economics and environment 1(92) • 2025 eissn 2957-0395

Agnieszka THIER

IMPLEMENTATION OF GREEN MANAGEMENT AS A PO-TENTIAL FACTOR OF ORGANISATIONAL MATURITY IN FAMILY BUSINESSES

Agnieszka THIER (ORCID: 0000-0002-5915-2071) — Cracow University of Economics, Department of Economics and Organisation of Enterprises

Correspondence address:

Rakowicka Street 27, 31-510 Cracow, Poland e-mail: agnieszka.thier@uek.krakow.pl

ABSTRACT: This study explores green management as a catalyst for organisational maturity, competitive advantage, and longevity in family businesses. The research employs a systematic review of Polish and international literature (2010–2024) and key reports from UNEP and OECD. It identifies strategies, challenges, and best practices for implementing green management in family enterprises. Four main green management approaches are outlined: emission reduction, adoption of renewable technologies, promotion of sustainable business models, and green human resource management. Family businesses, with their long-term vision, local community ties, and intergenerational value transmission, are well-positioned for green management. However, barriers such as financial conservatism and resistance to innovation may hinder adoption. Green management enhances family business maturity and resilience through sus-tainable practices like circular economy strategies and green HRM. It also strengthens competitive advantage by aligning ecological initiatives with family values, fostering customer trust, and adapting to regulatory demands. This study provides actionable insights for integrating green management into family businesses, emphasising its role in sustainable development and enter-prise longevity.

KEYWORDS: green economy, sustainable development, European Green Deal, renewable energy sources, quality of life

Introduction

The increase in the production of investment and consumer goods implies a rise in waste generation and pollutant emissions, which negatively affect the natural environment. To counteract these adverse effects, technologies with lower environmental impact and other solutions supported by appropriate economic and financial tools are being implemented. This has shaped the concept of the so-called green economy, encompassing, among others, green enterprises and green management, aimed at integrating environmental (ecological) aspects into economic processes.

The term "green" in the context of the economy refers to a set of ecological practices and strategies that become an integral part of business management. These activities not only minimise the negative impact on the environment but also promote sustainable development. They assume the adoption of innovative approaches to environmental protection that align with current requirements regarding corporate environmental policies.

The adjective "green" typically evokes positive associations, referring to the protection of the natural environment or specific elements of the natural world. Associations with the greenness of nature are often transferred to technical terms with an ecological and normative character. Such metaphors are widely accepted both in colloquial language and in academic literature.

The term "green economy" – widely used in Poland as well – originates from Anglo-Saxon literature (Carson, 2002; Ehrlich, 1995; Schumacher, 2010), where it began to be discussed in the context of reports by the Club of Rome, such as *The Limits to Growth* (1973) (Meadows et al., 2004, 2022), and later publications by the World Commission on Environment and Development (1987). The idea of the green economy gained significance as a concept integrating industrial development with environmental protection (Hawken, 2010) while simultaneously striving to minimise the negative impact of industry on ecosystems. In particular, it has included the promotion of low-emission technologies and renewable energy sources, which are key elements of energy policy and state support for a low-emission economy.

The concept of the green economy was popularised after 1989 thanks to the report *Blueprint for a Green Economy*, commissioned by the UK government (Pearce et al., 1989). In subsequent years, the United Nations launched the "Green Economy Initiative" programme. The concept of the green industrial revolution and green cities also began to be promoted, culminating in the Rio+20 Earth Summit in Rio de Janeiro in 2012 (UNEP, 2012). In the documents of the United Nations Environment Programme, the green economy is defined as an economic model that fosters increased well-being and social equity while reducing environmental pressure and natural resource consumption (Juszczak & Rabiega, 2021; UNEP, 2023).

The green economy has become the basis for formulating recommendations on transforming production structures and promoting the principles of Sustainable Development (OECD, 2011; UNEP, 2008, 2011, 2023). In the United States, this concept was utilised by President Barack Obama as part of the economic recovery strategy following the 2008–2009 financial crisis. Within the framework of the "American Recovery and Reinvestment Plan", often referred to as the Green New Deal (GND, modelled on Franklin D. Roosevelt's "New Deal"), the green economy was promoted as a key element of long-term economic growth and job creation (Office of the Federal Register & National Archives and Records Administration, 2009; Górka & Łuszczyk, 2014).

In Polish-language literature, terms such as "gospodarka niskoemisyjna" (low-emission economy) and "gospodarka niskowęglowa" (low-carbon economy) are used, as well as "zielona gospodarka," which is a literal yet somewhat unfortunate translation of the original term (green economy). Additionally, the incorrect "zrównoważony rozwój" is often used instead of correct forms like "rozwój zrównoważony", "rozwój trwały i zrównoważony" (sustainable and balanced development) or "samopodtrzymujący się" (self-sustaining development, sustainable development) (Górka, 2010a; Górka, 2010b; Górka, 2016).

Sustainable development remains closely associated with the concepts of the green economy and green growth, leading to the creation of complex and somewhat artificial terminology related to socio-economic development. It is important to highlight the differences between these two terms. "Green growth" refers to economic growth that minimises resource consumption and environmental impact. In contrast, the "green economy" encompasses a more comprehensive approach to the economy, integrating ecological goals across various sectors (Ryszawska, 2019; Adamowicz, 2021).

In this context, green management, also referred to as pro-environmental (or environmental) management, plays a crucial role in the rational management of natural resources (Tomala & Urbaniec, 2024). An important aspect of this concept is also proper human resource management (Bętlewska, 2024; Różańska-Bińczyk et al., 2020) and the organisational culture of enterprises (Szczepańska & Kosiorek, 2022). Green management systems are often financially supported by public administration to further encourage enterprises to adopt ecological innovations and practices (Szyja, 2015a; Adamowicz, 2021; Urbaniak, 2022).

