural element</b>	<b>Intended purpose (catalyst)</b>	<b>Documented challenges (barrier)</b>
Tribes	Provide strategic alignment and a shared mission for a collection of Squads, acting as an “incubator” for broader business objectives.	Susceptible to “cargo cult” implementation, where a department is simply renamed a “Tribe” without fundamentally changing its hierarchical structure or processes. It can also evolve into a new, larger “Tribe-level silo,” hindering cross-organizational collaboration.
Tribe Leadership (Tribe Lead, Trio)	Provide clear strategic direction and ensure that autonomous Squads remain aligned with the broader customer journey and business goals.	Risk of reverting to “command and control” management styles or creating role ambiguity regarding accountability relative to the Product Owner.
Autonomy-Alignment Principle	Empower teams to innovate quickly (autonomy) while ensuring they contribute to a unified strategic direction (alignment).	Over-fixation on autonomy without strong alignment mechanisms leads to strategic drift and inconsistent customer experiences (Carroll et al., 2023).

Source: Own elaboration

Taken together, the findings synthesized in Table 2 reveal a fundamental duality within the architectural elements of the Tribe Model, where each intended catalyst presents a corresponding implementation challenge. Each component, designed as a catalyst for agility, presents a corresponding barrier if implemented without addressing its inherent complexities. The autonomy that empowers Squads can lead to fragmentation, while the matrix structure of Chapters intended to ensure quality can create accountability conflicts. This synthesis reveals that the model is not a static blueprint but a dynamic system of managing organizational tensions. These results provide the foundation for a subsequent discussion on the broader implications for theory and practice.

## Conclusions

The findings of this meta-synthesis demonstrate that the Tribe Model is best understood not as a prescriptive framework to be replicated, but as a set of architectural principles designed to manage the inherent tensions between autonomy and alignment. Analysis confirms that core components, such as autonomous Squads, are effective in breaking down traditional functional silos, while the matrixed structures of Chapters and Guilds are intended to foster the knowledge sharing crucial for innovation. Nonetheless, this research reveals that these architectural elements present a fundamental paradox. The very autonomy that fuels speed and creativity can lead to strategic fragmentation and inconsistent customer experiences if not carefully balanced by robust alignment mechanisms. The model's catalytic potential,

therefore, is not an automatic outcome of its structure, but is contingent upon an organization's ability to actively navigate these persistent organizational paradoxes.

The primary contribution of this study is the deconstruction of the Tribe Model into a set of underlying principles and tensions, offering a more nuanced perspective than is typically found in practitioner-focused literature. For theory, this paper bridges the gap between organizational design literature and Agile scaling methodologies, framing the model as a socio-technical system for managing the paradoxes of innovation. For practice, the findings serve as a critical caution against cargo cult adoption. The key implication for managers is that a successful transformation requires a shift in focus from merely copying structural artifacts to fundamentally rewiring the organizational backbone, its core processes of budgeting, performance management, and talent development (Brosseau et al., 2019). The journey is rarely linear. It can be a “step-wise” process of gradual implementation or an “all-in” transformation, but in every case, it demands cultivation of the cultural prerequisites. As one of the architects of the ING transformation stated, leaders must be willing to “give up fundamental parts of [their] current way of working,” including traditional hierarchy and input steering, in exchange for empowered teams and “output steering” (Jacobs & Schlatmann, 2017). This underscores the final point: success hinges on fostering organizational trust and a deep commitment to enabling leadership. Without these foundational elements, the architectural principles of the model fail to function as intended and may even introduce new dysfunctions.

Finally, the limitations of this study, rooted in its reliance on a meta-synthesis of publicly available data, open several avenues for future research. While this approach allowed a broad synthesis of diverse perspectives, it lacks the depth of direct empirical investigation. Future research should therefore employ longitudinal, in-depth case studies within organizations that have implemented these principles. Such studies could provide richer data on the evolution of these structures over time and the specific leadership behaviors required to manage the identified tensions effectively. Furthermore, quantitative research is needed to measure the precise impact of specific architectural elements. Future studies could, for instance, examine the correlation between Guild strength (measured by meeting frequency and cross-Tribe project participation) and the reduction of duplicated work among Squads, offering tangible metrics beyond general innovation scores. Ultimately, as organizations continue to seek greater agility, understanding the deep interplay between architectural design, organizational culture, and strategic outcomes will remain a critical area of inquiry.

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## GLÓWNE WYZWANIE MODELU TRIBES – RÓWNOWAŻENIE AUTONOMII I STRATEGICZNEGO DOPASOWANIA

**Streszczenie:** Model Tribes to zwinna architektura organizacyjna, której wrodzonymi celami są przyspieszenie innowacji i osiągnięcie głębokiej klientocentryczności. Jego kluczowym wyzwaniem jest jednak zarządzanie fundamentalnym paradoksem: nieodłącznym napięciem między wysoką autonomią zespołów, niezbędną dla szybkich innowacji, a wysokim stopniem strategicznego dopasowania, koniecznym do zapewnienia spójnego doświadczenia klienta. Głównym celem tego artykułu jest dekonstrukcja modelu w celu analizy, w jaki sposób ten centralny paradoks kształtuje zdolność organizacji do osiągania jej podwójnych celów strategicznych. W badaniu zastosowano systematyczny przegląd literatury, obejmujący metasyntezę artykułów naukowych, prac praktyków oraz analiz eksperckich. Wyniki potwierdzają, że choć autonomiczne składy skutecznie likwidują siłosy funkcjonalne, mogą one również fragmentaryzować ścieżkę klienta bez solidnych mechanizmów strategicznego dopasowania. W artykule dokonano konkluzji, że sukces modelu nie jest gwarantowany przez samą jego strukturę, lecz zależy od aktywnego zarządzania tym nieodłącznym paradoksem poprzez sprzyjającą kulturę organizacyjną, odpowiednie podejście przywódcze i wykorzystanie odpowiednich narzędzi, takich jak OKR.

**Słowa kluczowe:** zwinne projektowanie organizacyjne, klientocentryczność, innowacje, zwinność organizacyjna, Model Tribes

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## **GREEN ENTREPRENEURIAL ORIENTATION AND COMPETITIVE PERFORMANCE: A LITERATURE REVIEW**

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**Abstract:** The growing importance of sustainability in strategic management has intensified research on the relationship between green entrepreneurial orientation (GEO) and the competitive performance of companies. The main objective of this study is to identify and synthesize key research streams linking GEO with competitiveness and competitive advantage. A bibliometric analysis based on the Scopus database was conducted using VOSviewer to generate co-occurrence and overlay visualizations. The analysis (up to February 2026) identified four thematic clusters. The findings show that GEO plays a central role in connecting strategic management concepts, green innovation, sustainability performance, and contexts related to small and medium enterprises (SME). Recent research increasingly emphasizes capability-based perspectives, including green innovation capabilities, green intellectual capital, and digital technologies. The study offers a structured overview on the research landscape of GEO competitiveness and outlines the direction for future studies.

**Keywords:** bibliometric analysis, competitive advantage, competitiveness, green entrepreneurial orientation, green innovation

**JEL Classification:** L26, O31, Q56, M10

### **Introduction**

The growing environmental challenges faced by contemporary economies, including climate change, resource depletion, and increasing regulatory pressures, have significantly reshaped strategic priorities of companies (Kura & Raimi, 2025).

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Organizations are no longer evaluated solely on financial performance but are increasingly expected to integrate environmental responsibility into their core strategies. In this context, green entrepreneurial orientation (GEO) has emerged as a key construct at the intersection of entrepreneurship, sustainability, and strategic management. By extending the traditional concept of entrepreneurial orientation into the environmental domain, GEO reflects the strategic posture of a company characterized by risk-taking, innovativeness, and proactiveness directed toward ecological objectives (Alwakid & Dahri, 2025).

At the same time, competitiveness remains a central concern for both scholars and practitioners. Companies operating in dynamic and environmentally turbulent markets must reconcile sustainability imperatives with the need to maintain or improve their competitive position. Consequently, increasing attention has been devoted to examining whether and how environmentally oriented entrepreneurial strategies translate into competitive advantage and improved competitive performance (Pratono et al., 2019). Existing studies suggest that GEO may foster green innovation, enhance environmental and financial performance, and contribute to sustainable competitive advantage. However, the rapidly expanding body of literature is fragmented across different theoretical perspectives, empirical contexts, and performance measures.

Despite the increasing number of empirical investigations, a structured synthesis of the research landscape linking GEO and competitiveness remains necessary. The diversity of conceptual approaches, mediating mechanisms, and contextual moderators makes it challenging to clearly identify dominant themes and emerging trends. A systematic bibliometric review can provide a comprehensive overview of the field's intellectual structure, reveal its developmental trajectory, and highlight areas requiring further investigation.

Therefore, the main objective of this study is to systematically identify, structure, and synthesize the key research streams that examine the relationship between green entrepreneurial orientation and competitiveness, including competitive advantage and competitive performance.

## **Literature review**

GEO is rooted in the concept of entrepreneurial orientation, one of the most widely recognized and empirically validated conceptualizations of entrepreneurship at the organizational level (Covin & Slevin, 1989). GEO captures the strategic posture of a company reflected in its propensity to take risks, innovate, and be proactive. GEO extends this foundational framework by embedding it within the sustainability paradigm, aligning entrepreneurial behaviors with environmental objectives and ecological responsibility (Khan et al., 2023; Wang et al., 2023a). In doing so, GEO represents not only a strategic orientation, but a sustainability-driven entrepreneurial mindset that integrates environmental considerations into the company's opportunity recognition and exploitation processes.

From a strategic perspective, GEO reflects a configuration of organizational capabilities and decision-making patterns that enable companies to systematically identify, evaluate, and capitalize on environmental opportunities arising from regulatory pressures, changing stakeholder expectations, and technological advances in green solutions (Mouawad, 2025). The risk-taking dimension manifests itself in the willingness to invest in uncertain long-term environmental initiatives, such as clean technologies, renewable energy systems, or circular economy models. Innovativeness refers to the development of environmentally friendly products, services, and processes that reduce ecological footprints and create new market value. Proactiveness, in turn, involves anticipating environmental trends, responding to sustainability-related changes before competitors, and even shaping emerging green markets (Adiguzel & Sonmez Cakir, 2025). Through these dimensions, GEO enables companies not only to adapt to sustainability demands, but also to take advantage of them for strategic competitive positioning.

A growing body of empirical research demonstrates that GEO is a significant driver of sustainable innovation. Companies characterized by strong GEO are more likely to introduce green product and process innovations and implement environmentally responsible operational practices (Zahoor & Gerged, 2021; Riaz, 2026). Furthermore, GEO has been shown to positively influence entrepreneurial outcomes (Aftab et al., 2022) and overall organizational success (Jiang et al., 2018). Its effects extend to operational performance, where it enhances efficiency and resource optimization (Adiguzel & Sonmez Cakir, 2025), and to financial performance, contributing to improved profitability and long-term economic stability (Asad et al., 2023).

Significantly, GEO also strengthens sustainable performance by integrating economic, environmental, and social outcomes into a coherent strategic framework (Kura & Raimi, 2025; Ma et al., 2025). These positive relationships have been observed not only in large corporations but also in small and medium-sized enterprises (SMEs), indicating that GEO is applicable across organizational sizes (Hamur et al., 2026).

Taken together, these innovations, performance, and sustainability outcomes are expected to contribute to the development of sustainable competitive advantage. Consistent with the resource-based and dynamic capabilities perspectives, GEO can be viewed as a strategic capability that fosters unique, environmentally-oriented competencies that are difficult to imitate. Empirical evidence further suggests a direct positive relationship between GEO and the competitiveness of a company (Li et al., 2022). Therefore, GEO represents a strategic mechanism that integrates entrepreneurship with sustainability, allowing companies to simultaneously generate economic value and environmental benefits while improving their long-term competitive position.

## Methods

This study provides a systematic review of the literature that examines the relationship between GEO and company competitiveness using bibliometric methods. The analysis was conducted using the Scopus database, selected for its broad

disciplinary coverage, high indexing standards, and the ability to export comprehensive bibliographic records suitable for quantitative mapping. The bibliometric analysis was supported by VOSviewer, which enabled the visualization and structured exploration of the field's intellectual architecture. Through co-occurrence mapping of keywords, it was possible to identify dominant thematic configurations, trace the temporal evolution of research interests, and examine the internal connectivity of concepts within the GEO-competitiveness domain.

The data collection process was carried out in the Scopus database on 10 February 2026. The search yielded 32 publications that met the inclusion criteria and were subsequently included in the bibliometric analysis. The following search query was applied: *(green entrepreneurial orientation) AND (competitiveness OR competitive performance OR competitive advantage OR competitive edge)*. This query ensured a focused, yet inclusive, dataset that captures studies that explicitly link GEO to various dimensions of competitive outcomes.

Bibliometric analysis was conducted using VOSviewer, which enabled the generation of two complementary types of visualizations.

First, an overlay visualization was developed to present the temporal distribution of keywords. This time-based map reflects the average publication year for each concept, enabling the identification of emerging themes and shifts in academic attention. The overlay visualization distinguishes earlier, more foundational topics from more recent capability- and innovation-oriented developments.

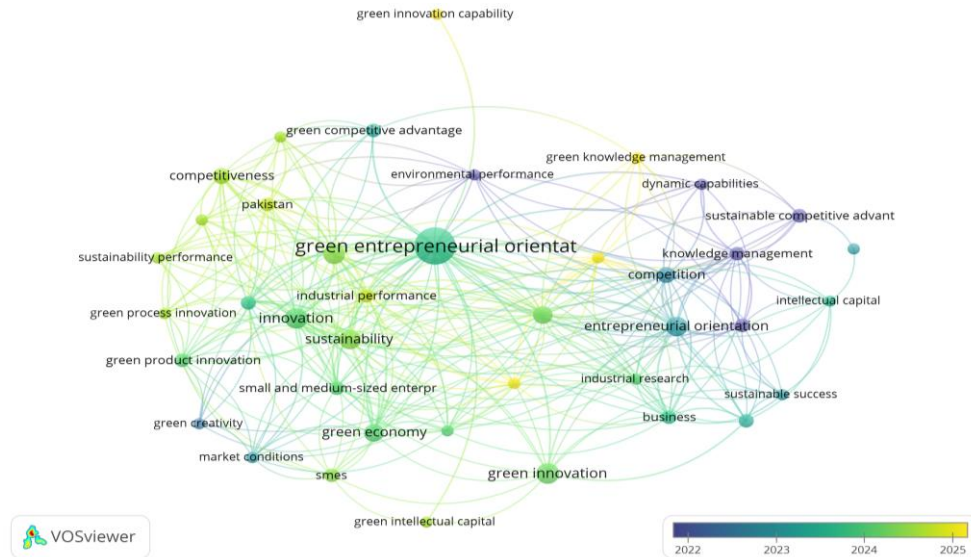
Second, a network visualization of keyword co-occurrence was generated to illustrate the field's structural composition. A minimum threshold of four occurrences per keyword was applied to ensure analytical clarity and conceptual relevance. Based on the clustering algorithm implemented in VOSviewer, four thematic clusters were identified, representing the principal research streams within the GEO and competitiveness literature:

- Cluster 1: artificial intelligence; business; competition; competitive advantage; dynamic capabilities; entrepreneurial orientation; green entrepreneurship; green knowledge management; green marketing; industrial research; intellectual capital; knowledge management; sustainable competitive advantage; sustainable development; sustainable success.
- Cluster 2: competitiveness; entrepreneur; environmental impact; environmental performance; green absorptive capacity; green competitive advantage; green process innovation; green product innovation; industrial performance; innovation; manufacturing; Pakistan; sustainability; sustainability performance.
- Cluster 3: green creativity; green economy; market conditions; Saudi Arabia; small and medium-sized enterprises; sustainable performance.
- Cluster 4: green entrepreneurial orientation; green innovation; green innovation capability; green intellectual capital; SMEs.

The applied bibliometric approach enabled a structured and integrative representation of the current state of research at the intersection of GEO and competitiveness, while simultaneously revealing areas of thematic concentration and potential avenues for further theoretical and empirical development.

## Results

The evolution of research topics in GEO, as presented in the bibliometric map (Figure 1), reveals noticeable shifts in scholarly attention during 2022-2025. The color overlay, indicating the average year of keyword occurrence, allows tracing the field's chronological development, from more general strategic constructs to increasingly capability-oriented and innovation-focused themes.



