SILESIAN UNIVERSITY OF TECHNOLOGY PUBLISHING HOUSE

SCIENTIFIC PAPERS OF SILESIAN UNIVERSITY OF TECHNOLOGY 2023
ORGANIZATION AND MANAGEMENT SERIES NO. 177

COMPARISION OF TRADITIONAL AND SUSTAINABLE BUSINESS PRACTICES

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Purpose: The goal of the paper is to analyze the differences between traditional and sustainable business practices.
Design/methodology/approach: Critical literature analysis. Analysis of international literature from main databases and polish literature and legal acts connecting with researched topic.
Findings: The main principles of sustainable business practices include the Triple Bottom Line principle, which considers people, planet, and profit; environmental stewardship; social responsibility; stakeholder engagement; long-term thinking; innovation and collaboration; transparency; and proactive compliance. These principles guide organizations in integrating sustainability into their strategies and decision-making processes. Traditional business practices, focused on short-term profitability, often neglect the environment and society. In contrast, sustainable business practices emphasize long-term value creation, balance economic, environmental, and social considerations, and actively mitigate environmental and social impacts. They prioritize resource efficiency, eco-friendly technologies, fair labor practices, and stakeholder engagement. Sustainable practices also embrace innovation, transparency, and proactive compliance.
Originality/value: Detailed analysis of all subjects related to the problems connected with the relation between traditional and sustainable business practices.

Keywords: Industry 4.0; business practices, sustainability, sustainable business, sustainable business practices, CSR, environment.

Category of the paper: literature review.

1. Introduction

Sustainable business practices refer to the strategic integration of environmental, social, and economic considerations into the core operations and decision-making processes of a business entity. This concept is rooted in the understanding that businesses have a responsibility to not

only generate profit but also mitigate their negative impacts on the environment and society, while simultaneously creating long-term value for stakeholders.

The goal of the paper is to analyze the main differences between traditional and sustainable business practices.

2. Sustainable business practices- main concepts

From an environmental standpoint, sustainable business practices entail the adoption of strategies and initiatives aimed at minimizing resource consumption, reducing greenhouse gas emissions, and conserving biodiversity. This includes implementing energy-efficient technologies, promoting the use of renewable energy sources, managing waste effectively through recycling and waste reduction measures, adopting sustainable supply chain practices, and considering the entire life cycle of products, from design to disposal (Liu et al., 2023).

The social dimension of sustainable business practices involves recognizing and addressing the broader societal impacts of business activities (Sułkowski, Wolniak, 2015, 2016, 2018; Wolniak, Skotnicka-Zasadzień, 2008, 2010, 2014, 2018, 2019, 2022; Wolniak, 2011, 2013, 2014, 2016, 2017, 2018, 2019, 2020, 2021, 2022; Gajdzik, Wolniak, 2023; Michalak, Wolniak, 2023). This includes ensuring fair labor practices, providing safe and healthy working conditions, promoting diversity and inclusion within the workforce, supporting local communities through philanthropic activities, and engaging in responsible marketing and consumer education. Businesses are encouraged to foster positive relationships with stakeholders such as employees, customers, suppliers, and communities, taking into account their needs and concerns (Cerciello et al., 2023).

Economically, sustainable business practices recognize that long-term profitability is closely linked to environmental and social performance. By implementing sustainability measures, businesses can achieve cost savings through improved resource efficiency, reduced waste generation, and enhanced operational efficiency. Additionally, sustainable practices contribute to building a positive brand reputation, increasing customer loyalty, and accessing new markets that prioritize sustainability (Wolniak, 2016; Czerwińska-Lubszczyk et al., 2022; Drozd, Wolniak, 2021; Gajdzik, Wolniak, 2021, 2022; Gębczyńska, Wolniak, 2018, 2023; Grabowska et al., 2019, 2020, 2021). While there may be initial investment costs associated with implementing sustainable practices, the potential for long-term economic benefits outweighs these costs (Sani, Garg, 2023).