The aim of this theoretical and review-based article is to provide a critical analysis of the literature on green management, with particular emphasis on the specificity of family businesses. It also examines how implementing the principles of green management can support the sustainable development of family businesses, their stability, and adaptability.

The research method used in this study was a systematic analysis of Polish and international literature on the subject published between 2010 and 2024. Based on the available scientific studies and reports, the most important strategies and challenges related to the implementation of green management in family businesses were identified. An analysis of reports and publications from international organisations, such as UNEP and OECD, provided data on the impact of ecological strategies on economic development and social well-being. The study also incorporated publications containing practical guidelines or theoretical models supporting the implementation of pro-environmental activities. The result of the critical analysis conducted was the systematisation of theoretical foundations and the formulation of practical guidelines for family businesses implementing green management.

Indicators of the Green Economy in Poland and Other EU Countries

The most commonly mentioned characteristics of the green economy include (Szyja, 2013; Szyja, 2015b):

- 1. The application of production and management methods based on natural biological processes allowing for more sustainable production of goods and services;
- 2. Low greenhouse gas emissions, particularly carbon dioxide, which reduce the negative impact of economic activities on the climate;
- 3. An increased share of renewable energy sources in total energy consumption contributes to reduced dependence on non-renewable resources.

These characteristics are easy to monitor and evaluate; however, they remain underutilised in economic practice. The persistence of traditional industrial structures and the high costs of transformation are significant barriers to the full implementation of these principles (KPMG, 2024). Despite this, the green economy – aiming to ensure the growth of well-being, quality of life, and social equity while simultaneously reducing the consumption of natural resources and mitigating ecological risks – is gaining importance and is increasingly being implemented successfully (Górka & Łuszczyk, 2014).

One practical aspect of the green economy is the implementation of closed production cycles. This is based on adopting the 3R principle (reduce, reuse, recycle), promoting waste reduction, reuse, and recycling. In some cases, repair instructions are also included to maximise the lifespan of products (Stahel, 2019).

The green economy and the circular economy differ in their objectives and approaches to sustainable development. The former represents a broad concept combining elements such as the circular economy, green management, and green growth. In contrast, the circular economy focuses primarily on resource efficiency and waste processing. Meanwhile, green economic growth, as a specific form of growth, is characterised by efficient resource use, pollution reduction, and resilience to natural hazards. Managing the green economy also includes preventive measures against natural disasters, ensuring greater ecosystem stability and resilience (Adamowicz, 2021).

For the effective promotion of sustainable development, further research is needed on the synergies between the green economy, the circular economy, and the other aforementioned categories (D'Amato et al., 2017).

The level of greening the economy can be monitored using sets of environmental and social indicators (Ryszawska, 2019; Ryszawska et al., 2021). Polish public statistics, drawing from the achievements of organisations such as the Organisation for Economic Co-operation and Development (OECD), the United Nations Environment Programme (UNEP), and the European Environment Agency (EEA) (European Environment Agency, 2022), have undertaken activities aimed at adapting the concept of the green economy to national realities, defining its key areas, and developing a set of indicators enabling its monitoring. The agency collects and publishes 225 "environmental indicators" divided into five main thematic groups: climate change, air pollution, water, biodiversity, and waste and resources. These indicators serve to assess and monitor the state of the environment and the progress of ecological policy implementation in EU countries (European Environment Agency, 2022).

In its regularly published *Indicators of the Green Economy in Poland* (GUS, 2022, 2024b), Statistics Poland (GUS) applies four categories of environmental indicators. These allow for a comprehensive analysis of the level of implementation of green economy principles (GUS, 2022; GUS, 2024b):

- 1. Natural capital indicators covering areas such as climate change, sustainable use of natural resources, and the management of forest and mineral resources. For example, the water productivity indicator measures the efficiency of water resource management. In Poland in 2023, this indicator amounted to 392 PLN/m³, representing a 25.5% increase compared to the previous year and a 475.7% increase compared to 2000 (GUS, 2024b). A significant element of natural capital also includes timber resources, whose volume reached 2,696.3 million m³ gross between 2019 and 2023, a 17% increase compared to 2005–2009 (GUS, 2024b).
- 2. Environmental production efficiency indicators relating to resource management, greenhouse gas emissions, and raw material consumption. For instance, in 2023, Poland's resource productivity indicator amounted to 4.69 PLN/kg, marking a significant increase compared to 1.65 PLN/kg in 2000 (GUS, 2024b). Suspended particulate matter emissions (PM10 and PM2.5) in 2022 were the lowest since 2000, at 9.4 kg and 6.9 kg per capita, respectively (GUS, 2024b).
- 3. Indicators of environmental quality of life, measuring social well-being, health status, and access to resources. This category reflects the impact of the environment on the quality of life of citizens, taking into account factors such as access to clean water, air quality, and green spaces. In 2022, air quality improvement and reduced road noise in cities were noted over the last five years, the share of people exposed to excessive noise decreased by 12.2 percentage points during the day and 7.1 percentage points at night (GUS, 2024b).
- 4. Economic policy and impact indicators, covering actions aimed at developing the green economy. In 2023, the value of green public procurement in Poland amounted to 11.9 billion PLN, representing 4.3% of the total value of public procurement. Although the number of green procurements increased by 22% compared to the previous year, their value decreased by 30.6% (GUS, 2024b). The number of organic farms grew to 22.4 thousand, with their area reaching 636 thousand hectares, accounting for 4.3% of agricultural land in Poland (GUS, 2024b).

In addition, Statistics Poland (GUS) regularly publishes other reports concerning issues related to the green economy. Information on this topic can be found, for example, in the *Statistical Yearbook of the Republic of Poland* (GUS, 2024c) and *Economic Aspects of the Environment* (GUS, 2024a). The data contained in these publications enable not only the analysis of economic growth but also a broader assessment of socio-economic development. In other words, the green economy indicators used by GUS have a wider application than merely analysing increases in national production and income. They also allow for a more detailed assessment of how economic growth impacts people's quality of life, the environment, and the sustainable use of resources. In this way, these indicators provide a more comprehensive picture of a country's development, considering both economic and environmental aspects as well as social well-being.