**Figure 1. Overlay visualization (VOSviewer software)**

Source: Own elaboration

In the earlier phase (around 2022-2023), the darker-colored nodes correspond to foundational concepts such as entrepreneurial orientation, knowledge management, intellectual capital, dynamic capabilities, competition, and sustainable development. At this stage, the research focused mainly on embedding GEO within established strategic management frameworks and the examination of its links to competitive advantage and sustainable success. The emphasis was placed on theoretical positioning and understanding how environmentally oriented entrepreneurial behavior relates to company resource configurations.

In the intermediate period (2023-2024), attention shifted toward more specific outcome-related constructs, including environmental performance, sustainability performance, green product innovation, green process innovation, and green absorptive capacity. This indicates a growing interest in empirically testing the impact of GEO on innovation activities and measurable performance indicators. Studies have increasingly explored the mechanisms of mediating and sectoral contexts, particularly within manufacturing industries and emerging economies.



research direction that links digital transformation with environmentally oriented strategic renewal (Alwakid & Dahri, 2025). Overall, this cluster aligns with the resource-based view and dynamic capabilities theory, framing GEO as a driver of sustainable competitive advantage through knowledge integration and capability orchestration (Martínez-Falcó et al., 2025).

The second cluster emphasizes performance outcomes and environmental innovation. It includes environmental performance, sustainability performance, green product innovation, green process innovation, green absorptive capacity, and competitiveness (Zhang et al., 2021). This stream represents the empirically dominant line of inquiry, focusing on testing the performance implications of GEO. The strong interconnections between innovation-related constructs and performance indicators suggest that green innovation operates as a key mediating mechanism through which GEO enhances both environmental and industrial performance. The inclusion of manufacturing and country-specific contexts further indicates that many empirical studies are conducted in industrial sectors and emerging economies, where sustainability pressures and institutional dynamics create fertile ground for examining the practical implications of GEO (Dahri et al., 2025).

The third cluster highlights contextual and organizational boundary conditions, particularly in relation to SMEs, market conditions, and national settings (Manigandan & Raghuram, 2024). Compared to the previous clusters, this stream is more focused on contextual embeddedness. It underscores the importance of green creativity and green economy dynamics in shaping sustainable performance outcomes (Jiang et al., 2018). Concentration on SMEs suggests that GEO is increasingly studied beyond large corporations, acknowledging that smaller companies face distinct resource constraints and institutional pressures (Mouawad, 2025). This cluster signals a growing recognition that GEO's effectiveness depends on environmental turbulence, market maturity, and regional sustainability agendas.

The fourth cluster represents the field's conceptual and innovation-focused core (Qin et al., 2024). It directly connects GEO to green innovation, green innovation capabilities, green intellectual capital, and SMEs. This configuration suggests a more recent shift toward examining the micro-foundations and capability-building mechanisms that translate orientation into measurable innovation outcomes. Rather than focusing solely on performance effects, this stream investigates how companies develop innovation capabilities rooted in environmentally oriented intellectual capital (Jiang et al., 2024; Wats et al., 2025). The temporal colouring of the map indicates that constructs such as green innovation capability and green intellectual capital are among the most recent additions to the discourse, reflecting a refinement of earlier performance-oriented models toward more process-based explanations. The four clusters illustrate the multidimensional structure of the GEO research domain. The field appears to have evolved from foundational discussions linking entrepreneurial orientation with sustainability to more sophisticated analyses integrating knowledge-based resources, innovation capabilities, and contextual moderators (Widjajanti et al., 2025). The network structure suggests increasing theoretical convergence around capability-based explanations while simultaneously expanding into digitalization and emerging

economy contexts. This pattern indicates both conceptual consolidation and thematic diversification, positioning GEO as a central construct at the intersection of entrepreneurship, sustainability, and strategic management research (Alwakid & Dahri, 2025).

## Conclusions

This study provides a comprehensive bibliometric examination of the research landscape linking GEO with competitiveness and related performance outcomes. By applying co-occurrence network analysis and temporal overlay visualization to publications indexed in the Scopus database, the study systematically mapped the intellectual structure, thematic evolution, and emerging directions of this growing field.

The findings reveal that GEO occupies a central and integrative position within the literature, connecting strategic management concepts, innovation mechanisms, and sustainability-oriented performance outcomes. The network structure demonstrates that research has evolved from embedding GEO within established theoretical frameworks – such as dynamic capabilities and intellectual capital – toward more empirically grounded analyses focusing on green innovation, absorptive capacity, and environmental performance. More recent contributions increasingly emphasize capability development, green intellectual capital, and the integration of digital technologies, such as artificial intelligence, reflecting a shift toward more fine-grained and process-oriented explanations.

The identification of four thematic groups highlights the multidimensional character of the field, which includes strategic foundations, innovation and performance implications, contextual and SME-focused perspectives, and capability-based mechanisms. This fragmentation, combined with strong interconnections among clusters, suggests a process of theoretical consolidation accompanied by growing contextual diversification, particularly in emerging economies and manufacturing sectors.

Despite its contributions, the study is subject to certain limitations. The analysis relies exclusively on the Scopus database, which, although comprehensive, may not capture all relevant publications available on other indexing platforms such as Web of Science or Google Scholar. Consequently, some influential works might have been excluded from the dataset. Additionally, the bibliometric approach is inherently quantitative and based on keyword co-occurrence patterns, which restricts the possibility of in-depth qualitative interpretation of the substantive content and theoretical nuances of individual studies.

Overall, the bibliometric evidence indicates that the GEO-competitiveness nexus is a maturing yet dynamically expanding research domain. Future studies may benefit from developing integrative, multi-level models that simultaneously address strategic resources, innovation processes, contextual moderators, and long-term competitive outcomes. Greater attention to longitudinal designs, cross-country comparisons, and digital–sustainability intersections may further strengthen theoretical clarity and empirical robustness in this field.

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## ZIELONA ORIENTACJA PRZEDSIĘBIORCZA A WYNIKI KONKURENCYJNE – PRZEGLĄD LITERATURY

**Streszczenie:** Rosnące znaczenie zrównoważonego rozwoju w zarządzaniu strategicznym zwiększyło zainteresowanie badaczy relacją między zieloną orientacją przedsiębiorczą (GEO) a konkurencyjnością przedsiębiorstw. Głównym celem niniejszego badania jest identyfikacja i synteza kluczowych nurtów badawczych łączących GEO z konkurencyjnością i przewagą konkurencyjną. Przeprowadzono analizę bibliometryczną na podstawie danych z bazy Scopus, wykorzystując oprogramowanie VOSviewer do wygenerowania map współwystępowania słów kluczowych oraz wizualizacji czasowej. Analiza (do lutego 2026 r.) pozwoliła wyodrębnić cztery klastry tematyczne. Wyniki wskazują, że GEO pełni centralną rolę w łączeniu koncepcji zarządzania strategicznego, zielonych innowacji, wyników zrównoważonych oraz kontekstu MŚP. Najnowsze badania koncentrują się na podejściu zdolnościowym, obejmującym m.in. zdolność do zielonych innowacji, zielony kapitał intelektualny oraz technologie cyfrowe. Badanie porządkuje stan wiedzy i wskazuje kierunki dalszych analiz.

**Słowa kluczowe:** analiza bibliometryczna, przewaga konkurencyjna, konkurencyjność, zielona orientacja przedsiębiorcza, zielona innowacja

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## DETERMINANTS OF GENERATION Z'S ATTITUDES TOWARD DISABILITY INCLUSIVITY IN THE WORKPLACE

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**Abstract:** Contemporary enterprises face challenges related to diversity management, particularly in adapting HR strategies to the evolving expectations of Generation Z employees. Growing up in a world saturated with digital media has influenced their attitudes towards inclusivity, equality, and corporate ethics. The aim of this article is to analyse Generation Z's perception of diversity, including individuals with disabilities, and to identify the challenges this presents for HR practice. The study was conducted on a sample of 469 students using descriptive statistics, the Shapiro–Wilk test, the Mann–Whitney U test, and Spearman's correlations. The results showed that women have significantly more positive attitudes towards working with individuals with disabilities than men, and residents of large cities are more likely to declare their willingness to work in teams with individuals with disabilities. While the amount of time spent on social media was not significant, the descriptive data suggest that exposure to inclusive content plays a more vital role in shaping open attitudes. The findings underscore the need for organisations to implement consistent diversity policies that go beyond mere declarations and genuinely support an inclusive work environment. The study fills a gap in the literature by demonstrating that Generation Z expects employers to be genuinely committed to creating environments that foster the full participation of individuals with disabilities in professional life.

**Keywords:** discrimination, Generation Z, human resource management, statistical analysis, inclusivity

**JEL Classification:** J14, J71, M14

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## Introduction

The contemporary labour market is experiencing dynamic changes, significantly influenced by the arrival of a new generation. Young people born after 1995, the so-called Generation Z, are characterised by attitudes, values, and expectations regarding professional life that differ from previous generations (Jayatissa, 2023). This shift in values presents new and complex challenges for traditional models of organisational and human resource management.

An important factor shaping the worldview and value system of Generation Z is the ubiquity of media, including social media, which is their primary channel of communication and source of information. The values promoted in the media are absorbed by this generation as norms and become the basis for their expectations of future employers. Young employees not only expect organisations to declare their support for inclusive values, but also demand that they implement socially responsible practices in a genuine and transparent manner (Siagian & Juliana, 2023).

Values that were often perceived as “soft” attributes of organisational culture in the past now translate into “hard” business expectations, affecting the market competitiveness of companies (Coman et al., 2022). As a result, organisations that fail to meet these expectations may face negative perceptions and significant difficulties in recruiting talented young employees (Wandhe, 2024). For this reason, human resources (HR) departments must go beyond their traditional role and become strategic partners capable of understanding these powerful changes in the labour market.

Despite the existence of studies on the general characteristics of Generation Z (Schroth, 2019; Chillakuri, 2020), the author has identified a research gap in the mechanisms shaping Generation Z's attitudes towards specific aspects of diversity, such as disability in the workplace. Previous studies have focused primarily on the digital literacy of this group. There is therefore a theoretical and empirical need to verify whether the declarative inclusiveness of this generation is merely a result of generational affiliation or the effect of specific exposure to content promoting diversity.

Despite growing awareness of diversity in companies, the issue of inclusiveness towards individuals with disabilities remains an area where numerous barriers still exist. Research indicates that individuals with disabilities (IWD) continue to encounter obstacles in accessing the labour market, including stereotypes, prejudices and insufficient structural and procedural support (Stolarska-Szeląg, 2025). There is a clear need to fill a research gap that links several key areas: the specific values and media habits of Generation Z, the impact of media exposure on their attitudes towards individuals with disabilities, and the implications of these relationships for human resource management practices.

This study aims not only to analyse Generation Z's attitudes towards individuals with disabilities, but also to assess how these attitudes translate into specific challenges and requirements in human resource management. The main rationale for addressing this topic is that Generation Z expects employers to be genuinely committed to creating environments that truly support the full participation of individuals with disabilities in working life.

## Literature review

The contemporary labour market is undergoing dynamic changes driven by the entry of Generation Z (individuals born after 1995), whose attitudes and expectations differ significantly from those of previous generations. Young employees place great emphasis on authenticity, transparency, and employer engagement in social issues (Eng & Kohsuwan, 2025). Inclusivity is no longer perceived merely as an image-related element but has become a “hard” business expectation affecting the competitiveness of enterprises (Coman et al., 2022; Wandhe, 2024). Despite these declarative values, individuals with disabilities still face structural, procedural, and cultural barriers, including deeply rooted prejudices (Stolarska-Szeląg & Król, 2024; Nota et al., 2014).

The literature indicates significant differences in social attitudes toward individuals with disabilities determined by gender (Timmons et al., 2024). In many studies, women achieve higher scores on empathy and acceptance scales, which is often explained by their greater sensitivity to social issues (Santilli et al., 2023; Rojo-Ramos et al., 2022). Some analyses suggest that women's attitudes may be shaped by their own experience of belonging to a marginalised group in the labour market, leading to greater inclusivity towards other groups at risk of exclusion. Conversely, men's attitudes are more frequently burdened by stereotypes regarding the lower productivity of individuals with disabilities, illustrating ableism in the professional environment (Mik-Meyer, 2016). Based on these premises, the first hypothesis was formulated:

*H1: Women declare more positive attitudes toward individuals with disabilities than men.*

Another significant factor differentiating attitudes is the size of the place of residence. The theoretical justification for this relationship is based on contact theory, according to which more frequent and positive intergroup interaction reduces prejudice (Vuong & Palmer, 2024). Large urban centres, characterised by higher population density and greater diversity, naturally foster such contact and offer greater visibility of inclusive initiatives (Selanon & Chuangchai, 2023; Fortune et al., 2022). Although the literature is not entirely consistent on this point, sometimes indicating the specific sensitivity of rural residents (Rojo-Ramos et al., 2022), it was assumed that:

*H2: The size of the place of residence correlates with declared readiness to work in a team with individuals with disabilities.*

Social media are the primary communication channel for Generation Z, shaping their norms and standards of behaviour (Siagian & Juliana, 2023; Ayuningtyas Y Hapsari et al., 2024). Through behavioural modelling mechanisms and viral campaigns, the media can both reinforce stereotypes and promote emancipatory narratives (Furr et al., 2016). Research indicates that it is not the time spent online itself, but exposure to inclusive content and positive portrayals of stigmatised groups that realistically influences pro-social attitudes (Tirocchi, 2024; Wang et al., 2021). On this basis, the following hypothesis was adopted:

*H3: Greater exposure to media content promoting inclusivity correlates with more positive attitudes toward individuals with disabilities.*

### Research methodology

The study was conducted on a sample of N = 469 Polish students. Of all participants, 235 combined their studies with professional work. The analyses were conducted on a complete sample of N = 469 (all analyses described refer to this group). Detailed information on the structure of the sample is presented in Table 1.

**Table 1. Structure of the sample studied**

		Value
Sample size (N)		469
Number of men		160
Number of women		309
Working persons		235
Age (mean ± SD)		21.67 (2.16)
Age (median ± IQR)		21 (20-23)
Age (range: min-max)		18-30
Encountering content about IWD on social media	Yes	369 (78.7%)
	No	100 (21.3%)

Source: Own study based on research

The research was conducted between October 2024 and June 2025. Data was collected using a convenience sampling method among students of Polish universities. The research tool was an online questionnaire distributed through student groups on social media platforms. The survey consisted of three parts: demographic data, social media usage patterns, and a special scale assessing attitudes towards IWD. The latter was measured using a five-point Likert scale (from 1 – ‘strongly disagree’ to 5 – ‘strongly agree’). The items were analysed as separate dependent variables, so they did not form a scale.

Respondents completed an anonymous survey containing personal details and a set of statements concerning attitudes towards individuals with disabilities (the tables include the abbreviation IWD).

The first step of the analysis was to check the distributions of the quantitative variables. For this purpose, basic descriptive statistics were calculated along with the Shapiro-Wilk test to examine the normality of the distribution. The results of the analysis are presented in Table 2.

**Table 2. Basic descriptive statistics of the studied variables, together with the Shapiro–Wilk test**

Dependent variable	M	Me	SD	Sk.	Kurt.	Min.	Max.	W	p
IWD arouses pity in me	3.12	3.00	1.15	-0.37	-0.96	1.00	5.00	0.87	<0.001
I believe that IWD will not work as efficiently as I will	2.87	3.00	1.21	0.04	-1.06	1.00	5.00	0.91	<0.001
I believe that IWD should not be employed	1.62	1.00	0.87	1.53	2.33	1.00	5.00	0.71	<0.001
I am willing to befriend a disabled colleague	4.06	4.00	0.96	-1.00	0.82	1.00	5.00	0.82	<0.001
I can work in a task force with IWD	4.19	4.00	0.92	-1.25	1.51	1.00	5.00	0.78	<0.001

Annotation: M – mean; Me – median; SD – standard deviation; Sk. – skewness; Kurt. – kurtosis; Min. – minimum value; Max. – maximum value; W – Shapiro–Wilk test result; p – p-value for the Shapiro–Wilk test.

Source: Own study based on research

Due to significant deviations from normality in the distributions shown by the Shapiro–Wilk test for the analysed items (e.g. IWD arouses pity in me:  $W = 0.87$ ,  $p < .001$ ; I believe that IWD will not work as efficiently as I will:  $W = 0.91$ ,  $p < .001$ ; I can work in a task force with IWD:  $W = 0.78$ ,  $p < .001$ ), the analytical plan provided for the use of non-parametric methods. A significance level of  $\alpha = 0.05$  was adopted.