The main principles of sustainable business practices encompass a holistic approach that considers the economic, environmental, and social dimensions of business operations. These principles guide organizations in integrating sustainability into their strategies, decision-

making processes, and daily practices. Here are the key principles of sustainable business practices (Moghrabi et al., 2023; george et al., 2022; Das et al., 2021; D'Adamo et al., 2022):

- The Triple Bottom Line (TBL) principle emphasizes the consideration of three interconnected dimensions: people, planet, and profit. It entails measuring organizational performance not only in terms of financial profitability but also by assessing social and environmental impacts. By striving for a balance between these three bottom lines, businesses can create long-term value and contribute to sustainable development.
- Sustainable business practices prioritize environmental stewardship by minimizing negative impacts on natural resources, ecosystems, and climate. Organizations commit to reducing their carbon footprint, conserving energy and water resources, adopting sustainable sourcing and production practices, promoting waste reduction and recycling, and integrating environmental considerations into product design and lifecycle management.
- Social responsibility entails actively addressing the well-being and interests of various stakeholders, including employees, customers, local communities, and society at large. Sustainable businesses prioritize fair labor practices, safe working conditions, diversity and inclusion, ethical sourcing, and human rights. They also engage in philanthropic activities, support community development, and contribute to the advancement of social causes.
- Sustainable businesses recognize the importance of stakeholder engagement in decision-making processes. They actively involve employees, customers, suppliers, investors, local communities, and NGOs in shaping business strategies, policies, and practices. By soliciting input, fostering collaboration, and considering diverse perspectives, organizations can align their actions with stakeholder expectations, build trust, and ensure accountability.
- Sustainable business practices focus on long-term thinking rather than short-term gains. Organizations consider the potential social, environmental, and economic impacts of their decisions and actions over time. By prioritizing the long-term well-being of stakeholders and the planet, businesses can ensure their own resilience, adaptability, and continued success in a rapidly changing world.
- Sustainable businesses embrace innovation and collaboration as drivers of positive change. They seek innovative solutions to sustainability challenges, develop new technologies, and implement sustainable practices across their value chains. Collaboration with stakeholders, industry peers, academia, and governments enables the sharing of best practices, knowledge exchange, and collective efforts to address complex sustainability issues.

- Transparency is a vital principle of sustainable business practices. Organizations are encouraged to disclose information about their sustainability performance, goals, targets, and progress. Transparent reporting allows stakeholders to assess the environmental and social impacts of a business, fostering accountability and trust. Adhering to recognized reporting frameworks, such as the Global Reporting Initiative (GRI) or Sustainability Accounting Standards Board (SASB), helps ensure consistency and comparability.
- Sustainable businesses go beyond mere regulatory compliance by proactively identifying and addressing sustainability challenges. They adhere to applicable laws and regulations while also striving to exceed minimum requirements and anticipate future sustainability standards. By adopting voluntary initiatives, industry certifications, and best practices, organizations demonstrate their commitment to continuous improvement and responsible business conduct.

By embracing these principles, businesses can drive positive change, mitigate risks, enhance reputation, and create shared value for all stakeholders. Sustainable business practices not only contribute to a more sustainable future but also foster innovation, resilience, and long-term profitability.

3. Sustainable and traditional business practices

Business practices play a crucial role in shaping the economic, environmental, and social landscape of our society. Traditional business practices have long been focused on short-term profitability and financial gains, often neglecting the broader impacts on the environment and society (Jonek-Kowalska, Wolniak, 2021, 2022; Jonek-Kowalska et al., 2022; Kordel, Wolniak, 2021, 2023; Rosak-Szyrocka et al., 2023; Gajdzik et al., 2023; Orzeł, Wolniak, 2021, 2022; Ponomarenko et al., 2016; Stawiarska et al., 2020, 2021; Stecuła, Wolniak, 2022; Olkiewicz et al., 2021; Wolniak, 2013, 2016; Hys, Wolniak, 2018). In contrast, sustainable business practices aim to strike a balance between economic prosperity, environmental stewardship, and social responsibility. This chapter delves into the significant differences between traditional and sustainable business practices, highlighting their implications and emphasizing the transformative potential of adopting sustainable approaches (Anaman et al., 2023).