The implementation of the concepts of sustainable development and the green economy not only contributes to environmental protection but can also support national income growth (GDP). According to OECD analyses, if the current economic development model, primarily based on the use of fossil fuels, were to continue, greenhouse gas emissions would increase by as much as 50% between 2010 and 2050. This would result in, among other things, a doubling of premature deaths to 3.6 million annually, a 55% increase in water demand, and a decline in biodiversity (OECD, 2012; OECD, 2021). In 2023, the OECD launched the "Net Zero+" project aimed at accelerating climate action and

building economic resilience. This project outlines 12 steps for governments to strengthen climate and economic resilience (OECD, 2024a, 2024b).

Current data on the progress of EU countries in implementing the green economy can be found in the *European Innovation Scoreboard* for 2023. This report identifies Denmark as the innovation leader, ahead of Sweden, Finland, the Netherlands, and Belgium. Poland, classified as an "emerging innovator," ranks below the EU average in terms of innovation. Although Poland has made progress compared to previous years, it remains in the group of countries with lower levels of innovation (Adamowicz, 2021; European Commission, 2023).

However, Poland achieves slightly better results in rankings related to GDP level and the Human Development Index (HDI) than in the green economy index. According to 2023 data, GDP per capita in Poland was USD 17,270, placing the country 21st among EU member states (Miniterstwo Aktywów Państwowych, 2023). In the latest HDI ranking, Poland ranked 34th, qualifying as a country with a very high level of social development (The Facts Institute, 2024). Earlier studies from 2013 concerning the synthetic green economy index placed Poland 20th among EU countries, indicating a lower level of advancement in implementing the green economy compared to its GDP and HDI results (Dual Citizen LLC, 2013).

In 2021, the European Commission, as part of the European Green Deal, adopted the "Fit for 55" legislative package aimed at reducing greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels (European Council, 2021). In the context of municipal waste recycling, the "Fit for 55" package does not introduce new targets in this area. The existing targets were set out in Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018, which obliges Member States to achieve a 55% municipal waste recycling rate by 2025, 60% by 2030, and 65% by 2035 (European Council, 2018).

Regarding the share of renewable energy sources (RES) in gross final energy consumption, the "Fit for 55" package initially proposed increasing this share to 40% by 2030. However, in June 2022, the European Commission proposed raising this target to 45% under the REPowerEU plan, aimed at accelerating the energy transition and reducing dependence on fossil fuel imports (European Council, 2022).

Thus, the "Fit for 55" package foresees a 55% reduction in greenhouse gas emissions by 2030 compared to 1990 levels. Furthermore, it plans to increase the share of renewable energy sources (RES) in gross energy consumption to 42.5%, with the possibility of raising this target to 45% under the REPowerEU plan. The municipal waste recycling targets remain unchanged at 60% by 2030 (Czerniak et al., 2022).

Implementation of Green Practices as a Factor of Organisational Maturity in Family Businesses

Traditionally, an enterprise is defined as a basic economic unit, legally, organisationally, and economically distinct, tasked with producing goods or providing services. It is a collection of people and production resources working together to generate profits and meet social needs. However, Polish legislation places more emphasis on the entrepreneur rather than the enterprise (Act, 2004b), highlighting the key role of the owner as the driving force behind the company.

At the enterprise level, management involves the efficient use of available resources through rational decisions that support the achievement of defined goals and tasks. Human resources – employees – and financial resources play a key role here, often determining the direction of investments and organisational development (Koźmiński & Piotrowski, 2013; Griffin, 2017; Szczepańska & Kosiorek, 2022).

A particular type of enterprise is the family business, defined by the combination of family and business spheres. Despite numerous calls for a formal definition of family businesses (e.g., by the Supreme Audit Office in Poland), most countries, including Poland, lack clear legal regulations or statistics from GUS (Statistics Poland) or Eurostat that cover this category. Practical definitions of family businesses applied for specific legal contexts vary but generally refer to ownership structures and management forms where the family plays a key role. Family businesses are not only the oldest form of economic activity but also among the most widespread – accounting for 80–90% of all busi-

nesses in the United States and Canada and 70–80% in the European Union (around 60% in Poland, due to the historical command-and-distribution system during the post-war period) (Jeżak, 2016; Zellweger, 2014).

Most research on green management focuses on large corporations, overlooking the specificity of family businesses, their rootedness in tradition, and their local ties. Both family and non-family businesses can exhibit "greenness," although family businesses often stand out in many respects compared to other economic entities. These businesses frequently demonstrate a stronger sense of responsibility for the company and its employees, closer ties with staff and customers, and resilience during recessions due to a willingness to make personal sacrifices. On the other hand, family businesses are characterised by investment caution, a tendency to avoid external managers, and adherence to traditional technologies and management methods. This kind of conservatism often limits innovation and openness to pro-environmental actions, which is particularly evident in smaller family enterprises. Excessive caution can serve as a barrier to adapting to contemporary sustainability requirements and ecological standards, affecting their interest in environmental protection (Sobiecki et al., 2014; Lajstet et al., 2017).

A topic frequently addressed in current research on organisational culture in the context of ecological issues is the aforementioned green human resource management (Szczepańska & Kosiorek, 2022). Drawing more specific conclusions about the correlation between the family-owned nature of an enterprise and its openness to implementing the principles of green human resource management, however, requires further empirical research.

One domain in which a family-owned green enterprise can operate is organic farming and local food production. Such businesses are often run across generations and maintain strong ties with the local community (Zegar, 2012). An example of a green approach in such firms is the use of regenerative farming methods that improve soil quality, reduce erosion, and contribute to carbon dioxide sequestration. These farms may also implement water recycling-based irrigation systems, which are more environmentally friendly and cost-effective. Thanks to their reputation within the local community, family-owned farms can effectively promote eco-friendly products, gaining loyal customers who value healthy food (Walaszczyk & Radziński, 2016; Trajer & Krzyżanowska, 2017; Frąc et al., 2022).