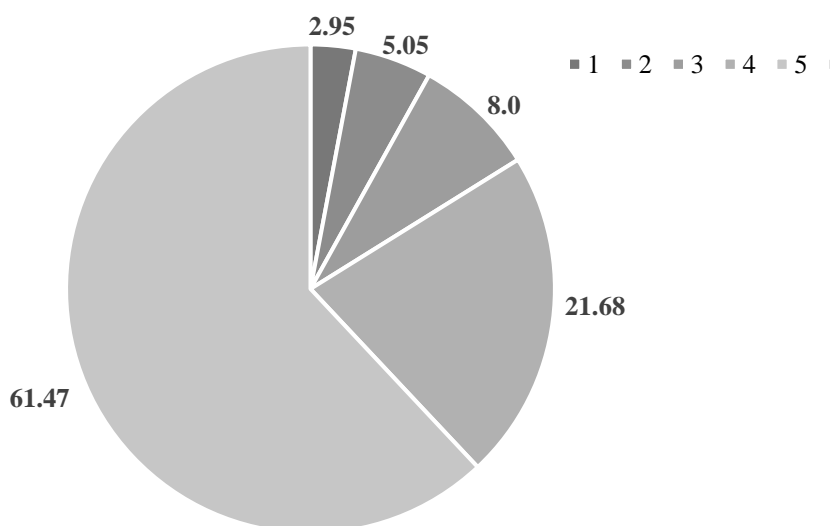
To verify the hypotheses, a Mann–Whitney U test was performed to compare the groups, with the report providing the U value, the converted statistic from (Z), p and the effect size r ( $r = z/\sqrt{N}$ ), as well as the medians and IQR for the compared groups. The relationships between ordinal variables and attitudes were examined using Spearman's rank correlation ( $\rho$ , N, p). The results of the Shapiro–Wilk test and the characteristics of the distributions justified the use of the non-parametric tests described above to verify H1-H3. All analyses were performed using IBM SPSS Statistics 29. The distribution of the sample size is presented in Table 3.

The survey asked the respondents whether they would be guided by the fact that a company is free from discrimination when choosing an employer. Respondents answered the question on a Likert scale (1 – I will not be guided by this, 5 – this will be very important to me). The answers received are presented in Figure 1. Figure 1 provides a starting point to understand the general sensitivity of the study group to ethical issues, which lends credibility to further, more detailed questions about individuals with disabilities (IWD).

**Table 3. Sample size distribution**

Category	Subcategory	N (469)	%
Place of residence	Rural areas	188	40.1
	Cities with over 500,000 inhabitants	105	22.4
	Cities with 150,000 to 500,000 inhabitants	89	19.0
	Cities with 50,000 to 150,000 inhabitants	32	6.8
	Cities with up to 50,000 inhabitants	55	11.7
Time spent on social media	3-4 hours per day	151	32.2
	2-3 hours per day	134	28.6
	1-2 hours per day	141	30.1
	Up to 1 hour per day	43	9.2

Source: Own study based on research



**Figure 1. Distribution of responses to the question about the importance of non-discrimination by employers (%)**

Source: Own study based on research

For a significant proportion of the students surveyed, the absence of discrimination in the workplace is very important. The high percentage of responses (rating 4 or 5) indicates that a genuine commitment to inclusiveness is not just a ‘soft’ attribute for this group, but a ‘hard’ business expectation. The visual representation in Figure 1 highlights a clear consensus among respondents, which serves as a benchmark to compare their specific attitudes toward IWD in the workplace.

## Results

### Gender differences in perceptions of individuals with disabilities

First, the differences between the female and male respondents were tested in terms of their perception of colleagues with disabilities. The Mann–Whitney U test was used to check for differences, and the results are presented in Table 4.

**Table 4. Gender differences in perceptions of colleagues with disabilities – Mann–Whitney test results**

Dependent variable	Men (N = 160)			Women (N = 309)			Z	p	r
	average rank	Mdn	IQR	average rank	Mdn	IQR			
IWD arouses pity in me	250.04	4.00	2.00	227.21	3.00	2.00	-1.82	0.069	0.08
I believe that IWD will not work as efficiently as I will	271.51	3.00	2.00	216.09	3.00	2.00	-4.32	<b>&lt;0.001</b>	0.20
I believe that IWD should not be employed	249.28	1.00	1.00	227.61	1.00	1.00	-1.85	0.064	0.09
I am willing to befriend a disabled colleague	213.56	4.00	2.00	246.10	4.00	1.00	-2.62	<b>0.009</b>	0.12
I can work in a task force with IWD	197.89	4.00	2.00	254.21	5.00	1.00	-4.61	<b>&lt;0.001</b>	0.21

Annotation: N – number of observations; Mdn – median; IQR – interquartile range; Z – test statistic value; p – statistical significance; r – effect size index.

Source: Own study based on research

The test results proved to be statistically significant for three of the five variables tested. Men were statistically significantly more likely than women to agree with the statement that individuals with disabilities do not work as efficiently as they do, but the strength of this effect was weak. Women, on the other hand, were statistically significantly more likely to befriend a disabled colleague and work with them in a task force. In these two cases, the strength of the effect was also weak. No statistically significant gender differences were found in the perception that individuals with disabilities elicit pity and should not work. Based on these results, hypothesis H1 was partially supported, as women showed significantly more positive attitudes in the key dimensions of social and professional cooperation.

### The relationship between place of residence and perceptions of individuals with disabilities

In the next step of the analysis, the relationships between the size of the place of residence and the opinions about individuals with disabilities were examined. Due to the ordinal nature of the variable size of the place of residence, Spearman's non-parametric rho correlation analysis was used for this purpose (Table 5).

**Table 5. Relationship between the size of the place of residence and the perception of individuals with disabilities – Spearman's rho correlation**

Variable	Specification	Place of residence
IWD arouses pity in me	<i>Spearman's rho</i>	-0.04
	statistical significance	0.433
I believe that IWD will not work as efficiently as I will	<i>Spearman's rho</i>	0.04
	statistical significance	0.336
I believe that IWD should not be employed	<i>Spearman's rho</i>	-0.06
	statistical significance	0.194
I am willing to befriend a disabled colleague	<i>Spearman's rho</i>	0.07
	statistical significance	0.148
I can work in a task force with IWD	<i>Spearman's rho</i>	<b>0.12</b>
	statistical significance	<b>0.012</b>

Source: Own study based on research

A statistically significant relationship was found between place of residence and willingness to work in a task force with individuals with disabilities. The larger the town where the respondents lived, the more willing they were to work in a task force with individuals with disabilities, and the strength of this effect was weak. No statistically significant correlations were found between the size of the place of residence and the other statements about disabled employees.

Consequently, hypothesis H2 was partially supported, specifically regarding the declared willingness to work in a task force with IWD.

### The relationship between social media usage and perceptions of individuals with disabilities

Next, we examined whether the amount of time spent daily on social media was related to the respondents' opinions about individuals with disabilities. Due to the ordinal nature of the measurement of time spent on social media, we again used Spearman's non-parametric rho correlation analysis (Table 6).

**Table 6. Relationship between the amount of time spent on social media and the perception of individuals with disabilities – Spearman's rho correlation**

Variable	Specification	Time spent on social media
IWD arouses pity in me	<i>Spearman's rho</i>	0.09
	statistical significance	0.053
I believe that IWD will not work as efficiently as I will	<i>Spearman's rho</i>	0.00
	statistical significance	0.952
I believe that IWD should not be employed	<i>Spearman's rho</i>	0.05
	statistical significance	0.265
I am willing to befriend a disabled colleague	<i>Spearman's rho</i>	-0.08
	statistical significance	0.067
I can work in a task force with IWD	<i>Spearman's rho</i>	-0.02
	statistical significance	0.662

Source: Own study based on research

No statistically significant correlations were found between the amount of time spent on social media and opinions about employees with disabilities. The analysis did not reveal any correlation between the total time spent on social media and attitudes (Table 6). However, considering the descriptive data indicating that as many as 78.7% of respondents encounter content about persons with disabilities (Table 1) and the high declarative importance of non-discrimination (Figure 1), it can be assumed that it is the quality of the message, rather than its quantity, that shapes the sensitivity of the study group. The vast majority of the group had been exposed to inclusive content, and at the same time, this group shows very high rates of willingness to cooperate (*Mdn* = 4.00 or 5.00 in Table 4), so the co-occurrence of these phenomena suggests a positive influence of the media, even if this has not been demonstrated by correlations. H3 was rejected in quantitative terms (time), but observations suggest that further research is needed on the qualitative aspect.

## Conclusions

The primary objective of this study was to analyse Generation Z's perception of diversity, particularly regarding individuals with disabilities, and to identify the resulting implications for human resource management. The results indicate how demographic variables, such as gender and place of residence, intersect with modern media consumption, shaping the professional values of the youngest cohort entering the labour market.

The empirical results confirm that women exhibit significantly more positive attitudes toward cooperation with individuals with disabilities than men, suggesting a higher level of social empathy and openness. Furthermore, the data support contact

theory, as residents of large urban centres showed a greater readiness to work in integrated teams. A conclusion directly referring to contemporary debates on “digital natives” is that the time spent on social media is not a significant predictor of inclusive attitudes. Instead, qualitative exposure to inclusive content fosters openness. This justifies the claim that for Generation Z, the substantive nature of digital consumption has a significantly greater impact than screen time alone.

This study extends existing academic knowledge focused on research into “quantitative” digital influence, proving that content quality is the decisive factor in value formation. The study also indicates that contemporary prejudices among young men are often linked to concerns about organisational productivity. This allows for a theoretical mapping of how ableism adapts to modern corporate environments.

This study has a methodological limitation in that it is not possible to verify the results obtained in a control group consisting of people who do not use the media. In the analysed demographic group, the phenomenon of complete lack of exposure to the media is marginal, which makes it practically impossible to select a representative control group. Another major limitation is the difficulty in isolating the influence of the media, due to the fact that media communication is a commonly occurring variable and not an isolated factor of influence. Under such conditions, it is difficult to clearly determine to what extent inclusive attitudes are the result of direct consumption of content and to what extent they are the result of general socialisation in the digital world. This study did not statistically analyse the direct impact of media content type on attitudes, focusing solely on exposure time. Future research should include an in-depth correlational analysis between specific content types and levels of diversity acceptance.

The author also wishes to point out the possibility of replicating the study. The study focuses exclusively on students, so the results cannot be generalised to the entire Generation Z population, including those who do not pursue higher education. The sample includes only students from Poland, so the results may reflect the specific cultural and social conditions of that country. The article describes in detail the construction of attitude indices towards people with disabilities, providing sample statements, which allows the questionnaire to be used in groups with different levels of education and from different cultural contexts. If you wish to compare the magnitude of effects in meta-analyses, you can use the test parameters indicated by the author of the study. An added value in this respect is also the fact that the structure of the study allows easy replication in order to compare Generation Z with other cohorts, which could verify whether the observed trends are unique to Generation Z.

The results obtained have a direct impact on HR practices in Polish organisations. They confirm that in order to attract and retain Generation Z talent, employers must abandon superficial declarations in favour of authentic actions:

- Findings indicating that men are more prone to performance stereotypes suggest a need for systematic anti-bias training that exposes ableism as a systemic and institutional phenomenon. Such training should be designed with the participation of individuals with disabilities to ensure authenticity and build empathy. This type of workshop can help build authenticity and allow stereotypes to be

confronted with reality. In this way, it will be possible to move from pity to a professional partnership based on recognising the competence of one's colleague.

- HR and marketing departments should use social media to tell credible stories about inclusion in their organisations. Presenting positive examples of cooperation and success has the potential to become an effective tool in combating stereotypes and attracting young, conscious employees. Organisations should publish specific case studies of the professional successes of employees with disabilities instead of general declarations of openness. As the analysis in the literature review section shows, social media are becoming a tool for young employees to verify the value of an employer, which is why the message should be transparent and ethical.
- Companies should create conditions for natural, positive contact between employees from different groups, e.g., through collaborative projects and intergenerational mentoring. Verification of the contact hypothesis in an academic environment suggests that such activities, when transferred to an organisational setting, can effectively reduce prejudice.

The conclusions indicate that diversity management should not be merely an image-building exercise, but an integral part of a business strategy aimed at attracting and retaining talent. Organisations should implement consistent diversity and organisational inclusion management policies that go beyond mere declarations, introducing transparent recruitment processes and training in diversity management.

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**AI Declaration:** Artificial intelligence was used for linguistic correction in this article.

## CZYNNIKI DECYDUJĄCE O STOSUNKU POKOLENIA Z DO INTEGRACJI OSÓB Z NIEPEŁNOSPRAWNOŚCIAMI W MIEJSCU PRACY

**Streszczenie:** Współczesne przedsiębiorstwa stoją przed wyzwaniami związanymi z zarządzaniem różnorodnością, zwłaszcza w zakresie dostosowania strategii HR do zmieniających się oczekiwań pracowników z pokolenia Z. Dorastanie w świecie nasyconym mediami cyfrowymi wpłynęło na ich podejście do inkluzywności, równości i etyki korporacyjnej. Celem niniejszego artykułu jest analiza postrzegania różnorodności przez pokolenie Z, w tym osób z niepełnosprawnościami, oraz zidentyfikowanie wyzwań, jakie stwarza to dla praktyki HR. Badanie zostało przeprowadzone na próbie 469 studentów z wykorzystaniem statystyk opisowych, testu Shapiro–Wilka, testu U Manna–Whitneya oraz korelacji Spearmana. Wyniki pokazały, że kobiety mają znacznie bardziej pozytywne nastawienie do pracy z osobami z niepełnosprawnościami niż mężczyźni, a mieszkańcy dużych miast częściej deklarują chęć pracy w zespołach z osobami z niepełnosprawnościami. Chociaż ilość czasu spędzanego w mediach społecznościowych nie była znacząca, dane opisowe sugerują, że ekspozycja na treści promujące integrację odgrywa ważniejszą rolę w kształtowaniu otwartych postaw. Wyniki badania podkreślają potrzebę wdrożenia przez organizacje spójnej polityki różnorodności, która wykracza poza zwykłe deklaracje i rzeczywiście wspiera integracyjne środowisko pracy. Badanie wypełnia lukę w literaturze, pokazując, że pokolenie Z oczekuje od pracodawców prawdziwego zaangażowania w tworzenie środowisk sprzyjających pełnemu uczestnictwu osób z niepełnosprawnościami w życiu zawodowym.

**Słowa kluczowe:** dyskryminacja, pokolenie Z, zarządzanie zasobami ludzkimi, analiza statystyczna, inkluzywność

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## **LAW AND ETHICS AS MECHANISMS OF HEALTHCARE GOVERNANCE: BETWEEN PATIENT AUTONOMY AND RESPONSIBILITY FOR PUBLIC HEALTH**

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**Abstract:** The Polish healthcare system operates under cost pressure, workforce constraints, and rising stakeholder expectations, which increases the importance of governance and decision accountability. The aim of the article is to develop, from a management perspective, an analytical framework showing how law and ethics jointly shape governance mechanisms in health care, particularly in balancing patient autonomy with responsibility for public health. The study applies a normative-institutional analysis and conceptual synthesis, complemented by mapping core principles onto key management functions: rule and process design, service prioritisation, risk and quality management, compliance control, as well as stakeholder communication. The results indicate that effective governance requires the simultaneous integration of a patient-rights perspective (transparency, equality of access, respect for autonomy) and a stewardship perspective (solidarity, prevention, and the justificatory standards for allocation decisions). The article concludes by proposing a managerial “dual responsibility” model as a basis for developing measurable governance standards that strengthen legitimacy, coherence and trust in decision-making within the healthcare system.

**Keywords:** governance, healthcare management, health law, machine learning, management ethics, patient autonomy, public health responsibility

**JEL Classification:** I11, I18, D63

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## Introduction

Healthcare systems currently operate under growing regulatory complexity, cost pressure, and rising stakeholder expectations regarding quality, safety, and equitable access. In this context, legal and ethical issues are no longer merely an external constraint; they become a managerial resource and a binding design parameter that shapes processes, standards, governance arrangements, and organizational accountability.