From economic perspective traditional business practices prioritize immediate profit maximization and often overlook the long-term implications. On the other hand, sustainable business practices recognize the value of long-term thinking and take a holistic approach by considering the triple bottom line - people, planet, and profit. Sustainable practices have been shown to generate economic benefits through cost savings achieved via resource efficiency, waste reduction, and energy conservation. Moreover, sustainable businesses enjoy enhanced

brand reputation and customer loyalty, providing access to new markets and emerging opportunities (Sanchez-Planelles et al., 2022).

In the case of environmental impact traditional business practices tend to be resource-intensive, resulting in excessive consumption, waste generation, and pollution. Sustainable business practices, however, embrace the concept of environmental stewardship. They prioritize resource conservation, employ eco-friendly technologies, and actively seek to reduce their carbon footprint. Sustainable practices integrate renewable energy sources, implement sustainable supply chain management, and adopt eco-design principles that consider the entire lifecycle of products. By doing so, they mitigate environmental impacts and contribute to the preservation of natural resources and biodiversity (Lathabhavan, 2022).

The next important factor is connected with social responsibility. Traditional business practices often exhibit limited social responsibility, focusing primarily on profit generation and neglecting the welfare of employees and communities. In contrast, sustainable business practices recognize the importance of social responsibility. They foster employee well-being, promote diversity and inclusion, ensure fair labor practices, and provide safe and healthy working conditions. Sustainable businesses actively engage with local communities, supporting their development through philanthropic activities, responsible marketing, and ethical sourcing. By prioritizing social responsibility, sustainable practices foster positive relationships with stakeholders and contribute to the overall welfare of society (Yacob et al., 2022).

In the case of stakeholders engagement traditional business practices typically involve minimal stakeholder engagement beyond immediate customers and investors. In contrast, sustainable business practices embrace stakeholder engagement as a core principle. They actively involve employees, customers, suppliers, and local communities in decision-making processes, seeking their input and considering their concerns. Sustainable businesses prioritize transparent communication, accountability, and collaboration with stakeholders, recognizing the importance of their perspectives and needs. This engagement fosters trust, enhances reputation, and ensures the alignment of business practices with the broader societal context (Jananipriya, Usha, 2022).

The long-term visibility also differs traditional and sustainable business practices. Traditional business practices often face challenges in a rapidly changing business landscape. Their focus on short-term gains can hinder adaptation to emerging trends and market demands. In contrast, sustainable business practices demonstrate resilience and long-term viability. They anticipate regulatory changes, proactively comply with evolving standards, and embrace innovations that align with sustainability principles. Sustainable businesses possess the agility to respond to emerging challenges and capitalize on sustainability-driven opportunities, thereby securing their long-term success (Singh et al., 2022).

In the table 1 there is a detailed analysis of differences between traditional and sustainable business practices.

Table 1.
Comparison of traditional and sustainable business practices

Traditional Business Practices	Sustainable Business Practices
Focus primarily on short-term profitability and financial gains	Emphasize long-term value creation and consider the triple bottom line (people, planet, profit)
Primarily driven by profit maximization	Balance economic, environmental, and social considerations
Resource-intensive and inefficient	Strive for resource efficiency and conservation
Limited consideration for environmental impacts	Actively mitigate and reduce environmental impacts
Minimal social responsibility and stakeholder engagement	Engage stakeholders and address social and community needs
Linear production and consumption models	Promote circular economy principles and sustainable supply chain practices
Reactive approach to regulations and compliance	Proactive compliance and go beyond regulatory requirements
Short-term cost savings prioritized	Recognize the long-term economic benefits of sustainable practices
Lack of transparency and accountability	Transparent reporting and accountability for sustainability performance
Limited consideration for social and environmental risks and opportunities	Identify and capitalize on social and environmental risks and opportunities
Emphasis on individualistic decision-making	Collaborative decision-making involving stakeholders and considering diverse perspectives
Single bottom line (financial performance)	Triple bottom line approach (people, planet, profit)
Extractive approach to natural resources	Conservation and responsible use of natural resources
Reactive approach to social and environmental issues	Proactive identification and mitigation of social and environmental risks
Focus on short-term customer satisfaction	Prioritization of long-term customer relationships and satisfaction
Limited innovation and adaptation to changing market needs	Focus on innovation and adaptation to address sustainability challenges and market demands
Limited consideration for employee well-being and development	Employee-centric approach, promoting well-being, diversity, and professional growth
Lack of engagement with local communities	Active engagement with local communities, addressing their needs and supporting their development
Limited transparency and disclosure	Transparent reporting of environmental, social, and governance (ESG) performance
Minimal consideration for climate change and carbon emissions	Efforts to reduce carbon footprint and mitigate climate change impacts
Inefficient use of energy and water resources	Implementation of energy and water efficiency measures
Focus on short-term cost reduction	Long-term cost savings through resource efficiency and waste reduction
Risk of reputational damage from unsustainable practices	Enhanced reputation and brand value through sustainable practices
Ignoring potential regulatory and legal risks	Proactive compliance with regulations and anticipation of future requireme