In the case of family-owned artisan firms, such as furniture or clothing manufacturers, green management may involve the use of materials from certified renewable sources or recycled materials. The company may also introduce processes that reduce waste, such as using leftover materials to produce smaller items or accessories. This type of approach enhances brand value and attracts customers seeking products manufactured in accordance with sustainable development principles (Seliger, 2012; Akademia ESG, 2024; AMS, 2024).

The green economy is shaped by green enterprises, characterised by lower-than-average greenhouse gas emissions as well as high resource and energy efficiency, achieved especially through the use of renewable energy sources (KPMG, 2023). A key criterion for recognising an enterprise as "green" is the implementation of an environmental management system compliant with ISO 14000 standards or the EMAS (Eco-Management and Audit Scheme) system (Act, 2004a; Ministerstwo Klimatu i Środowiska, 2025). However, the number of enterprises meeting these requirements has been relatively small so far, which is why simply reducing emissions and implementing initiatives in the areas of recycling, land reclamation, etc., has been used as a benchmark for greenness.

Environmental activities within an enterprise can be divided into four main levels, where management incorporates pro-environmental elements consistent with ecological policy principles (Szyja, 2013; Dubel & Trela, 2019; Andryeyeva et al., 2020):

- 1. Adherence to basic legal regulations regarding environmental protection, including provisions specifying emission fees and penalties for exceeding emission standards. These requirements are a key factor motivating enterprises to minimise their negative environmental impact.
- Implementation of environmentally friendly solutions in production and service processes. Such
 mechanisms arise from the European Emissions Trading System (ETS), which motivates companies to reduce greenhouse gas emissions, translating into cost reductions and increased efficiency.
- 3. Introduction of ecological products and services to the market, such as electric vehicles, which serve as alternatives to combustion-engine vehicles. The production of environmentally friendly

goods increases the availability of ecological alternatives on the market, contributing to changes in consumption patterns.

4. Production of goods and provision of services solely in line with environmental protection principles. This stage includes enterprises that completely abandon activities harmful to the natural environment, focusing on creating low-carbon footprint products and services.

These four levels of activities form the framework for effective green management, where the implementation of pro-environmental solutions and products, as well as appropriate resource management (including human resources) and production process organisation, contribute to achieving ecological policy objectives and sustainable development, both at the enterprise level and across the entire economy.

Enterprises classified under the first level of the aforementioned model can hardly be considered ecological or green. It is generally accepted that the designation "green" or "environmentally friendly" applies only to companies that introduce significant changes in their production processes, leading to the creation of products or services with a lower environmental impact, such as eco-friendly cosmetics or environmentally friendly car washes. Two types of such enterprises are distinguished in the classification: green businesses, which focus on developing environmental technologies or using renewable energy sources, and "greening" businesses, which implement ecological solutions in their production processes but do not specialise in environmental technology (Pitelis et al., 2011; Seliger, 2012).

The concept of business greening relates to the implementation of green management systems, conducting environmental audits, and assessing the enterprise's impact on the environment, as well as calculating environmental protection costs in the company's accounting. Additionally, the term "eco-industry", as defined by Eurostat, encompasses economic sectors focused on producing goods and services related to environmental protection, such as technologies reducing pollution, waste, and noise. This sector requires significant investment, reflecting the costs associated with pro-environmental activities (Eurostat, 2016).

Green public procurement, in turn, includes goods, services, and works with reduced environmental impact throughout their life cycle compared to standard alternatives. Such an approach allows for incorporating pro-environmental values into public procurement processes, fostering the development of the green economy (Szyja, 2013).

The concept of green management also pertains to a company's organisational culture, including appropriate human resource management (Coats & Benton, 2016; Konfederacja Lewiatan, 2022; Urbaniak, 2022). In the so-called green human resource management style, emphasis is placed on active employee participation in the decision-making process and daily operations of the company (Różańska-Bińczyk et al., 2020; Urbaniak, 2022; Bętlewska, 2024). An example of a modern approach to management is the so-called teal management style (Laloux, 2014). This concept is particularly well-suited to small and medium-sized family businesses. These enterprises often emphasise values such as autonomy, sustainability, social responsibility, and harmony between business interests and family priorities. The teal style, as a more advanced form of green management, is characterised by a strong focus on collaboration and consultation between management and the team. The three pillars of this management style are as follows:

- A lack of traditional hierarchy enables teams to make decisions and complete tasks independently, which increases employee engagement and responsibility. Employees operate in small, self-managing groups. This approach fosters a more conscious attitude toward sustainable development.
- Organisations following the teal model pursue goals beyond economic profit. Their management
 is focused on long-term outcomes, such as environmental protection or social well-being.
- Creating an appropriate work environment where employees can fully express themselves. This
 should include consideration of economic, health, and social needs, as well as ecological values
 (Laloux, 2014; Blikle, 2016; Sulich & Rutkowska, 2020).

Green workplaces are a visible manifestation of green management in companies. They are associated with professions that actively contribute to environmental protection and preventing the effects of climate change. Definitions of these workplaces, published by organisations such as the International Labour Organisation (ILO), the United Nations Environment Programme (UNEP), and the European Commission, evolve with social and economic development, reflecting changes in ecological services and end products (UNEP, 2008; ILO, 2015; European Commission, 2014).

Definitions of green jobs emphasise that these are positions that contribute to protecting or restoring the natural environment around enterprises by reducing the consumption of raw materials, energy, and water, limiting waste and pollution, decarbonisation, and protecting biodiversity. Moreover, such jobs are meant to provide decent living and working conditions. The European Commission points out that these jobs ultimately reduce the environmental impact of companies to a level deemed sustainable, in line with standards and recommendations (European Commission, 2014). The necessity of applying production processes and technologies that require fewer resources is also highlighted, as they bring tangible environmental benefits while supporting sustainable development (Instytut Analiz Rynku Pracy, 2022).