This is particularly visible in the fundamental values underpinning European healthcare systems, equality of access, solidarity, human dignity, patient rights, and professional ethics, which need to be translated into managerial decisions and internal control mechanisms (Wrześniewska-Wal et al., 2018). At the same time, public health ethics increasingly shifts attention from individual autonomy to responsibility for population health and the institutional consequences of decisions. From a management perspective, this implies aligning clinical and social goals with legality, transparency, and accountability, especially when decisions concern scarce resource allocation, priority setting, health programmes, or preventive interventions (Surmiak, 2020). Organizationally, accountability cannot be reduced to compliance alone; it also involves the quality of justification, learning capacity, and trust-building through consistent standards applied to patients and communities (Włodarczyk & Szetela, 2017).

Recent international research emphasizes that improved health system performance is increasingly linked to governance quality: the transparency of procedures, meaningful stakeholder participation, accountability mechanisms, and procedural fairness in financing and priority decisions (Dale et al., 2023). Evidence also suggests that transparency interventions may reduce selected systemic risks (e.g. corruption, inefficiency, and abuse), yet their sustainability depends on institutional maturity and implementation design, including measurable outcomes and enforceable accountability rules (Gholami et al., 2024). At the organizational level, particularly in hospitals, oversight structures (e.g. boards) are increasingly highlighted as mechanisms that help balance clinical and financial objectives, mitigate tensions between medical professionals and management, in addition embed multidimensional accountability (financial, clinical, and social) (Jalilvand et al., 2024). Meanwhile, reviews of governance interventions indicate that governance arrangements can affect the quality of care, but the evidence base remains fragmented and difficult to transfer across contexts, which complicates the managerial adoption of “what works” solutions (George et al., 2023).

Against this background, a key question emerges: how can the legal-ethical foundations of healthcare be operationalized into coherent managerial instruments, accountability architecture, decision rules, monitoring systems, and reporting mechanisms? The aim of this article is to propose an analytical framework that links the normative dimension (law and ethics) with the execution dimension (management), thereby supporting managers and policy-makers in designing solutions that strengthen transparency, accountability, and trust in healthcare organizations.

## Literature review

Healthcare systems operate under persistent tension between efficiency objectives (process performance, cost rationalization, clinical outcomes) and normative requirements that set binding limits for managerial decisions. In the Polish context, the starting point is the constitutional right to health protection, interpreted through the principles of human dignity, equality of access, and solidarity, which together define the “rules of the game” for healthcare organisers and managers. In management practice, this means that organisational goals and performance indicators must capture not only outputs (e.g. service volumes) but also the conditions under which services are delivered, including transparency, respect for patient rights, safety, and professional ethics, as components of service quality and organisational culture.

The development of regulations on patient rights and the corresponding duties of medical professionals and healthcare executives can be viewed as a shift in accountability from the individual to the organisational level, with direct implications for process design, internal control systems, and accountability mechanisms. In this view, compliance is not merely meeting the minimum legal requirements; it becomes a core component of organisational governance, shaping decision-making, the documentation of rationale, risk communication, and the management of adverse events. The literature also highlights the gap between formal guarantees and actual service availability, which, from a managerial perspective, directs attention to managing system constraints, including waiting lists, prioritization, resource allocation, and the patient experience as a stakeholder concern (Wrześniewska-Wal et al., 2018).

Alongside the legal perspective, scholarship on public health increasingly emphasizes an ethical shift: from the primacy of individual autonomy toward responsibility, understood not only as retrospective accountability for outcomes but also as a prospective obligation to prevent foreseeable harm at the population level (Surmiak, 2020). Because public health action often affects individual choices, the justification of interventions requires proportionality, reliable information, and social legitimacy (Holland, 2022; Bernstein et al., 2024; Surmiak, 2020). This orientation has managerial consequences: leaders do not simply “implement a programme” but manage acceptability, trust and public compliance, which demands communication capabilities, stakeholder analysis and systematic risk management (Venkatapuram, Broadbent, 2023; Surmiak, 2020). In the context of scarce resources, procedural justice becomes particularly important. The concept of “accountability for reasonableness” stresses that what matters is not only what is decided but how it is justified: the publicity of reasons, opportunities for appeal and revision, as well as institutional safeguards against arbitrariness (Dastidar, 2020).

In public health management and healthcare delivery, a procedural approach strengthens governance standards by supporting predictability and trust in prioritisation rules (e.g. access to services or crisis response), while also enabling organisational learning through decision audits and policy adjustments (Dastidar, 2020; Venkatapuram, Broadbent, 2023). Recent research published after 2023 extends

this discussion by focusing on instruments and structures of accountable governance in healthcare organisations. A scoping review by Jalilvand et al. identifies four core areas for strengthening accountability in hospitals: inclusive governance, commitment to accountability, accountability planning, and managerial autonomy (Jalilvand et al., 2024). This aligns with the argument that accountability in healthcare has clinical, financial, and socio-political dimensions and therefore requires the simultaneous design of oversight structures, quality systems, and stakeholder involvement mechanisms (Jalilvand et al., 2024). Transparency is treated in this logic as a prerequisite for accountability and for limiting abuse, but also as a lever for improving system outcomes. Gholami et al. show that transparency interventions in low- and middle-income countries are often introduced as responses to corruption and inefficiency and may yield positive yet uneven effects; a major challenge is the sustainability of results and the lack of standardised approaches to measuring impact (Gholami et al., 2024). From a management perspective, this implies that transparency should be designed as a system (data, processes, responsibilities and monitoring) rather than a one-off informational initiative (Gholami et al., 2024).

Another dimension of governance is social accountability, understood as a set of mechanisms enabling communities to influence service quality and access. A scoping review by Nejatian et al. organised social accountability tools and showed that effectiveness depends on multi-component interventions and fit with the institutional context; it also pointed to typical implementation barriers such as limited resources, insufficient political support and weak enforcement of agreed actions (Nejatian et al., 2024). From a managerial standpoint, this highlights the need to design participation so that it has a genuine pathway of influence over decisions (e.g. priorities, quality standards and investments) rather than a purely symbolic consultative role (Nejatian et al., 2024). Data-driven governance is also gaining prominence, particularly in mixed systems where private providers play a significant role. Faddoul et al. argue that routine data from private providers can support key governance functions (planning, quality oversight, financing, workforce and facility monitoring), but its use remains limited, signalling gaps in institutional capabilities and in standardisation and integration mechanisms (Faddoul et al., 2024). From a management perspective, this underscores the importance of interoperability, data quality policies and accountability for the information lifecycle as part of the decision-making infrastructure (Faddoul et al., 2024). Recent reviews also apply these themes to primary healthcare and UHC objectives, framing governance as a set of functions: policy and plan development, the use of regulatory instruments, generation of “intelligence” (monitoring, benchmarking and evidence-based decision-making), assurance of accountability, in addition to intersectoral coordination and collaboration (Khatri et al., 2025). This strengthens the managerial interpretation of legal and ethical norms: values (fairness, equality of access, protection of patient rights) must be operationalised by means of processes, roles, metrics and oversight mechanisms; otherwise, they remain declarations without practical effect (Khatri et al., 2025; Wrześniewska-Wal et al., 2018). There is also increasing recognition of leadership competencies at the organisational level

as a condition for effective governance. Mondal et al. identify competencies crucial for public health system governance, including systems thinking, policy development and implementation, partnership working, equity and fairness orientation, organisational learning, oversight, the stewardship of resources, as well as the understanding of legal frameworks and organisational ethics (Mondal et al., 2025). From a management perspective, this supports treating law and ethics not as external constraints but as organisational capabilities that can be developed, assessed and embedded within management systems (Mondal et al., 2025). Overall, the literature points to a growing need to integrate three domains: (1) legal norms and patient rights as sources of requirements for healthcare organisers, (2) public health ethics, which provides criteria for justifying interventions and managing population risks, and (3) governance instruments (accountability, transparency, participation and data governance) that enable the operationalisation of values in managerial practice (Jalilvand et al., 2024; Gholami et al., 2024; Nejatian et al., 2024; Wrześniewska-Wal et al., 2018). At the same time, a gap is visible in the limited translation of values and standards into coherent analytical frameworks for managers, frameworks that link the normative level (what is protected) with governance mechanisms (how it is implemented) and outcomes (how to measure effects and unintended consequences). This justifies further work on management models that integrate legality, ethics, and governance into a single architecture of decisions and accountability in healthcare and public health.

## **Research methodology**

The study had a quantitative design and was conducted using the diagnostic survey method. The research instrument was an original questionnaire developed based on a review of the relevant literature, as well as applicable legal regulations and organizational standards governing the functioning of the healthcare system. The questionnaire consisted of a substantive section containing questions related to the analysed research dimensions, as well as a demographic section enabling socio-professional characterisation of the respondents. The study was carried out between March and May 2024. The survey was anonymous, which was intended to increase the sincerity of responses and to limit the influence of social desirability bias. The respondents were informed about the purpose of the study, the voluntary nature of participation, and the possibility of withdrawing at any stage of the research. Participation in the study was not associated with any remuneration or formal consequences. The sampling strategy was purposive. The questionnaires were distributed in electronic form via a dedicated online survey platform, which enabled access to a broad group of respondents and efficient data collection. After the data collection process was completed, the questionnaires were verified for completeness. The collected empirical material was then subjected to analysis using descriptive statistical methods and inferential statistics, in accordance with the stated research objectives and hypotheses.

The study included 210 respondents, whose socio-professional characteristics were described based on the data collected in the demographic section of the questionnaire. In terms of gender structure, women predominated, accounting for 61.0% of the study sample (128 individuals), while men represented 39.0% (82 individuals). This indicates a clear predominance of women among the respondents. The analysis of the age structure shows that the largest group consisted of respondents aged 40-49 years, comprising 64 individuals (30.5%), which suggests a predominance of middle-aged participants with substantial professional experience. The next most numerous group included respondents aged 30-39 years, with 56 individuals (26.7%). Respondents aged 50-59 years accounted for 42 individuals (20.0%), while the youngest group, aged 18-29 years, consisted of 34 individuals (16.2%). The least numerous group comprised respondents aged 60 years and above, totalling 14 individuals (6.6%). With regard to educational attainment, the study sample was dominated by individuals with a master's degree, who accounted for 41.0% of the respondents (86 individuals). A bachelor's or engineering degree was reported by 62 respondents (29.5%), while 48 individuals (22.9%) declared secondary education. The smallest group consisted of respondents with doctoral or higher education, comprising 14 individuals (6.6%). The analysis of occupational status revealed that the largest proportion of the sample consisted of healthcare professionals, totalling 96 individuals (45.7%). The second largest group was managerial and administrative staff, comprising 42 individuals (20.0%). Academic and teaching staff accounted for 28 respondents (13.3%), while individuals representing other professions totalled 44 respondents (21.0%), indicating a diverse occupational profile of the study participants. In terms of length of professional experience, the most numerous group included respondents with 11-20 years of work experience, comprising 66 individuals (31.4%). Participants with more than

20 years of experience accounted for 54 individuals (25.7%), while 52 respondents (24.8%) reported 6-10 years of professional experience. The least numerous group consisted of individuals with up to 5 years of work experience, totalling 38 respondents (18.1%), which confirms the predominance of participants with well-established professional experience. Considering the type of institution in which the respondents were employed, the majority were affiliated with public institutions, totalling 138 individuals (65.7%). Private institutions employed 56 respondents (26.7%), while 16 individuals (7.6%) indicated another or mixed type of institution. This structure reflects the dominant role of the public sector within the studied population. The primary aim of this study was to identify and assess the key determinants influencing the level of legitimacy and stakeholder trust in managerial decision-making within the healthcare system. The research sought to examine how legal-operational, ethical-social, and managerial-resource dimensions jointly shape stakeholders' acceptance and perceived credibility of decisions made under conditions of limited resources. A further objective was to evaluate the predictive power of these determinants using a nonlinear machine learning approach, specifically Support Vector Regression (SVR), in order to capture complex

and potentially nonlinear relationships between decision-making processes and perceived legitimacy.

The main research question guiding this study was formulated as follows:

To what extent, and through which dimensions, do legal-operational, ethical-social, and managerial-resource factors influence the level of legitimacy and stakeholder trust in managerial decisions in the healthcare system?

## **Independent variables**

Legal and operational dimension (compliance and processes):

1. Degree of compliance fulfilment – the level of implementation of patient rights protection procedures and legal standards.
2. Transparency of allocation procedures – clarity of the criteria applied in establishing waiting lists and prioritizing healthcare services.
3. Quality of justification documentation (accountability for reasonableness) – the standard of substantive justification of decisions in situations of resource constraints.

Ethical and social dimension (stewardship):

1. Level of patient autonomy protection – the extent to which patient subjectivity and rights are respected in medical processes.
2. Effectiveness of preventive and prophylactic actions – fulfilment of responsibility for population health (stewardship perspective).
3. Scope of stakeholder participation – the real influence of patients and communities on decision-making processes and quality standards.

Managerial and resource dimension:

1. Level of maturity of supervisory structures (Supervisory Boards) – effectiveness of mechanisms balancing clinical and financial objectives.
2. Quality of data governance – the extent to which reliable data are used in the planning and monitoring of healthcare services.
3. Leadership competencies in ethics and systems thinking – the level of managers' preparedness to understand legal and ethical frameworks.
4. Effectiveness of risk and quality control mechanisms – the efficiency of systems monitoring safety and adverse events.

## **Results**

To provide a comprehensive and methodologically robust answer to the research question, a complementary analytical strategy was adopted that combines Spearman's rank correlation analysis with Support Vector Regression (SVR). Spearman's correlation was employed to identify and assess the direction and strength of monotonic relationships between the independent variables and the level of legitimacy and stakeholder trust in managerial decisions. This nonparametric method is particularly appropriate for social and organizational data as it does not require assumptions of normality and is robust to outliers and ordinal measurement scales.

Building on the insights gained from the correlation analysis, Support Vector Regression was applied to model the combined and potentially non-linear effects of the independent variables on the dependent construct. The SVR approach enables the estimation of complex functional relationships and provides strong predictive performance even in the presence of multicollinearity and high-dimensional feature spaces. By integrating correlation analysis with SVR modelling, the study is able not only to identify which factors are associated with legitimacy and trust, but also to determine their relative importance and predictive contribution within an integrated model. Consequently, the use of these methods allows a direct and empirically grounded response to the research question by linking theoretical constructs to observed patterns in the data and by quantifying their joint influence on managerial decision legitimacy in the healthcare system.

The results of the Spearman's rank correlation (Table 1) analysis reveal a consistent pattern of positive relationships between all the examined independent variables and the level of legitimacy and stakeholder trust in managerial decisions within the healthcare system. The strength of these relationships varies across dimensions, providing important insight into the relative importance of legal-operational, ethical-social, and managerial-resource factors.