Source: Authors own work on the basis of: George et al., 2022; Das et al., 2021; Lathabhavan, 2022; Singh et al., 2022; Cerciello et al., 2023; Liu et al., 2023; Pietro et al., 2021.

The differences between traditional and sustainable business practices are significant and far-reaching. Sustainable practices encompass a broader perspective, taking into account the economic, environmental, and social dimensions of business operations. By adopting sustainable practices, businesses can achieve not only financial success but also contribute to the well-being of the planet and society. The transformation towards sustainability is not only an ethical imperative but also a pathway to resilience and long-term viability. It is crucial for

businesses to recognize the profound implications of sustainable practices and actively embrace them, playing a vital role in creating a sustainable and prosperous future for all.

4. Examples of sustainable business practices

Sustainable business practices have gained increasing recognition as organizations strive to address environmental and social challenges while pursuing long-term profitability. This chapter highlights exemplary examples of sustainable business practices implemented by companies across various industries. These examples demonstrate how businesses can successfully integrate sustainability into their core operations, contributing to positive environmental outcomes, social well-being, and economic prosperity. The examples of selected sustainable business practices were described in the table 2.

Table 2.
Examples of sustainable business practices

Organization	Type of sustainable practice	Description
Patagonia	Embracing Environmental Stewardship	Patagonia, an outdoor clothing company, exemplifies a commitment to environmental sustainability. They have implemented innovative practices, such as using recycled materials, reducing waste through repair and recycling programs, and advocating for fair labor practices throughout their supply chain. Patagonia's transparency and efforts to raise awareness about environmental issues set them apart as a leader in sustainable business practices.
Interface	Leading the Path to a Circular Economy	Interface, a global carpet tile manufacturer, has made substantial progress in transitioning to a circular economy. They introduced a product take-back program, enabling the recycling and reuse of old carpet tiles. Interface also focuses on sustainable sourcing, energy-efficient manufacturing processes, and carbon-neutral operations. Their "Mission Zero" commitment demonstrates how sustainable business practices can drive innovation and profitability while minimizing environmental impact.
Unilever	Driving Sustainable Consumption	Unilever, a multinational consumer goods company, has embarked on a sustainability journey encompassing their entire value chain. They have set ambitious goals for reducing their environmental footprint, promoting responsible sourcing, and improving the well-being of billions of people worldwide. Unilever's Sustainable Living Plan showcases their dedication to sustainable business practices and serves as a model for engaging consumers in making sustainable choices.
Tesla	Revolutionizing the Automotive Industry	Tesla, an electric vehicle manufacturer, has revolutionized the automotive industry with its sustainable business practices. By prioritizing the development of electric vehicles, Tesla aims to reduce dependence on fossil fuels and combat climate change. They have built an extensive network of charging stations, fostered renewable energy integration through energy storage solutions, and revolutionized the energy sector with their innovative products such as the Powerwall. Tesla's commitment to sustainability extends beyond their products to the way they produce and deliver them.

Cont. table 2.