Creating green jobs within companies and business chambers is an important task for management, which must engage appropriately qualified specialists with ecological competencies (Sulich & Kozar, 2024). Such specialists should possess the skills to implement ecological standards, ensure environmental safety, and adapt activities to the specific nature of a given industry (Coats & Benton, 2016; Urbaniak, 2022). These specialists should also exhibit pro-environmental behaviours in their daily work, serving as examples for the entire organisation (Konfederacja Lewiatan, 2022).

In addition to ensuring a friendly work environment, the literature extensively describes the competencies required of environmental specialists and the principles of green recruitment and selection of such employees. Green human resource management principles include defining key competencies and developing recruitment strategies for employees with ecological skills and attitudes (Bugdol & Stańczyk, 2021).

Conclusion

Based on the literature review, at least four approaches to green management in contemporary enterprises can be identified. These approaches differ in terms of objectives, methods of implementation, and the benefits they provide:

- Strategies for reducing greenhouse gas emissions through modernising production processes
 and using more environmentally friendly technologies. An example is farms employing regenerative agriculture methods that improve soil quality and reduce carbon dioxide emissions. Implementing water recycling-based irrigation systems is another example of effective use of natural
 resources.
- 2. Implementation of technologies based on renewable energy sources. This allows for a reduction in CO_2 emissions and lower energy costs. Moreover, production plants that introduce energy management systems not only improve energy efficiency but also enhance the company's image, attracting environmentally conscious customers.
- 3. Promotion of sustainable business models, such as circular economy strategies or initiatives supporting local communities, including collaboration with regional suppliers.
- 4. Green human resource management, encompassing practices such as training on pro-environmental activities, appropriately designed workplaces, and programmes promoting engagement in environmental initiatives. For instance, tree-planting events involving employees and their families simultaneously build a culture of sustainable development and strengthen internal relationships.

The aforementioned strategies can be implemented in both family and non-family businesses. However, the unique characteristics of family firms make the prospects of adopting green management in such entities particularly worthy of discussion. Family businesses are distinguished by a long-term management perspective, strong ties with local communities, and the transfer of values from generation to generation. These features mean that the implementation of green management in such firms often stems from a sense of responsibility for the environment and future generations, rather than purely economic considerations.

The implementation of green management can support the organisational maturity of family businesses. Through strategies such as a circular economy or green human resource management, these enterprises develop their ability to adapt and respond to the challenges of the modern world. Long-term investments in renewable energy sources require advanced strategic planning and effective change management – traits that are fundamental to organisational maturity. In this way, green

management becomes a catalyst for the transformation of businesses into more organised and environmentally conscious structures. The role of green management in building competitive advantage stems from the unique combination of family values and ecological initiatives. Customers increasingly prefer companies that engage in environmental protection, enabling the attraction of new clients and enhancing market attractiveness. Such firms often have greater flexibility in decision-making, facilitating faster responses to changing regulatory requirements.

In family businesses, involvement in the green economy derives from values passed down through generations. Owners of these enterprises may invest in energy- and resource-saving technologies. Caring for the natural environment can also foster relationships with the local community. This approach enhances the company's reputation and social impact, which is particularly important for businesses planning to pass the enterprise on to future generations. It can thus be assumed that green management contributes to the longevity of family businesses by building lasting foundations aligned with family values, such as responsibility, concern for future generations, and relationships with local communities. A sustainable approach also promotes effective risk management associated with ecological or social crises. Green management can serve as a tool for improving operational efficiency and a factor enhancing organisational maturity, competitive advantage, and the longevity of family businesses. Future research should detail how these elements are interconnected and identify mechanisms that enable the full utilisation of the potential of green management.

Acknowledgements

This publication has been financed from the funds of Krakow University of Economics.

References

- Act from 12 March 2004a. Act of eco-management and audit system. Journal of Laws No. 70, item 631. https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20040700631 (in Polish).
- Act from 2 July 2004. Act on freedom of economic activity. Journal of Laws No. 173, item 1807. https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=wdu20041731807 (in Polish).
- Adamowicz, M. (2021). Zielona gospodarka, zielony wzrost i zazielenienie jako formy realizacji koncepcji zrównoważonego rozwoju. Wieś i Rolnictwo, 2(191), 13-33. https://doi.org/10.53098/wir022021/01 (in Polish).
- Akademia ESG. (2024). Zielone trendy w biznesie. Jak firmy walczą o zrównoważony wizerunek? https://akademiaesg.pl/zielone-trendy-w-biznesie-jak-firmy-walcza-o-zrownowazony-wizerunek (in Polish).
- AMS. (2024). EKO świadomość w wyborach konsumentów. Warszawa: AMS. (in Polish).
- Andryeyeva, N., Tiutiunnyk, H., Burkynskyi, B., Khumarova, N., & Kupinets, L. (2020). Methodological Approach of Investment and Innovation Regional Environmental Policy Using the Smart Specialization and Quintuple Helix Models. Economics and Environment, 74(3), 28. https://ekonomiaisrodowisko.pl/journal/article/view/24
- Armstrong, M. (2011). Zarządzanie zasobami ludzkimi. Warszawa: Wolters Kluwer Polska. (in Polish).
- Bętlewska, J. (2024). Green HRM jako sposób na zrównoważony rozwój. Studia i Prace Kolegium Zarządzania i Finansów, 196, 149-159. https://doi.org/10.33119/SIP.2024.196.11
- Blikle, A. (2016). *Turkusowa organizacja XXI wieku*. https://moznainaczej.com.pl/Download/WykladyUzupelnia-jace/A.Blikle_Turkusowa_firma_XXI_wieku.pdf (in Polish).
- Bugdol, M., & Stańczyk, I. (2021). Zielone zarządzanie ludźmi. Warszawa: Difin. (in Polish).
- Carson, R. (2002). Silent spring. Boston: Mariner Books.
- Coats, E., & Benton, D. (2016). Rynek pracy a gospodarka o obiegu zamkniętym w Europie: Studium możliwości we Włoszech, Polsce i Niemczech. Warszawa: Green Alliance. (in Polish).
- Czerniak, A., Rudziński, L., & Wrona, M. (2022). *Jak Europejski Zielony Ład zmieni konkurencyjność polskich firm.* Warszawa: Fundacja Przyjazny Kraj. (in Polish).
- D'Amato, D., Droste, N., Allen, B., Kettunen, M., Lahtinen, K., Korhonen, J., & Toppinen, A. (2017). Green, circular, bio economy: A comparative analysis of sustainability avenues. Journal of Cleaner Production, 168, 716-734. https://doi.org/10.1016/j.jclepro.2017.09.053
- Dual Citizen LLC. (2013). The Global Green Economy Index (GGEI) 2013: Measuring National Performance in the Green Economy. Washington: Dual Citizen LLC.
- Dubel, A., & Trela, M. (2019). Financial Efficiency Analysis of PV Plants in Poland under the Evolving Support Scheme. Economics and Environment, 71(4), 18. https://ekonomiaisrodowisko.pl/journal/article/view/56