**Table 1. Spearman's rank correlation matrix between independent variables and dependent variable "Level of legitimization and stakeholder trust in managerial decisions"**

No.	Independent variable	r (Z1)	Strength of correlation	Theoretical justification
1	Degree of compliance with regulatory requirements (compliance)	0.62	strong	Compliance with law and patient rights constitutes a fundamental condition for institutional legitimacy.
2	Transparency of allocation procedures	0.68	strong	Clear decision-making criteria increase perceived fairness and social acceptance.
3	Quality of documenting justifications (A4R)	0.72	strong	Providing decision justifications is a key mechanism for building procedural trust.
4	Level of protection of patient autonomy	0.55	moderate	Respect for patient agency strengthens the moral legitimacy of decisions.
5	Effectiveness of preventive and prophylactic measures	0.44	moderate	Population-level health outcomes enhance trust indirectly over the long term.
6	Scope of stakeholder participation	0.70	strong	Co-participation in decision-making increases social

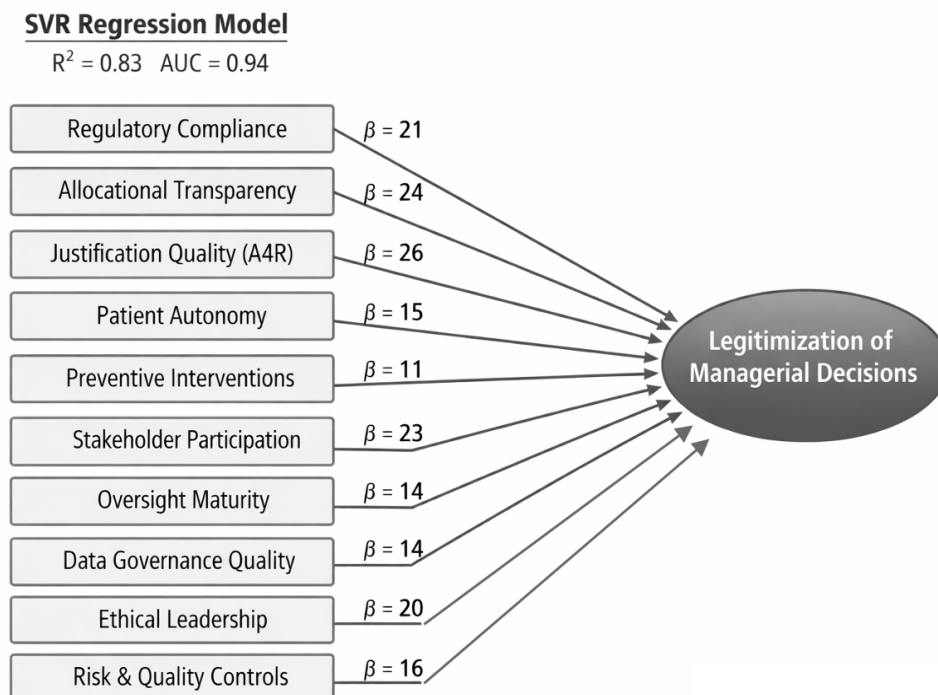
No.	Independent variable	r (Z1)	Strength of correlation	Theoretical justification
				acceptance and sustainability of decisions.
7	Maturity level of oversight structures	0.58	moderate	Oversight ensures coherence and a balance of interests but is less visible to patients.
8	Quality of data governance	0.50	moderate	Data support decision rationality, yet their impact on trust is indirect.
9	Leadership competencies in ethics and systems thinking	0.65	strong	Ethical leadership is directly associated with the credibility of decisions.
10	Effectiveness of risk and quality control mechanisms	0.57	moderate	Safety and quality are prerequisites for maintaining trust, although often reactive in nature.

Source: Own elaboration

The results indicate that legitimacy and trust in healthcare decision-making are most strongly associated with procedural factors. The highest correlations are observed for the quality of documented justifications ( $r = 0.72$ ), stakeholder participation ( $r = 0.70$ ), transparency of allocation procedures ( $r = 0.68$ ), ethical leadership competencies ( $r = 0.65$ ), and compliance with legal and regulatory requirements ( $r = 0.62$ ). These findings confirm the central role of procedural justice, transparency, and reason-giving in building institutional legitimacy. Moderate correlations are identified for supervisory and oversight structures ( $r = 0.58$ ), risk management and quality control ( $r = 0.57$ ), protection of patient autonomy ( $r = 0.55$ ), data governance quality ( $r = 0.50$ ), and the effectiveness of preventive and public health actions ( $r = 0.44$ ). These mechanisms contribute to trust more indirectly, reinforcing credibility and coherence over time rather than shaping immediate perceptions of legitimacy. Overall, the correlation analysis demonstrates that transparency, justification, participation, and ethically grounded leadership are the primary drivers of legitimacy and stakeholder trust, while operational and preventive mechanisms play a supportive role. These findings provide a robust empirical basis for subsequent multivariate modelling using the SVR regression approach Table 2.

SVR Model parameters:

- Algorithm: SVR (RBF kernel)
- Feature standardization: yes
- Number of observations: 300
- Number of independent variables: 10
- Data split: 70% training / 30% testing.



**Figure 1. SVR Regression Model**

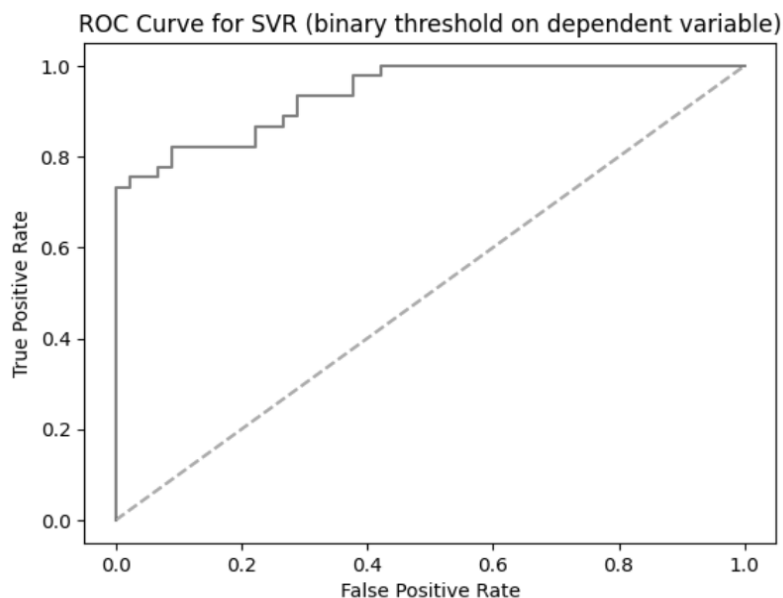
Source: Own elaboration

**Table 2. Model coefficients**

Metric	Value	Interpretation
RMSE	0.763	Low prediction error given a moderate variance of the dependent variable
MAE	0.623	Moderate mean absolute error
$R^2$	0.834	Very good model fit (83% of the variance explained)

Source: Own elaboration

The regression model based on Support Vector Machines (SVM) demonstrated high predictive performance ( $R^2 = 0.83$ ) (Table 2). In addition, to assess the model's ability to discriminate between the levels of the legitimization of managerial decisions, ROC analysis was applied to the discretized dependent variable, yielding an AUC value of 0.94, which indicates very good discriminative validity of the model (Figure 2).



**Figure 2. Matrix ROC**

Source: Own elaboration

**Table 3. Model coefficients**

No.	Exogenous variable	Standardized $\beta$	Effect direction	Relative contribution	Interpretation
1	Degree of regulatory compliance (compliance)	0.21	positive	high	Higher regulatory compliance significantly increases the perceived legitimacy of managerial decisions.
2	Transparency of allocation procedures	0.24	positive	very high	The strongest predictor – transparency of decision criteria directly enhances stakeholder trust.
3	Quality of decision justification documentation (A4R)	0.26	positive	very high	A key procedural determinant – systematic justification of decisions substantially reduces the trust deficit.

No.	Exogenous variable	Standardized $\beta$	Effect direction	Relative contribution	Interpretation
4	Protection level of patient autonomy	0.15	positive	moderate	Patient autonomy contributes to moral legitimacy, although its effect is weaker than that of procedural determinants.
5	Effectiveness of preventive and prophylactic interventions	0.11	positive	moderate	An indirect and long-term effect – population-level outcomes translate into trust over time.
6	Stakeholder participation intensity	0.23	positive	high	Participatory decision-making significantly increases the acceptance and sustainability of system-level decisions.
7	Maturity of oversight and governance structures	0.14	positive	moderate	Oversight mechanisms enhance decision stability, though their effect is less directly observable.
8	Data governance quality	0.12	positive	moderate	Data-driven rationality improves decision credibility but does not independently generate trust.
9	Ethical and systems leadership competencies	0.20	positive	high	Ethical and system-oriented leadership is strongly associated with perceived decision credibility.
10	Effectiveness of risk and quality control mechanisms	0.16	positive	moderate	Ensuring safety and quality is necessary for trust maintenance, primarily through reactive mechanisms.

Source: Own elaboration

The results indicate that legitimacy and stakeholder trust in healthcare managerial decisions are primarily driven by procedural transparency and participation. The Support Vector Regression model with an RBF kernel demonstrated very strong predictive performance ( $R^2 = 0.834$ ), explaining over 83% of the variance, with low prediction errors (RMSE = 0.763; MAE = 0.623), confirming model robustness. The correlation analysis showed positive relationships for all the predictors, with the strongest effects observed for documented decision justifications, the transparency of allocation procedures, stakeholder participation, and compliance with legal and regulatory requirements. These findings suggest that trust under conditions of resource scarcity is built mainly through clear criteria, justification mechanisms, and inclusive decision-making. The SVR results further confirmed the dominant role of procedural and deliberative factors, which outweighed operational and quality-control mechanisms. Ethical and system-level leadership also showed a substantial positive influence, while patient autonomy, preventive actions, data governance, and risk control exhibited moderate, more indirect effects. Overall, the findings highlight transparent, well-justified, and participatory processes as the core determinants of legitimacy and trust in healthcare governance.

## Conclusions

The article's perspective demonstrates that law and ethics should not be treated merely as "external" constraints on healthcare management, but as the core of a governance architecture; they set the boundaries of permissible decisions while simultaneously providing criteria for justifying, communicating, and holding those decisions to account. In practice, this means the constant need to reconcile two orders of responsibility, toward the individual (autonomy, patients' rights, equality of treatment) and toward the community (solidarity, prevention, protection of population health). Understood in this way, "dual responsibility" is not only a normative dilemma but also a managerial task that requires tools: clear rules for prioritization, standards for justification, mechanisms for stakeholder involvement, and measurable procedures for oversight and quality control. The empirical analyses support the claim that enduring trust in managerial decisions is built primarily through process quality, transparency, the ability to understand the logic of decisions, as well as genuine participation and only secondarily through "hard" operational instruments. This points to the need to shift the emphasis from formal compliance alone to mature legitimacy management, one that can integrate legal requirements, ethical standards, and organizational efficiency into a coherent system of rules, roles, and accountability. From a managerial standpoint, this entails, among other things, designing allocation procedures as auditable processes (with clear documentation of premises), strengthening the ethical and systems competencies of leadership, and developing solutions that enable stakeholders to shape quality standards and priorities, not merely in a consultative way, but in a manner that is meaningfully connected to decision-making.

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**Ethics Declaration:** The authors declare that ethical clearance was not required for this research as it was based on an anonymous diagnostic survey among professionals and did not involve clinical interventions or sensitive medical data.

**AI Declaration:** The authors confirm that no AI tools were used in the creation of this paper.

## **PRAWO I ETYKA JAKO MECHANIZMY ŁADU ZARZĄDCZEGO W OCHRONIE ZDROWIA: MIĘDZY AUTONOMIĄ PACJENTA A ODPOWIEDZIALNOŚCIĄ ZA ZDROWIE PUBLICZNE**

**Streszczenie:** Polski system ochrony zdrowia funkcjonuje w warunkach presji kosztowej, ograniczeń kadrowych oraz rosnących oczekiwań interesariuszy, co zwiększa znaczenie ładu zarządczego i rozliczalności decyzji. Celem artykułu jest wypracowanie, w perspektywie zarządzania, ram analitycznych pokazujących, jak prawo i etyka współtworzą mechanizmy governance w ochronie zdrowia, szczególnie w obszarze równoważenia autonomii pacjenta z odpowiedzialnością za zdrowie publiczne. Zastosowano analizę normatywno-instytucjonalną oraz syntezę koncepcyjną, uzupełnioną mapowaniem zasad na funkcje zarządcze: projektowanie reguł działania, priorytetyzację świadczeń, zarządzanie ryzykiem i jakością, kontrolę zgodności (compliance) oraz komunikację z interesariuszami. Wyniki wskazują, że skuteczny ład zarządczy wymaga jednoczesnego uwzględniania perspektywy praw pacjenta (transparentność, równość dostępu, poszanowanie autonomii) i perspektywy stewardingu (solidarność, prewencja, uzasadnialność decyzji alokacyjnych). Artykuł kończy propozycja menedżerskiego modelu „podwójnej odpowiedzialności” jako podstawy budowy mierzalnych standardów zarządzania, które wzmacniają legitymizację, spójność i zaufanie do decyzji w systemie ochrony zdrowia.

**Słowa kluczowe:** ład zarządczy, zarządzanie w ochronie zdrowia, prawo medyczne, uczenie maszynowe, etyka w zarządzaniu, autonomia pacjenta, odpowiedzialność za zdrowie publiczne

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## MODERN PRIMARY SCHOOL MANAGEMENT USING IT

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**Abstract:** The article addresses the issue of modern management in primary schools through the use of information technology tools. It highlights the role of digital solutions in organizational, administrative, and pedagogical aspects of school functioning. The analysis is based on a survey conducted among teachers from the OSEhero 2024/2025 community, which examined the extent of ICT use in teaching, administration, and communication. The findings identify the most commonly applied tools, their areas of use, as well as challenges related to teachers' digital competences and training needs. The study indicates that the implementation of ICT significantly supports effective school management but also requires continuous professional development and adequate technological infrastructure.


**Keywords:** digital tools, ICT in education, school management


**JEL Classification:** I21, I28, M15

### Introduction

Information technology tools are widely used in everyday life. Primary schools are faced with the need to implement modern solutions in school management. Social expectations, legislative changes, and the growing importance of digital skills are forcing the management of educational institutions to continuously improve their working methods. Effective school management covers organisational, administrative, and pedagogical issues, combined with the use of available financial, human, and technological resources.

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The aim of this article is to present IT tools that support the daily functioning of schools. In particular, it focuses on three main areas: school financing, the role and tasks of the school principal, and IT systems and programmes used in educational institutions. Based on the results of a survey conducted among teachers belonging to the OSEhero community, the authors analysed the use of ICT in teaching, administration and communication. The data obtained allows us to identify the most commonly used tools, indicate the areas of use of the tools by teachers and draw attention to the problems and training needs of the teaching staff.

The article is a review and research paper that aims to answer the question of how computerisation can support modern school management in the Polish education system.

### **School funding characteristics**

State involvement in financing education is common in many countries. It is based on the belief that the right to education is one of the fundamental human rights, and not all citizens are able to cover the costs of schooling (Korolewska, 2010). The financing of education in Poland is regulated by a number of legal acts, such as the Constitution of the Republic of Poland, the Act on the Education System, the Act on the Revenues of Local Government Units, and the Act on Public Finance (Adamowicz, 2017).

The most important public sources of financing for schools in Poland include:

- the education part of the general subsidy, which is transferred from the state budget to local government units;
- targeted subsidies from the state budget, which are transferred to local government units;
- own funds of local government units;
- European funds;
- other public funds.

The above-mentioned public funds are not only allocated to public institutions, but also used as subsidies to finance non-public childcare institutions, kindergartens and schools (Korolewska, 2010). Education can also be financed from non-budgetary sources such as foundations, associations, or households (Adamowicz, 2017). It can be noted that the majority of funds are organised by local government units. This is because gminas (English: commune, municipality) are obliged to run primary schools and kindergartens, while powiats (English: district) are obliged to run secondary schools, educational centres and special schools (Najwyższa Izba Kontroli, 2022b).

### **The headteacher and his daily tasks in the school management process**

School management is a complex process that requires organisational, pedagogical, and interpersonal skills. To become a headteacher in a public school, one must have a professional promotion to the level of a tenured or certified teacher (Journal

of Laws of 2023, items 2578, 2025). In addition, candidates must meet several formal requirements described in the regulation concerning the requirements that a person holding the position of headteacher should meet (Trochimiuk, 2023).

The school principal is at the head of the school's organisational structure and is responsible for its day-to-day operations. His or her duties cover a wide range of activities, from administrative matters and organising teaching work to cooperating with parents, governing bodies, and supervisory authorities. The daily work of a school principal requires flexibility, quick decision-making skills, and team management abilities (Norkowska, 2024). The tasks of a school principal in the field of educational supervision are specified in detail in the Regulation of the Minister of National Education of 27 December 2023 (Journal of Laws 2024, item 15, 2024).

Planning and supervising school activities involves setting educational, teaching, and organisational goals that facilitate everyday life at school. Supervision of the implementation of these goals ensures quality control of teaching, as well as monitoring the proper expenditure of funds and personnel management. Regular evaluation of teaching activities and adjustment of measures allow for continuous improvement of the institution's work. At this stage, cooperation between the headteacher and the supervisory body is essential, both in administrative and pedagogical terms. In schools, pedagogical supervision is carried out by the Board of Education, and in administrative terms by the municipal or city office (Janta, 2024).

The school principal is responsible for ensuring compliance with the law, regulations, and school statutes and documenting the school's activities. He or she prepares reports for governing bodies such as the school superintendent's office, local authorities and the teaching council (Ostrach, 2008).