- Ehrlich, P. R. (1995). The population bomb. New York: Buccaneer Books.
- European Commission. (2014). *Green Employment Initiative: Tapping into the job creation potential of the green economy.* Brussels: European Commission.
- European Commission. (2023). European Innovation Scoreboard. https://research-and-innovation.ec.europa. eu/statistics/performance-indicators/european-innovation-scoreboard_en
- European Council. (2018). Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste (Text with EEA relevance). https://eur-lex.europa.eu/eli/dir/2018/851/oj/eng
- European Council. (2021). Fit for 55. https://www.consilium.europa.eu/en/policies/fit-for-55/
- European Council. (2022). Fit for 55: how the EU plans to boost renewable energy. https://www.consilium.europa.eu/en/infographics/fit-for-55-how-the-eu-plans-to-boost-renewable-energy/
- European Environment Agency. (2022). Environmental indicators: Monitoring and assessment in EU countries. Copenhagen: European Environment Agency.
- Eurostat. (2016). Environmental Goods and Services Sector Accounts Practical Guide (2016 edition). Luxembourg: Publications Office of the European Union.
- Frąc, M., Matyka, M., Rozbicki, J., & Tryjanowski, P. (2022). Rolnictwo regeneracyjne koncepcja zrównoważonej produkcji żywności oraz poprawy agroekosystemów. Nauka, 4, 155-164. https://doi.org/10.24425/nauka. 2022.142927 (in Polish).
- Górka, K. (2010a). Kontrowersje terminologiczne w zakresie ekonomiki ochrony środowiska i ekonomii ekologicznej. Ekonomia i Środowisko, 38(2), 10-21. (in Polish).
- Górka, K. (2010b). Kwestie terminologiczne w ewolucji ekonomiki ochrony środowiska. Aura, 11, 10-13. (in Polish).
- Górka, K. (2016). Kontrowersje wokół rozwoju zrównoważonego i trwałego. In *Jakość w biznesie zrównoważony rozwój wyzwania i wymagania* (pp. 5-14). Warszawa: Polskie Forum ISO. (in Polish).
- Górka, K., & Łuszczyk, M. (2014). Zielona gospodarka i gospodarka oparta na wiedzy a rozwój trwały. Optimum. Studia Ekonomiczne, 69(3), 22-31. https://doi.org/10.15290/ose.2014.03.69.02 (in Polish).
- Griffin, R. W. (2017). Podstawy zarządzania organizacjami. Warszawa: Wydawnictwo Naukowe PWN. (in Polish).
- GUS. (2022). Wskaźniki zielonej gospodarki w Polsce. https://bialystok.stat.gov.pl/publikacje-i-foldery/ochrona-srodowiska/wskazniki-zielonej-gospodarki-w-polsce-2022,5,5.html (in Polish).
- GUS. (2023). *Ochrona środowiska 2023*. https://stat.gov.pl/obszary-tematyczne/srodowisko-energia/srodowisko/ochrona-srodowiska-2023,1,24.html (in Polish).
- GUS. (2024a). Ekonomiczne aspekty ochrony środowiska w 2023 roku. https://stat.gov.pl/obszary-tematyczne/srodowisko-energia/srodowisko/ekonomiczne-aspekty-ochrony-srodowiska-2023,14,5.html (in Polish).
- GUS. (2024b). Rocznik Statystyczny Rzeczypospolitej Polskiej 2023. https://stat.gov.pl/obszary-tematyczne/roczniki-statystyczne/roczniki-statystyczny-rzeczypospolitej-polskiej-2023,2,23.html (in Polish).
- GUS. (2024c). Wskaźniki zielonej gospodarki w Polsce 2024 [informacje sygnalne]. https://stat.gov.pl/obszary-tematyczne/srodowisko-energia/srodowisko/wskazniki-zielonej-gospodarki-w-polsce-2024,10,4.html (in Polish).
- Hawken, P. (2010). The ecology of commerce: A declaration of sustainability. New York: HarperBusiness.
- ILO. (2015). Guidelines for a just transition towards environmentally sustainable economies and societies for all. https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@ed_emp/@emp_ent/documents/publication/wcms_432859.pdf
- Instytut Analiz Rynku Pracy. (2022). Zmiany na rynku pracy wynikające z wdrażania koncepcji zrównoważonego rozwoju. https://www.parp.gov.pl/storage/publications/pdf/Zmiany-na-rynku-pracy-wynikajce-z-wdraania-koncepcji-zrwnowaonego-rozwoju.pdf (in Polish).
- Jeżak, J. (2016). Rozwój przedsiębiorczości rodzinnej w Polsce na tle tendencji światowych. Przegląd Organizacji, 915(4), 52-59. https://przegladorganizacji.pl/plik/5e09249706b3d/po.2016.04.08.pdf (in Polish).
- Juszczak, A., & Rabiega, W. (2021). *Green Economy wpływ zielonej ekonomii na klimat gospodarczy.* Warszawa: Polski Instytut Ekonomiczny. (in Polish).
- Konfederacja Lewiatan. (2022). Zielone kompetencje i miejsca pracy w Polsce w perspektywie 2030 roku. Warszawa: Konfederacja Lewiatan. (in Polish).
- Koźmiński, A. K., & Piotrowski, W. (2013). Zarządzanie. Teoria i praktyka. Warszawa: Wydawnictwo Naukowe PWN. (in Polish).
- KPMG. (2023). Raport o stanie zeroemisyjności na świecie. https://kpmg.com/pl/pl/home/insights/2023/11/globalny-krajobraz-klimatyczny-zaprezentowany-w-net-zero-readiness-report.html (in Polish).
- KPMG. (2024). *Transformacja firm rodzinnych w Polsce*. https://kpmg.com/pl/pl/home/insights/2024/08/transformacja-firm-rodzinnych-w-polsce.html (in Polish).
- Lajstet, J., Karwacki, A., Escher, I., Karwacka, M., & Królicka, B. (2017). Firmy rodzinne. Ludzie relacje wartości. Toruń: Wydawnictwo Naukowe UMK. (in Polish).