Selected administrative and organisational tasks are presented below:

- Planning and supervising school activities involves setting educational, teaching, and organisational goals that facilitate everyday life at school. Supervision of the implementation of these goals ensures quality control of teaching, as well as monitoring the proper expenditure of funds and personnel management. Regular evaluation of teaching activities and adjustment of measures allow for continuous improvement of the institution's work. At this stage, cooperation between the headteacher and the supervisory body is essential, both in administrative and pedagogical terms. In schools, pedagogical supervision is carried out by the Board of Education, and in administrative terms by the municipal or city office (Janta, 2024).
- Work schedule planning – creating a schedule for teachers and administrative staff, lesson schedules for individual classes, coordinating teachers' plans, and classroom availability.
- Budget management is one of the key elements in ensuring the proper functioning of an educational institution. It involves planning, controlling, and spending funds in such a way as to ensure that the objectives set out in the financial plan are achieved. Regardless of the amount of educational needs and subsidies allocated from the local government budget, which is the main source of school funding and is distributed on the basis of adopted assumptions (Ministerstwo

Edukacji, 2024). The school may apply for EU funds, its own income, such as rental income, and donations, including computer equipment.

- Supervision of teachers – responsibility for organising teachers' work, including assigning teaching hours, arranging substitutes, evaluating teachers' work, organising professional training, and resolving day-to-day issues with staff.
- Communication with teachers – organising staff meetings, conducting individual discussions with teachers on educational and teaching issues.
- Communication with parents – organising meetings with parents, consultations, open days, and monitoring cooperation between teachers and parents.
- Assessment of teaching quality – monitoring the quality of teachers' work by creating a lesson observation plan and monitoring student progress. Supporting the professional development of teachers, assessing the implementation of teaching programmes.
- Fundraising – raising additional funds for the development of the school, e.g., from EU grants, collections, and cooperation with foundations.
- Organisational culture – ensuring a positive atmosphere at school, motivating employees to work effectively, assigning employees to various types of academies commemorating important historical events, or promoting safety-related activities. In addition, assigning teachers to look after classrooms, computer labs, or chemistry labs.
- Resolving conflicts in difficult situations, such as conflicts between teachers and parents or students, the headteacher acts as a mediator.
- Cooperation with the local community – involving the school in the life of the local community, establishing cooperation with external institutions, organisations, companies, or local authorities.

Nowadays, it is difficult to imagine managing a school without the use of IT tools. The level of computerisation in education depends on many aspects, including legal, economic, technological, pedagogical, competence, and ethical aspects.

### **Tools supporting school management work**

Schools are increasingly turning to modern technological solutions that support them in their daily tasks. These tools streamline the management of educational institutions, from planning expenses, creating class schedules and substitutions, maintaining electronic records, to facilitating contact with parents, teachers, and students (Kinal, 2025).

The basic IT tool that streamlines work at school is the electronic register. One of them, Vulcan, is a solution often chosen by local government units to manage the entire school network (Więśław, 2018). What makes this system stand out is its integration with other Vulcan tools, such as modules for human resources and payroll, finance, student recruitment, organisational sheets and library collection management.

Purchasing Vulcan's integrated system or packages allows schools to systematically expand their functionality with specialised school management modules, depending on their current needs.

The most popular modules are presented below:

- Organisational sheet – a tool that enables the preparation and management of a school's organisational sheet, an important document defining the organisational structure of the institution for a given school year. In addition, it allows for the preparation of reports for the governing body and the pedagogical supervision authority (Vulcan, 2025).
- The finance module is a tool that enables schools to create budget plans and track school expenditure and income, which helps in the effective management of public finances. This makes it easy to monitor the use of funds, ensuring that they are in line with the plan and identifying any deviations. In addition, it minimises the time needed to prepare budget and financial statements and reports (Czaja et al., 2024).
- Salaries – a tool that helps determine the remuneration of school employees, taking into account factors such as salary components, allowances, deductions, holidays, and other variables related to remuneration. The programme is widely used in school administration, covering tasks such as determining the salaries of teachers and administrative staff and generating reports and documents related to remuneration.
- Human Resources – a tool that supports school administration in managing employees, enabling, among other things, contract management and task delegation. The programme provides comprehensive support for documents related to employee recruitment, such as employment contracts, annexes, employment certificates, and holiday requests. The programme enables accurate recording of working time for both teachers and administrative staff.
- Inventory – a programme used to manage and control the resources owned by the school. It can cover a variety of assets, such as computer equipment, books, furniture, teaching aids, and other resources.
- Optivium + students – the tool is available online under the name UONET+ and consists of administration, secretarial, register, and messaging modules. It enables the management and tracking of student data as part of the educational process. It is a central tool that collects all necessary information about students and enables their ongoing monitoring. It includes a range of functions that support administration in the areas of student records, grades, attendance, and communication with parents.
- E-register – a tool that enables the management of student documentation, including their grades and attendance. It also contains information about curricula for individual subjects, material schedules, data about teachers teaching in a given class, trips, and changes to the timetable. This module also enables communication between administrative staff, teachers, students, and their parents. It is a solution that facilitates the daily work of the school by providing access to data in electronic form and enabling the automatic generation of reports and

documents. One of the important features of the e-register that is useful for everyone is the schedule of tests and exams. This eliminates the possibility of having too many tests on a given day or week, which is contrary to the school's statutes. From the e-register, teachers can print school certificates. The e-register is also available on mobile phones as an app for both students and parents.

- Lesson plan – a tool that allows you to create lesson plans for your school. It allows you to easily assign teachers to subjects and classes and plan specific lesson times. It also allows the management of classroom availability and the assignment of appropriate classrooms to specific lessons, taking into account equipment requirements and class size.
- Substitutions – a tool that enables the headteacher or deputy headteacher to organise and monitor lesson substitutions. This is a very important feature, especially in the event of unforeseen circumstances, such as teacher illness or other unexpected situations that require a quick response and flexibility in organising school work.
- MOL NET+ – a tool that enables library resource management, supporting libraries in organising their work, including collection management, student services and the provision of library materials.

The use of IT systems brings many benefits to schools, such as increased administrative efficiency through budget planning and record keeping, better work organisation, improved communication processes and more effective personalisation of teaching. At the same time, implementing this system comes with some challenges, such as the need for training, ensuring adequate infrastructure, and keeping data safe. Still, the benefits of using the system, especially when it comes to developing e-learning and modern school management, make it a valuable tool in the Polish education system.

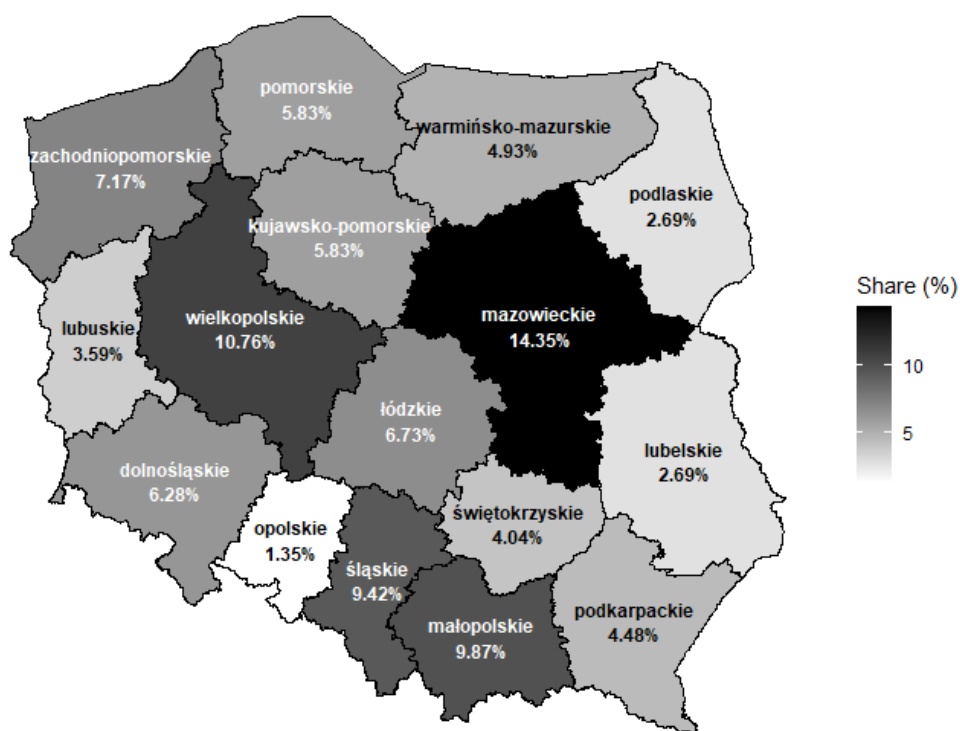
In addition to systems operating within schools, there are also nationwide systems that support the work of headteachers, teachers, and administrative staff.

The Education Information System (SIO) is part of the National Education Data System, which aims to collect and process data on the education system (Kuźniak-Stankowska, 2019). It is a tool that supports public administration, schools and other educational institutions in managing information about students, teachers, and educational institutions. The aim of the system is to integrate educational data at national, regional, and local levels. The objectives of the system include analysing the use of public funds allocated to finance educational tasks, determining the distribution of the educational part of the general subsidy, and collecting statistical data on institutions, teachers, and teaching equipment used.

Education Information System – Education Exams (SIO EO) – a system for collecting, processing, and storing data on exams conducted in the Polish education system. SIO EO covers exams such as the eighth-grade exam, the matura exam, and vocational exams (Pater, 2025).

## Research methodology

The survey was conducted among teachers belonging to the OSEhero group, 2024/2025 edition, which brings together educators from all over Poland. The group consisted of 569 people. At the turn of February and March 2025, a total of 223 questionnaires were collected. There were 22 questions in the questionnaire. All completed questionnaires were included in the study. The main objective of the study was to determine what tools educators currently use in their work, what difficulties they encounter when using these tools, whether they see the benefits of using IT tools in education, and how they assess the Internet at school, as most tools cannot be used without the Internet. Figure 1 shows the percentage share of respondents in individual voivodeships.



**Figure 1. Percentage of surveyed teachers by voivodeship**

Source: Own study using the R environment

There are differences between Polish voivodeships in terms of the number of respondents. Most respondents came from the mazowieckie (14.4%), wielkopolskie (10.8%) and małopolskie (9.9%) voivodeships. The next largest groups were from the zachodniopomorskie (7.2%) and dolnośląskie voivodeships (6.3%). The smallest number of respondents came from the opolskie (1.4%), lubelskie and podlaskie voivodeships (2.7%) (Figure 1).

**Table 1. Frequency of using IT tools in teachers' work**

Frequency leve	Share %
Every day	89.69
Several times a week	8.07
Once a week	1.79
Rarely	0.45
Never	0.00

Source: Own study

Based on the collected data, it can be concluded that most teachers use IT tools every day (89.7%) or several times a week (8.1%) (Table 1).

**Table 2. Additional training for teachers in the field of information technology**

Types of training	Share %
Training in network security	42.60
Training in troubleshooting computer and Internet problems	26.91
Workshops on organising online classes	16.91
Training in the use of office software, e.g. Word, Excel, PowerPoint	13.45
Training in the use of the e-register	8.52

Source: Own study

Based on the collected data, it can be concluded that teachers have diverse training needs. The majority of respondents indicated an interest in the topic of online safety – as many as 42.60% of respondents. This high result may indicate a growing awareness of digital threats and the need to improve skills in the field of data protection and safe use of the Internet. The teachers surveyed pointed to training in solving computer and Internet problems (26.91% of respondents). This may indicate a need for practical skills related to operating devices and solving everyday technical difficulties (Table 3).

**Table 3. Technological difficulties encountered in the work of teachers**

Types of technological problems	Share %
Internet problems	42.60
Lack of appropriate equipment	41.26
Lack of time to learn new tools	30.94
Lack of technical support	26.46
Difficulties in using software	4.04

Source: Own study

The respondents indicated that the greatest difficulties in working with IT tools concerned mainly technical aspects, e.g., problems with the Internet (42.60%) and the lack of appropriate equipment (41.26%), organisational problems related to the lack of time to learn new tools (30.94%), and the lack of systematic technical support (26.46%). By contrast, only a small proportion of teachers reported difficulties with the software used by the school (4.04%). In addition, teachers were asked about their attitudes towards the use of IT tools in education (Table 4).

**Table 4. Percentage of teachers who expressed a specific opinion**

<b>Do you think that information technologies and tools should be used more often in education?</b>	<b>Share %</b>
I strongly agree	41.26
I rather agree	35.43
I have no opinion	12.56
I rather disagree	8.97
I strongly disagree	1.79

Source: Own study

The majority of respondents (76.69%) believe that information technologies and tools should be used more often in education (answers “I rather agree” and “I strongly agree”). The opposite opinion was held by 10.76% of respondents (answers “I rather disagree” and “I strongly disagree”). This distribution of answers may indicate the growing teachers’ interest in modern teaching methods, as well as their awareness of changes in students’ educational needs. Respondents were also asked about the areas in which IT tools are currently used in teaching (Table 5).

**Table 5. Areas of use of IT tools in teachers' work**

<b>In which areas of your work do you most often use IT tools?</b>	<b>Share %</b>
Preparation of educational materials	93.72
Managing student grades and progress	79.82
Communicating with students	39.91
Collaborating with other teachers	36.77
Conducting online lessons	14.35

Source: Own study

The teachers surveyed indicated that they use IT tools primarily to prepare educational materials used in class (93.72% of teachers) and for statutory tasks, i.e., filling in electronic documentation in the form of an e-register. 79.82% of teachers use IT systems to assign topics, check student attendance, add grades, etc. Another important area of use of tools in the teacher's work is communication with students (39.91%).

**Table 6. Use of telecommunications tools for communication in the work of teachers**

	e-register	Whatsapp, messenger	e-mail	SMS	by telephone
Parents	88.34%	4.04%	0.45%	0.90%	6.28%
Students	75.34%	16.14%	5.38%	0.90%	2.24%
Other teachers	37.67%	26.46%	8.52%	8.97%	18.39%
Administrative staff	32.29%	6.28%	23.32%	6.28%	31.84%

Source: Own study

Both the form teacher and subject teachers use IT tools for communication depending on their needs at a given moment. When it comes to contacts with the administration, e.g., the headteacher, deputy headteacher, or school office, teachers prefer to communicate via the electronic register (32.3%), telephone (31.8%), and e-mail (23.3%). In addition to the electronic register (37.7%), teachers prefer to use social media such as WhatsApp and Messenger (26.5%) to communicate with other teachers. Teachers prefer to communicate with students via the electronic register (75.3%), which is due to the form imposed by the Ministry of National Education. However, social media platforms such as WhatsApp and Messenger (16.1%) are often chosen as a method of communication with this group of people. Communication with parents most often takes place via the e-register (88.3%). Other methods include telephone contact (6.28%) and contact via social media groups (4.0%).

**Table 7. IT tools used by teachers in schools**

Types of IT tools	Share%
Electronic register	96.86
Word processor (e.g., MS Word, Libre Office Writer)	83.41
E-mail	78.48
Graphics programmes (e.g., Canva, Gimp)	72.65
Cloud drives (e.g., Google Drive, OneDrive, Dropbox)	71.30
Presentation tools (e.g., PowerPoint, Prezi, Google Slides)	70.40
Video websites (e.g., YouTube, TikTok)	63.68
Spreadsheets (e.g., MS Excel, Libre Office Calc)	57.40
Educational platforms or platforms for group work (e.g., Microsoft 365, Classroom, Discord)	52.47
Quiz creation tools (e.g., Kahoot, Quizlet)	47.98
Tools for generating content and images using artificial intelligence (e.g. ChatGPT, DALL-E 3)	46.19
Portals provided by the Ministry (e.g., Integrated Education Platform)	44.84
Thematic websites or online encyclopaedias (e.g., Wikipedia)	40.81
Chat communication tools (e.g., Skype, Messenger, WhatsApp)	33.18
Social media portals (e.g., Facebook, X)	23.32
Moodle	6.73

Source: Own study

It can be observed that in professional matters related to school work, teachers prefer to use the electronic register to communicate with all groups, including the school administration, other teachers, students, and parents. This may be due to a desire to separate their professional and private lives. In addition to communication, teachers also use IT tools in other aspects of their work (Table 7).

Among the available information and communication technologies (ICT) used by teachers, the most important is the electronic register, which is used by as many as 96.86% of respondents. It plays a key role in documenting and organising the teaching process. Next, respondents indicate the frequent use of word processors (83.41% of respondents), e-mail (78.48%) as a communication channel, as well as graphics programmes used to create educational materials (72.65%). Cloud solutions, which enable the storage and sharing of teaching resources, are also playing an increasingly important role. They are used by 71.30% of the respondents. Among the websites used in educational practice, respondents most frequently mentioned multimedia platforms such as YouTube, which is used in class (63.68%).