- Laloux, F. (2014). Reinventing organisations: A guide to creating organizations inspired by the next stage in human consciousness. Brussels: Nelson Parker.
- Meadows, D. H., Meadows, D. L., & Randers, J. (2004). Beyond the limits: Confronting global collapse, envisioning a sustainable future. White River Junction: Chelsea Green Publishing.
- Meadows, D., & Randers, J. (2022). Limits and beyond: 50 years on from The limits to growth, what did we learn and what's next? London: Exapt Press.
- Ministerstwo Aktywów Państwowych. (2023). *Wzrost gospodarczy w Polsce od 2015 r. na tle innych państw Unii Europejskiej*. https://www.gov.pl/web/aktywa-panstwowe/wzrost-gospodarczy-w-polsce-od-2015-r-natle-innych-panstw-unii-europejskiej (in Polish).
- Ministerstwo Klimatu i Środowiska. (2025). System ekozarządzania i audytu EMAS. https://www.gov.pl/web/klimat/emas (in Polish).
- OECD. (2011). Towards Green Growth. Paris: OECD Publishing.
- OECD. (2012). OECD Environmental Outlook to 2050: The Consequences of Inaction. Paris: OECD Publishing.
- OECD. (2021). Green Growth and Economic Recovery. Paris: OECD Publishing.
- OECD. (2024a). Closing in on Net Zero: Background and Issues Explored in Phase Two of the Net Zero+ Project (OECD Net Zero+ Policy Papers No. 1). https://www.oecd.org/content/dam/oecd/en/publications/reports/2024/10/closing-in-on-net-zero_3844482a/bbe55705-en.pdf
- OECD. (2024b). Green Industrial Policies for the Net-Zero Transition (OECD Net Zero+ Policy Papers No. 2). https://www.oecd.org/content/dam/oecd/en/publications/reports/2024/10/green-industrial-policies-for-the-net-zero-transition_1e066699/ccc326d3-en.pdf
- Office of the Federal Register & National Archives and Records Administration. (2009, February 17). *Public Law* 111 5 American Recovery and Reinvestment Act of 2009. [Government]. U.S. Government Printing Office. https://www.govinfo.gov/app/details/PLAW-111publ5
- Pearce, D., Markandya, A., & Barbier, E. (1989). Blueprint for a Green Economy. London: Earthscan.
- Pitelis, C., Keenan, J., & Pryce, V. (Eds.). (2011). Green Business, Green Values, and Sustainability. London: Routledge.
- Różańska-Bińczyk, I., Matejun, M., & Matusiak, B. E. (2020). Praktyki green HR we współczesnych przedsiębiorstwach. In J. Cewińska, A. Krejner-Nowecka & S. Winch (Eds.), *Zarządzanie kapitałem ludzkim wyzwania* (pp. 77-91). Warszawa: Oficyna Wydawnicza SGH. (in Polish).
- Ryszawska, B. (2019). The Role of CSR in the Transition to a Green Economy. In A. Długopolska-Mikonowicz, S. Przytuła & C. Stehr (Eds.), *Corporate Social Responsibility in Poland: Strategies, Opportunities and Challenges* (pp. 105-119). Springer.
- Ryszawska, B., Rozwadowska, M., Ulatowska, R., Pierzchała, M., & Szymański, P. (2021). The Power of Co-Creation in the Energy Transition DART Model in Citizen Energy Communities Projects. Energies, 14(17), 5266. https://doi.org/10.3390/en14175266
- Schumacher, E. F. (2010). Small is beautiful: Economics as if people mattered. New York: Harper Perennial.
- Seliger, G. (Ed.). (2012). Sustainable Manufacturing: Shaping Global Value Creation. Berlin: Springer-Verlag.
- Sobiecki, R., Kargul, A., & Kochanowska, J. (2014). Przedsiębiorstwo rodzinne definicja i stan wiedzy. In R. Sobiecki (Ed.), *Przedsiębiorstwo rodzinne w gospodarce globalnej* (pp. 15-32). Warszawa: Oficyna Wydawnicza SGH. (in Polish).
- Stahel, W. (2019). The Circular Economy: A User's Guide. Londyn: Routledge.
- Sulich, A., & Kozar, Ł. J. (2024). Green Competences: A Review and Future Research in the Context of Green Human Resource Management. Economics and Environment, 89(2), 713. https://doi.org./10.34659/eis.2024.89. 2.713
- Sulich, A., & Rutkowska, M. (2020). Zielony a turkusowy styl zarządzania. Zarządzanie Publiczne, 1(49), 15-31. (in Polish).
- Szczepańsla, K., & Kosiorek, D. (2022). Związki koncepcji zielonego zarządzania zasobami ludzkimi z typami kultur organizacyjnych. Zeszyty Naukowe Wydziału Zarządzania GWSH, 18, 19-28. https://doi.org/10.53259/2022.18.02 (in Polish).
- Szyja, P. (2013). Znaczenie programów Zielonego Nowego Ładu dla rozwoju społeczno-gospodarczego [Doctoral dissertation]. Kraków: Uniwersytet Ekonomiczny. (in Polish).
- Szyja, P. (2015a). Pojęcie, tworzenie i pomiar zielonej gospodarki. Gospodarka w Praktyce i Teorii, 39(2), 21-38. https://doi.org/10.18778/1429-3730.39.02 (in Polish).
- Szyja, P. (2015b). Zielona gospodarka w Polsce stan obecny i perspektywy. Nierówności Społeczne a Wzrost Gospodarczy, 41, 432-447. http://cejsh.icm.edu.pl/cejsh/element/bwmeta1.element.desklight-9bc592bd-503a-42dd-b7a1-890beb983afe (in Polish).
- The Facts Institute. (2024). *Human Development Index (HDI) Country Rankings 2024.* https://factsinstitute.com/ranking/human-development-index
- Tomala, J., & Urbaniec, M. (2024). Towards Sustainable Development in the European Union: A Critical Raw Materials Perspective. Economics and Environment, 88(1), 654. https://doi.org/10.34659/eis.2024.88.1.654

- Trajer, M., & Krzyżanowska, K. (2017). Rolnictwo ekologiczne w Polsce i perspektywy jego rozwoju w kontekście PROW 2014–2020. Turystyka I Rozwój Regionalny, (8), 115-126. https://doi.org/10.22630/TIRR.2017.8.24 (in Polish).
- UNEP. (2008). *Green Jobs: Towards decent work in a sustainable, low-carbon world*. Nairobi: United Nations Environment Programme.
- UNEP. (2011). Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication. Nairobi: United Nations Environment Programme.
- UNEP. (2012). *Future We Want Outcome document*. https://sustainabledevelopment.un.org/futurewewant.html UNEP. (2023). *Annual Report 2023: Keeping the Promise*. Nairobi: United Nations Environment Programme.
- Urbaniak, B. (2022). Zielone zarządzanie zasobami ludzkimi czy i w jaki sposób zarządzanie zasobami ludzkimi może wspierać efektywność ekologiczną firmy? In. M. Burchard-Dziubińska (Ed.), *W poszukiwaniu zielonegoładu* (pp.114-131).Łódź: Wydawnictwo UniwersytetuŁódzkiego. https://doi.org/10.18778/8220-870-2.06 (in Polish).
- Walaszczyk, A., & Radziński, W. (2016). Zarządzanie ekologicznymi gospodarstwami rolnymi w Polsce badania własne uzupełnione o przykłady międzynarodowe. Zeszyty Naukowe SGGW w Warszawie Problemy Rolnictwa Światowego, 16(3), 362-370. https://doi.org/10.22630/PRS.2016.16.3.91 (in Polish).
- World Commission on Environment and Development. (1987). *Our Common Future*. https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf
- Zegar, J. S. (2012). Gospodarstwa rodzinne wobec wyzwań wyżywienia i ochrony środowiska ujęcie globalne. Wieś i Rolnictwo, 4(157), 53-74. https://doi.org/10.53098/wir.2012.4.157/03 (in Polish).
- Zellweger, T. (2014). Managing the Family Business. Theory and Practice. Cheltenham: Edward Elgar Publishing.

Agnieszka THIER

WDRAŻANIE ZIELONEGO ZARZĄDZANIA JAKO POTENCJALNY CZYNNIK DOJRZAŁOŚCI ORGANIZACYJNEJ W PRZEDSIĘBIORSTWACH RODZINNYCH

STRESZCZENIE: Celem artykułu jest analiza koncepcji zielonego zarządzania, ze szczególnym uwzględnieniem jej zastosowania w przedsiębiorstwach rodzinnych. Praca podkreśla rolę zielonego zarządzania jako czynnika wspierającego dojrzałość organizacyjną, przewagę konkurencyjną oraz długowieczność firm rodzinnych. W oparciu o systematyczną analizę literatury polskiej i międzynarodowej, a także kluczowych raportów organizacji takich jak UNEP i OECD, zidentyfikowano cztery główne podejścia do zielonego zarządzania: strategie redukcji emisji, wdrażanie technologii odnawialnych, promowanie zrównoważonych modeli biznesowych oraz zielone zarządzanie zasobami ludzkimi. W artykule zwrócono uwagę na unikalne cechy przedsiębiorstw rodzinnych, takie jak długoterminowa perspektywa zarządzania, przekazywanie wartości międzypokoleniowych oraz silne więzi z lokalnymi społecznościami, które czynią je szczególnie predysponowanymi do wdrażania praktyk proekologicznych. Jednocześnie wskazano na bariery, takie jak konserwatyzm finansowy i opór wobec innowacji, które mogą utrudniać implementację strategii środowiskowych. Wnioski artykułu dostarczają zarówno podstaw teoretycznych, jak i praktycznych wskazówek, podkreślając potrzebę dalszych badań empirycznych nad synergicznym związkiem pomiędzy zielonym zarządzaniem a specyfiką przedsiębiorstw rodzinnych.

SŁOWA KLUCZOWE: zielona gospodarka, rozwój trwały i zrównoważony, Europejski Zielony Ład, odnawialne źródła energii, jakość życia