**Table 8. Benefits of using IT tools in education**

Type of benefit from using IT tools	Share %
Facilitating access to educational materials	70.40
Facilitating the organisation of teachers' work	55.61
Interactivity and student engagement	30.49
Creativity and innovation	25.11
Enabling remote learning	12.56

Source: Own study

Most of the surveyed teachers pointed to easier access to educational materials (70.40%) and assistance in organising their work (55.61%) as the benefits of using IT tools in their work.

Over the past few years, the ability to use artificial intelligence (AI) tools in various industries has been gaining importance. Therefore, it seems reasonable to ask about the use of such tools in the work of teachers (Table 9).

**Table 9. Use of AI by teachers to create teaching materials**

Use of AI tools	Share %
Yes	61.82
No	36.82
I am afraid to use this technology	1.36

Source: Own study

The majority of teachers surveyed admit that they use artificial intelligence tools to create or improve the visualisation of their teaching materials.

The results presented in Tables 1 to 9 show that teachers currently often use modern technologies in schools, indicating that education is changing. IT tools are used for organisational and administrative work, but also as an aid in lesson preparation. In addition, many teachers use AI tools, which are a relatively new solution. This may indicate a desire to keep up to date with modern technologies, which will allow teachers to learn about both the positive and negative aspects of AI technologies.

Tables 10-11 present the profile of the respondents. Based on the collected data, the authors attempted, among others, to outline the profile of the respondent (teacher) by asking questions about their gender, age, place of work, type of the subject taught, and years of experience in the teaching profession.

**Table 10. Type of the subject taught**

Subject taught	Share %
Science subjects, e.g., mathematics, chemistry, geography, biology	47.09
Humanities subjects, e.g., Polish, English, history	16.14
School counsellor	13.45
Vocational subjects	9.42
Technical subjects, e.g., technology	8.97
Educational and physical subjects, e.g., physical education (PE)	2.69
Artistic subjects, e.g., art, music, dance	2.24

Source: Own study

Among the respondents, the largest group was teachers of science subjects (47.09%) and humanities subjects (16.14%). The smallest group of respondents were teachers of arts subjects (2.24%).

**Table 11. Number of years of experience as a teacher**

Number of years	Share %
0-4 years	6.28
5-9 years	13.90
10-14 years	14.80
15-19 years	12.11
20 years or more	52.91

Source: Own study

Most of the teachers surveyed have 20 or more years of professional experience (52.9%).

The profile of respondents shows that the vast majority of teachers surveyed have many years of experience. This shows that even older education workers use IT tools in their work. This may be a matter of wanting to update their teaching skills and adapt them to the needs of their students, or it may be due to the obligation to use specific tools at school, such as electronic registers.

## Discussion

The educational experiences related to the COVID-19 pandemic have significantly influenced the perception of digital education both in Poland and in other countries (European Commission, 2022). In the first phase of the crisis, efforts focused mainly on providing ICT infrastructure and software that would enable the continuation of distance learning. Currently, more and more attention is being paid to the growth of digital competences (Najwyższa Izba Kontroli, 2022a). The OECD Digital Education Outlook 2023 report, on the other hand, draws attention to digital education ecosystems, which consist of three essential elements: digital tools for managing systems and institutions, digital tools for teaching, learning, and assessment, and the people who bring these tools to life and give them meaning (OECD, 2023). The above considerations of the authors show that there is currently a noticeable need to use IT tools in Poland.

As Anna Plusa notes in her report “Science in the digital world of technological transformation and global challenges,” young people are very eager to use electronic tools. The bridge connecting contemporary teachers and students in the education process is not only teaching them how to use digital tools, but also showing young students how to use them properly. Artificial intelligence, which is currently developing very dynamically, deserves particular attention. Most of the respondents already have experience in working with it, and only a small percentage of them are afraid of using it. It is therefore worth considering introducing training for students on the principles of using artificial intelligence to counteract the spread of false information and harmful content.

As part of the Digital Transformation of Education Policy – a draft resolution of the Council of Ministers submitted for consultation – there are plans to introduce the role of Digital Education Coordinator in every school. This solution is an extension of an approach that does not focus solely on expanding IT infrastructure in schools but emphasizes the development of teachers' digital skills (Głos Nauczycielski, 2024). This direction is in line with the results of the authors' research, which emphasizes the importance of preparing teaching staff to use technology effectively in the education process.

In the literature on the digital transformation of education, modern school management is defined as the systematic use of information and communication technologies (ICT) to increase organisational efficiency, teaching quality and communication within institutions. Digital transformation in schools goes beyond the implementation of IT tools alone – it involves changing the organisational culture, improving the digital skills of staff, modernising administrative processes and introducing new forms of collaboration and learning (OECD, 2023).

## Conclusions

Contemporary schools are confronted with constantly evolving challenges in education. One of them is the introduction of modern technology into teaching. What is more, apart from teaching itself, a significant number of schools are introducing

solutions to support administrative and management work. The most popular system used in schools is the electronic register, which allows teachers to check attendance, enter grades, plan tests, contact parents and students, and issue certificates. It streamlines the work of the headteacher and teachers in particular, but also helps parents to monitor their children's academic performance on an ongoing basis. The introduction of modern technologies in schools requires adequate funding, which comes from both subsidies provided by the Ministry and other public funds.

The research presented in this paper shows that IT tools and artificial intelligence are indeed used in schools. The teachers participating in the research mostly indicated that they consider IT tools to be important in their work in education and that most of them use them in preparing lessons and monitoring student progress. At the same time, there is a clear need for technical support and training, especially in areas related to digital security and the practical use of technology in education. Among the most popular tools used by teachers are electronic registers and word processors, graphics programs, and artificial intelligence, which is also becoming popular.

The next stage of research on Polish schools will focus on the availability of electronic equipment in primary and secondary schools.

This research shows that, alongside global technological development, education is also undergoing an IT-driven transformation. On the one hand, this helps streamline and accelerate work; on the other, it prepares students to participate in a digital society.

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**Streszczenie:** W artykule podjęto temat nowoczesnego zarządzania szkołą podstawową z wykorzystaniem narzędzi informatycznych. Wskazano znaczenie technologii cyfrowych w codziennym funkcjonowaniu placówki, obejmującym aspekty organizacyjne, administracyjne i pedagogiczne. Analiza została oparta na wynikach badań przeprowadzonych wśród nauczycieli ze społeczności OSEhero 2024/2025, które pozwoliły określić stopień wykorzystania technologii informacyjno-komunikacyjnych (TIK) w pracy dydaktycznej, administracyjnej oraz komunikacyjnej. Zidentyfikowano najczęściej stosowane narzędzia, ich obszary zastosowania oraz wyzwania związane z kompetencjami cyfrowymi kadry pedagogicznej. Wnioski wskazują, że wdrażanie nowoczesnych rozwiązań informatycznych wspiera skuteczność zarządzania szkołą, jednak wymaga systematycznego doskonalenia umiejętności nauczycieli oraz dostosowania infrastruktury technologicznej.

**Słowa kluczowe:** narzędzia cyfrowe, TIK w edukacji, zarządzanie szkołą

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## DETERMINANTS OF SHAPING ORGANIZATIONAL CULTURE IN NON-PUBLIC UNIVERSITIES

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**Abstract:** In the context of dynamic socio-economic transformations within the higher education sector, organizational culture is increasingly recognized as a critical factor in ensuring institutional coherence and adaptability. The primary objective of this study was to diagnose the determinants of organizational culture in non-public academic universities and to assess their impact on the structure and direction of cultural change. The research was conducted in five Polish non-public academic universities using a case study approach, combining structured interviews (n = 39) and questionnaire surveys (n = 577). The findings reveal that internal determinants – particularly the institutional type and employee characteristics – exert the most significant influence on organizational culture. These factors can be actively shaped. In most of the universities analyzed, a balanced organizational culture was identified, characterized by a combination of individualism and moderate openness to change.


**Keywords:** determinants of culture, non-public universities, organizational culture

**JEL Classification:** M1, M14

### Introduction

In conditions of dynamic and unpredictable changes, both in the organization's environment and within it, the importance of intangible factors that ensure organizational coherence, stability, and adaptability is increasing. One of these factors is organizational culture, a complex system of values, norms, symbols, and behaviors that shapes the way an organization functions and determines its identity and competitive advantage (Lawler, 1992; Alvesson, 2002). Transformations in the Polish higher education sector, intensifying competition for students, demographic, legal, and

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economic changes, as well as processes of internationalization and digitalization – all these factors force universities to redefine existing management models and seek new sources of organizational success (Maliszewski, 2015). While for many years an organization's advantage was determined by so-called "hard factors" – infrastructure, financial resources, or technology – today it is increasingly recognized that "soft factors," including organizational culture, determine the durability and quality of management (Graham et al., 2022).

In the case of private universities, which operate under conditions of limited funding, strong market competition, and face challenges in managing broadly understood resources, culture becomes one of the most critical determinants of organizational success and plays a significant role in knowledge management (Figurska, 2018; Scaliza et al., 2022). It enables not only adaptation to a changing environment but also the creation of a lasting, unique advantage based on values and identity.

The decision to address the determinants of organizational culture in private universities stems from a noticeable gap in the literature. Analysis of national sources indicates a lack of comprehensive studies on organizational culture in this segment of higher education, even though these universities constitute an important part of the educational system and the knowledge-based economy. Their specificity – resulting from self-financing, complex organizational structures, diverse educational profiles, and a dynamically changing environment – makes them a particularly interesting field for research.

The aim of this study is to diagnose the determinants of organizational culture in private universities and to indicate their influence on the shape and direction of cultural change in the context of the challenges mentioned above. Particular emphasis is placed on internal determinants, which the university can actively shape. The study of these determinants aims at understanding the mechanisms that influence culture and to indicate the direction of its improvement.

The decision to focus the research on academic private universities was driven by both theoretical and practical considerations. On the one hand, these universities represent an important but still insufficiently explored empirical field; on the other hand, they require effective tools for managing culture, which can become a source of their long-term development and lasting market position. In this sense, the article has both a cognitive and applied character, providing university management with guidance on how to consciously develop an organizational culture that supports the university's mission under conditions of increasing uncertainty and environmental variability. Ultimately, reflection on the determinants of organizational culture fits into the broader research trend on the strategic importance of organizational culture in building the competitive advantage of knowledge organizations.

## **Organizational culture – essence and significance in higher education institutions**

Organizational culture is a holistic phenomenon that encompasses both material and immaterial elements of the functioning of an organization. It is defined from various perspectives: normative-axiological, behavioral, interpretative, and philosophical (Sułkowski, 2001; Sikorski, 2006).

Some authors (Kostera, 2003; Morgan, 2022) adopt a postmodernist perspective, according to which an organization does not simply have a culture, but *is* a culture, understood metaphorically as an organism, a machine, or a brain. Organizational culture is also perceived as the social glue that binds members of an organization together (Handy, 1996) or as an unwritten code of values and traditions passed down from generation to generation (Bolesta-Kukułka, 2003).

The diversity of definitions arises, among other things, from researchers applying different paradigms in the study of culture (Sułkowski, 2012). To this day, the most frequently cited definition, which is also adopted in this work, is the one proposed by Schein (1992), according to which: “culture is the set of learned assumptions that a group has acquired in its history, which allowed it to survive and develop. The values and norms that enabled this group to survive and manage its internal affairs constitute its culture”.

Attention should also be given to the concept of the so-called “programming of the mind” proposed by Hofstede, Hofstede, and Minkov (2011), who conceptualize culture on three levels:

- a) universal – common to all humans,
- b) collective – typical of a specific social group,
- c) individual – specific to an individual.

Particular importance for organizations lies at the collective level, which encompasses shared patterns of behavior, values, and meanings.

In a synthetic view, organizational culture is a set of material and immaterial symbols, values, and norms of behavior of people in the organization, as well as fundamental cultural assumptions. The concept adopted in this context combines two dimensions: the instrumental dimension (related to organizational effectiveness) and the socio-psychological dimension (related to employee integration, motivation, and identification). Understood in this way, culture is a dynamic and complex social system, shaped in relation to the environment and influencing both internal and external relationships (Białas, 2025).

Analysis of the literature indicates that research on the organizational culture of private universities focuses mainly on internal factors, such as: quality of education (Ziemkiewicz-Gawlik et al., 2023), internationalization (Mazur, 2020), information environment (Deja, 2021), and student engagement (Łuźniak-Piecha et al., 2023). Studies confirm that organizations that consciously shape their culture achieve better outcomes in terms of educational quality (Sułkowski et al., 2016). A strong organizational culture also promotes organizational effectiveness (Smart & John, 1996).

## **Typologies of organizational cultures**

An important tool in studies of organizational culture is the typology of organizational cultures. It should be emphasized that typologies are simplified and organizing frameworks; their purpose is not to fully represent organizational reality but to provide a reference point that facilitates analysis.

Two-dimensional typologies use two independent cultural dimensions that define four types of organizational culture. They help to describe the dominant type of culture and identify the elements that should be reinforced. In research, the concept proposed by Cameron and Quinn (2015) is most commonly used.

The operational context of universities and the literature analysis allowed the author to distinguish two primary dimensions, to which one-dimensional typologies of organizational cultures diagnosed in the studied universities can be assigned. These are:

- a) conservatism vs. flexibility – the approach to change and risk: uncertainty, operational stability, and low tolerance for change vs. openness, innovation, and high tolerance for change;
- b) participativeness vs. authoritarianism – the orientation toward the team or the individual: collaboration vs. individualism.

### Determinants of organizational culture in non-public universities

The organizational culture of a non-public university is shaped by a range of both internal (endogenous) and external (exogenous) factors. The analysis and synthesis of various perspectives allowed the author to adopt her own concept of external determinants (economic, legal-regulatory, social, and market-related) and internal determinants (type of organization, organizational characteristics, and staff characteristics).

**Table 1. External determinants of the organizational culture of a non-public university**

Determinants	Criteria characterizing determinants
Economic	the state of economic indicators (GDP growth rate, inflation rate, interest rate), economic stability, sector financing, labor market (unemployment rate)
Legal-regulatory	political system, degree of government intervention, number of regulations and legal provisions, level of legal regulation variability, level of detail in legal regulations
Social	the state of demographic indicators, the status of education in the hierarchy of societal values, the standard of living of society, the culture of society/region, the pace of technological changes, the availability of new technologies
Market-related	possibility of obtaining funds, cooperation with foreign organizations, mobility and exchange of staff, international recognition – position in European/world rankings, individualization of prospective students' expectations, changing needs of current students, number of prospective students, number of students, number of international students, contact with alumni, number of competitors, attractiveness of competitors' offerings, intensity of competition, territorial proximity of competitors' operations, cooperation with employers/employment office, cooperation with entrepreneur-practitioners, cooperation with institutions and the local community

Source: Own study based on research

The literature emphasizes that no organization operates in a vacuum (Hofstede, 2000; Siemiński, 2008). The external environment provides a significant context for shaping norms, values, and behavioral patterns.

The dynamics of economic changes affect the functioning of universities, their financing, and their innovativeness. Factors such as consumer income levels, economic conditions, and the labor market shape both the educational offer and the human resources of the university. In conditions of economic uncertainty, organizational cultures with a high tolerance to change adapt more effectively to a changing environment.

State regulations, accreditation systems, quality standards in education, and national educational policy determine the organizational culture of universities. The state creates the framework for operation and fair practice (Mączyńska, 2017). When state policy provides opportunities for development, system-legal determinants should foster participatory cultures with a high degree of tolerance for change.

The social sphere (country, region, place of origin of the employees, and location of the organization) influences culture by transferring specific values, norms, and behaviors from the local community to the organization. The structure of social and professional groups determines the status and composition of human resources, which play a fundamental role in organizational culture. Dynamics in this sphere also require the development of flexible, change-oriented, innovative, and participatory cultures.

Non-public universities operate in a context of strong competition for students and staff. The market situation demands a culture focused on educational quality, as well as flexibility and innovation in teaching. Equally important are the expectations of external stakeholders: employers, alumni, local institutions, and business partners. Market volatility, including technological changes and shifting student expectations, forces universities to quickly adapt their culture, which should exhibit a high tolerance for change.

Digital transformation, remote work, hybrid learning models, and the increasing role of artificial intelligence significantly shape work organization, communication, and consequently drive the organizational culture toward greater flexibility and participation.

The internal environment is closely related to the specific characteristics of a given university (Table 2).

The non-public nature of a university fosters a more market-oriented and flexible culture, emphasizing efficiency, quality of educational services, and stakeholder satisfaction. Building a quality culture requires changing employees' awareness about their work outcomes and their impact on creating added value for students. When services are tailored to students' needs at an optimal price, when new markets are sought, new products and services are designed, the offer is shaped by students, and innovations are pursued, flexible, innovative, and participatory cultures are developed (Fischer & Theis, 2014).

In non-public universities, the direction of development is guided by the mission, vision, and values upheld by the academic community. An ingrained tradition, established and familiar ways of organizing meetings, and organizational symbolism

encourage people to identify more readily with their workplace and to achieve set goals. Attachment to tradition and a long-standing presence in the market can, on the one hand, create difficulties in implementing organizational changes, while, on the other hand, they can foster trust in the organization from its environment.

**Table 2. Internal determinants of organizational culture in non-public universities**

Determinants	Criteria characterizing determinants
Type of organisation	attractiveness of the industry, attractiveness of the offer, offer in foreign languages, range of services provided, quality of services provided, position in rankings, brand, quality of technical equipment, method of service delivery, accessibility and location, possession of own premises and facilities, attractiveness of the facilities
Organizational characteristics	size of the organization, financial situation, effectiveness of obtaining external funds, mission, vision and values, history and tradition, management style, organizational structure, internal systems, procedures, regulations, and operational rules
Staff characteristics	employee demographic structure, values and attitudes of employees, employee personality, employee motivation level, employee knowledge and experience, stability of internal staff, staff loyalty, level of organizational integration, willingness of staff to develop, staff achievements, number of international employees

Source: Own study based on research

The organizational culture is also influenced by the leadership style, organizational structure, and the administrative system. Flexible structures promote teamwork, reduce hierarchical levels and managerial positions, and provide employees with greater freedom of action. Such structures shape participatory and innovative cultures with a high tolerance for change. Leadership style is crucial in shaping attitudes. An autocratic style reinforces values related to hierarchy, control, and discipline, while a democratic style supports a participatory culture, trust, and collective responsibility.

The characteristics of employees, both academic and administrative staff, also affect the functioning of the university. In her research, the author deliberately excluded students, as they constitute a variable and dynamic parameter compared to the relatively stable and long-term organizational culture. Individual employee attributes (age, gender, professional experience, education, value system) influence the climate and functioning of the university.

The organizational culture of a non-public university is the result of the dynamic interaction between environmental influences and the organization itself. Modern universities operating in conditions of strong competition, digitalization, and changing societal expectations should, in the author’s view, build flexible and participatory cultures, that is, cultures that support collaboration, as well as the well-being of employees and students. Together, these determinants create a unique “cultural

genotype” of the university, distinguishing it from other institutions. The diagnosis of determinants should indicate their impact on the shape and direction of cultural changes.

In summary, the basis for drawing conclusions about the organizational cultures of the universities under study lies in the frequency, nature, and dynamics of change, which require cultures that are flexible, tolerant of change, innovative, risk-oriented, and grounded in collaboration and the participation of the entire team. These are “fast-action” cultures, oriented toward immediate outcomes. In contrast, conservative and authoritarian cultures require a stable and predictable environment.

## Methodology

The aim of this study is to diagnose the determinants of organizational culture in private universities and to indicate their influence on the shape and direction of cultural change. This study focused on exceptional cases to identify recurring patterns in organizational culture. Non-public academic universities were selected due to their dual role in providing both academic and practical education, conducting research, and collaborating with industry. This positioning allows them to compete with public universities through prestige, brand reputation, and educational quality, while also facing financial, infrastructural, and demographic challenges. The cases were purposively selected from the POL-on system maintained by the Ministry of Education and Science. The selection criteria included the observability of relevant phenomena and the accessibility of the research. Invitations were sent to all identified universities and five institutions consented to participate. Each university was treated as an individual case for independent analysis, followed by comparative examination. Findings cannot be generalized to all non-public academic universities in Poland; however, they provide insights into potential patterns and inform recommendations, with caution regarding contextual limitations. The study employed a mixed-methods approach, combining literature review and empirical research. The literature review included national and international sources and various secondary materials, establishing a theoretical framework, methodological assumptions, and research instruments. Empirical research involved structured interviews and surveys. Interviews were conducted with 39 university management representatives (rectors, vice-rectors, deans, vice-deans, and heads of academic units) who assessed the strength, direction, and status of cultural determinants. Surveys were administered to 577 academic and non-academic staff. The sample was complete as all listed employees were included in the study. Academic staff completed surveys during faculty meetings, while non-academic staff participated individually. Respondents evaluated the influence of organizational culture determinants. Quantitative data were aggregated and analyzed using a custom MS Excel matrix, with results presented descriptively and in tables. Qualitative data were analyzed based on field notes and interview transcriptions. This approach allowed for the identification of patterns, the evaluation of organizational culture determinants, and the formulation of contextually informed conclusions. The statistical analyses were limited to calculating the arithmetic mean of the respondents’ ratings.

## Research results concerning determinants and their impact on the organizational culture of non-public universities

The results of the study on the strength of the determinants' impact on the culture of the examined universities are presented in Table 3.

**Table 3. Strength of determinants' influence on the organizational cultures of the studied universities**

University	A	B	C	D	E
<b>External determinants</b>	<b>4.2</b>	<b>3.6</b>	<b>4.1</b>	<b>3.7</b>	<b>3.7</b>
economic	4.1	3.2	3.9	3.2	3.7
legal and regulatory	4.3	3.2	4.3	4.0	3.8
social	4.2	4.1	4.0	3.9	3.7
market-related	4.1	3.8	4.2	3.9	3.6
<b>Internal determinants</b>	<b>4.1</b>	<b>4.1</b>	<b>4.1</b>	<b>4.1</b>	<b>4.0</b>
type of university	4.3	4.2	4.2	4.2	4.1
university characteristics	3.9	3.9	4.2	4.0	3.8
staff characteristics	4.0	4.1	4.0	4.0	4.0

Source: Author's own elaboration based on interviews and surveys. In the area of determinant influence intensity, the interpretation of the scores is as follows: 1.0-2.5 – weak influence, 2.6-3.5 – moderate influence, 3.6-5.0 – significant influence

The research shows that internal determinants have a stronger influence on the culture of the studied universities (with balanced average scores across all universities), which indicates that universities can actively shape them to drive cultural change. Furthermore, internal factors (type and characteristics of staff) remain a key and significant source of influence on culture. This confirms that industry and program attractiveness, quality of services provided, brand, and infrastructure are crucial culture-shaping factors.

The second most influential factor is the characteristics of the staff, which received balanced ratings across the studied universities (4.0-4.1). This indicates that staff competencies, values, motivation, development, and demographics are significant influencing factors. The characteristics of the universities themselves (financial situation, efficiency in obtaining external funds, mission, vision and values, history, leadership style, structure, and internal systems) were rated slightly lower, with the lowest score in University E (3.8).

Greater differences are observed in external determinants. They have the strongest combined influence in Universities A (4.2) and C (4.1) and the weakest in University B (3.6). The largest range of scores between universities occurs in the system-legal environment (3.2-4.3), indicating that the impact of laws and regulations is highly variable in the studied cases. For some universities, regulations are the main "catalyst" for organizational change (especially Universities A and C), while for others, their influence is relatively smaller (Universities B and E).

The weakest influence was attributed to economic factors: the highest in University A (4.1), the lowest in Universities B and D (3.2). Universities A and C feel economic pressure more strongly, which affects their fundraising strategies and risk aversion. Universities B and D (lower scores) may be less sensitive to direct economic shocks or have alternative funding channels/response strategies.

Social factors (student demographics and expectations, new technologies) are considered significant in all cases. Market factors most strongly influence the cultures of Universities A (4.1) and C (4.2), as these universities compete intensively for students and projects.

Table 4 discusses the determinants indicating the dominant type of culture.

**Table 4. Analysis of the current state and direction of influence of determinants in the studied universities**

<b>University</b>	<b>External determinants – strongest areas of influence on culture</b>	<b>Internal determinants – strongest areas of influence on culture</b>	<b>Type of culture dominant (characteristics)</b>
<b>A</b>	lack of supportive development policies, absence of stable funding sources, limited implementation of new technologies, decline in the number of domestic students	lack of a motivational and staff development evaluation system, insufficient IT and communication infrastructure, absence of effective systems to improve the quality of education, frequent organizational restructurings	conservative (low tolerance for change, individualism, sense of responsibility for students)
<b>B</b>	variability and ambiguity of national and EU regulations, strong competition in the educational market	lack of stable financial foundations and shared financial responsibility among employees, absence of formal tools for employee development and reward, lack of coherent values and behavioral standards, and absence of integrated work tools	conservative (high individualism, student-oriented, technologically capable, but resistant to organizational changes)
<b>C</b>	strong influence of national regulations, need to independently secure funding, dependence on external grants	underdeveloped incentive systems and insufficient technological infrastructure, unstable funding sources, and inadequate technological support	balanced (moderate openness to technological changes, individualism, student-oriented, partial tolerance for change)

University	External determinants – strongest areas of influence on culture	Internal determinants – strongest areas of influence on culture	Type of culture dominant (characteristics)
D	political conditions, excessive regulations, bureaucracy, frequent changes in legislation and unfavorable state education policy, conservative regional environment, competitive pressure	insufficient diversification of offerings, lack of systemic motivational solutions and strategic approach to staff development, inefficient use of resources	balanced (moderate individualism with elements of collectivism, cautiousness, stability prioritized over innovation)
E	variable economic situation and legal pressure, as well as the necessity to report activities to multiple external institutions	infrastructure limitations and lack of innovative administrative solutions, absence of motivation systems, insufficient administrative infrastructure and processes, strong attachment to hierarchy and employment stability, ineffective internal communication	balanced (conservative attitude toward innovation, individualistic approach with openness to change, collectivism in international relations and in relations with students, low tolerance for administrative changes)

Source: Own research based on interviews and surveys

Systemic and legal determinants remain the key external factor for the analyzed universities. The organizational culture of most institutions is individualistic and hierarchical in nature, whereas in Universities D and E elements of collaboration are more noticeable. Tolerance for change varies – it is the highest in University E (innovation, internationalization) and the lowest in Universities B and D (conservatism, caution). A balanced culture appears in Universities C, D, and E, combining elements of stability with moderate openness to change.

Below, the determinants shaping the cultures of the examined universities toward greater flexibility and participation are discussed.

At University A, a slightly stronger influence of external determinants (4.2) compared to internal ones (4.1) was recorded, particularly in relation to the high sensitivity to laws and regulations. Interview results confirm that a flexible culture is driven by the attractiveness of the offer and institutional reputation. Modern teaching methods, management by objectives, financial stability, internationalization, international cooperation, technological development, and demographic changes in other countries all contribute to fostering a culture of flexibility and participation. The university is student-oriented but struggles with a lack of coherent systems of quality assurance, communication, and infrastructure.

University B shapes its culture primarily through internal resources (type of university, staff), which exert a stronger influence than legal or economic regulations. Among external determinants, the social environment (4.1) has the greatest impact, including cooperation with business and stakeholders, technological development, and internationalization. Within the internal determinants, the strongest influences on culture were assessed as university brand, attractiveness of study programs, quality of technical facilities, position in the rankings, efficiency in acquiring external funds, staff stability, and employee loyalty. The interviews confirmed the importance of reputation and a recognizable brand, modern teaching methods, employee engagement and values, as well as commitment to quality.

At University C, both legislation and the market exert a strong influence – the institution operates under significant external pressure but also possesses strong internal capabilities and management methods (type and characteristics of the university – 4.2). The research findings indicate that the culture is shaped by the individualization of student expectations, stakeholder cooperation, legislative changes, and demographic processes. Among internal determinants, the most influential were the quality of the services provided, the position of the university's ranking, the brand, the attractiveness of the facilities and the leadership style. This highlights the importance of institutional prestige and a participatory management approach.

At University D, the strongest influence is exerted by the type and characteristics of the university (4.2), while the economic sphere shows weaker sensitivity (3.9). Among external determinants, the most significant impact on culture comes from demographic and legislative changes, the number of applicants, and collaboration with the local environment. These factors have improved some cultural parameters to the level of high tolerance for change and collectivism. Internal determinants dominate (4.1), especially the university type (4.2), as well as tradition and staff experience. Culture benefits from a strong brand, history, effective communication, community rituals, material resources, and employee knowledge and experience. The culture of participation is further reinforced by efficient communication, a positive atmosphere, staff integration, high loyalty, and student orientation.

At University E, the influence of the determinants was assessed as moderate to significant. The internal determinants (4.0) are stronger, particularly the type of university (4.1). The brand, leadership style, and employee competencies are the areas most strongly determining organizational culture. University E effectively utilizes its technological potential and international recognition. An attractive offer, dynamic relations with stakeholders, internationalization, and a participatory management style contribute to shaping collectivist attitudes and openness to change.

## Conclusions

Ultimately, the state of the examined internal and external determinants shapes a balanced culture characterized by a predominance of individualism, yet including elements of collectivism and openness to international cooperation. Internal determinants, over which universities have direct influence, should be actively shaped toward developmental, pro-innovative, and collaborative orientations.

Despite increasing awareness of the need for change, a conservative attitude toward innovation persists, accompanied by deficiencies in communication among employees and in knowledge sharing. Overcoming this behavioral conservatism could significantly increase tolerance for change and shift the organizational culture toward greater flexibility and participation. For universities strongly affected by external determinants, it is recommended to build internal adaptive capacities, implement quality management systems, and establish regulatory monitoring procedures. For universities with a dominant influence of internal factors, the creation of a coherent and comprehensive motivation system, modernization of procedures and infrastructure, as well as the implementation of mechanisms linking internal strength with responsiveness to the environment (strategic analyses, competence development programs) are advised.

For University A, the recommendations include strengthening internal adaptation mechanisms. It is proposed to enhance internal communication that fosters collaboration and knowledge sharing, increase flexibility in change management, and further develop the quality management system. The direction of change should lead toward shaping a pro-innovative and collective culture based on dialogue, teamwork, and a high tolerance for change.

For University B, it is recommended to enhance employee engagement in fundraising, expand internationalization efforts, align staff evaluation and development systems, implement quality management procedures, and introduce strategic planning. These changes should support the development of an organizational culture founded on trust and shared responsibility.

For University C, the proposed actions include implementing transparent reward and development mechanisms for academic staff, advancing the digital transformation of the institution, and strengthening change management systems. Building a collective culture should be supported by integration initiatives and training in innovation and communication.

For University D, it is recommended to actively acquire external funding, broaden the educational offer, develop international cooperation in teaching and research, implement staff development and training policies, and optimize infrastructure use. Progress toward an innovation-oriented culture will be possible through the promotion of bottom-up initiatives and the use of local partnerships and funds as levers of change.

For University E, it is advised to develop internal collaboration networks to reduce individualism and strengthen a culture of shared responsibility, design and implement an internal communication strategy, standardize staff evaluation principles, define and promote academic career paths, and introduce project management systems along with modern administrative tools. The recommended direction of development is the creation of a culture of trust, cooperation, and innovation based on shared values and knowledge transfer.

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## **DETERMINANTY KSZTAŁTOWANIA KULTURY ORGANIZACYJNEJ W UCZELNIACH NIEPUBLICZNYCH**

**Streszczenie:** W warunkach dynamicznych zmian społeczno-gospodarczych w sektorze szkolnictwa wyższego rośnie znaczenie kultury organizacyjnej jako kluczowego czynnika zapewniającego spójność i adaptacyjność. Celem badań jest diagnoza determinant kultury organizacyjnej akademickich uczelni niepublicznych oraz określenie ich wpływu na kształt i kierunek zmian kultury. Badania przeprowadzono w pięciu polskich akademickich uczelniach niepublicznych metodą studium przypadku, za pomocą wywiadów kwestionariuszowych (n = 39) oraz badań ankietowych (n = 577). Wyniki wskazują, że najsilniejszy wpływ na kulturę organizacyjną mają determinanty wewnętrzne – typ uczelni i cechy pracowników – które można aktywnie kształtować. W większości analizowanych uczelni dominuje kultura zrównoważona, łącząca indywidualizm z umiarkowaną otwartością na zmiany.

**Słowa kluczowe:** determinanty kultury, kultura organizacyjna, uczelnie niepubliczne

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