Danone	Nurturing Communities and Empowering Farmers	Danone, a multinational food company, embraces sustainability by focusing on community engagement and responsible sourcing. They work closely with farmers to promote regenerative agricultural practices, ensuring the sustainability of their supply chain. Danone's initiatives for empowering local communities and improving access to nutritious food demonstrate the broader social impact that sustainable business practices can achieve.
Grameen Bank	Financial Inclusion and Social Impact	Grameen Bank, founded by Nobel laureate Muhammad Yunus, exemplifies sustainable business practices in the realm of microfinance. By providing financial services to the unbanked and marginalized populations, Grameen Bank empowers individuals to start sustainable businesses, fostering economic growth and reducing poverty. Their focus on social impact and financial inclusion showcases the transformative potential of sustainable finance models.

Source: Authors own work on the basis of: George et al., 2022; Das et al., 2021; Lathabhavan, 2022; Singh et al., 2022; Cerciello et al., 2023; Liu et al., 2023, Alfaras, Alfaras, 2021; Mohaghegh et al., 2021.

The examples provided in this paper illustrate the diverse ways in which businesses can adopt sustainable practices, creating a positive impact on the environment, society, and the economy. These companies serve as inspirations, demonstrating that sustainable business practices can be successful and profitable while contributing to a more sustainable future. By embracing sustainability, businesses can drive innovation, engage stakeholders, and create shared value. The transformative power of sustainable business practices extends far beyond individual companies, inspiring a new paradigm of responsible and ethical business conduct.

5. Conclusion

Sustainable business practices are essential for addressing the environmental, social, and economic challenges of our time. From an environmental standpoint, businesses must adopt strategies to minimize resource consumption, reduce greenhouse gas emissions, and conserve biodiversity. Socially, they must recognize and address the broader impacts of their activities, ensuring fair labor practices, safe working conditions, and engagement with stakeholders. Economically, businesses must understand that long-term profitability is closely linked to environmental and social performance.

The main principles of sustainable business practices include the Triple Bottom Line principle, which considers people, planet, and profit; environmental stewardship; social responsibility; stakeholder engagement; long-term thinking; innovation and collaboration; transparency; and proactive compliance. These principles guide organizations in integrating sustainability into their strategies and decision-making processes.

Traditional business practices, focused on short-term profitability, often neglect the environment and society. In contrast, sustainable business practices emphasize long-term value creation, balance economic, environmental, and social considerations, and actively mitigate

environmental and social impacts. They prioritize resource efficiency, eco-friendly technologies, fair labor practices, and stakeholder engagement. Sustainable practices also embrace innovation, transparency, and proactive compliance.

Examples of sustainable business practices include companies like Patagonia, Interface, Unilever, Tesla, Danone, and Grameen Bank. These companies demonstrate a commitment to environmental stewardship, circular economy principles, sustainable consumption, renewable energy, community engagement, and financial inclusion. Their success showcases the transformative potential of sustainable business practices.

In summary, adopting sustainable business practices is crucial for creating a more sustainable future. By integrating economic, environmental, and social considerations into their operations, businesses can drive positive change, mitigate risks, enhance reputation, and create shared value for all stakeholders. The examples provided serve as inspirations for other companies, demonstrating that sustainability and profitability can go hand in hand. Sustainable business practices are not only an ethical imperative but also a pathway to resilience, innovation, and long-term success.

References

1. Alfaras, K.A., Alfaras, R.S.A. (2021). Kabankalan city accommodation industry: Sustainable business attitudes and practices. *Journal of Environmental Management and Tourism, 12(8),* pp. 2232-2239.
2. Anaman, P.D., Ahmed, I.A., Suleman, A.-R., Dzakah, G.A. (2023). Environmentally Sustainable Business Practices in Micro, Small, and Medium Enterprises: A Sub-Saharan African Country Perspective. *Business Perspectives and Research, 12,* 53-67.
3. Cerciello, M., Busato, F., Taddeo, S. (2023). The effect of sustainable business practices on profitability. Accounting for strategic disclosure. *Corporate Social Responsibility and Environmental Management, 30(2),* pp. 802-819.
4. D'Adamo, I., Lupi, G., Morone, P., Settembre-Blundo, D. (2022). Towards the circular economy in the fashion industry: the second-hand market as a best practice of sustainable responsibility for businesses and consumers. *Environmental Science and Pollution Research, 29(31),* pp. 46620-46633.
5. Das, J.K., Taneja, S., Arora, H. *Corporate social responsibility and sustainable development: Strategies, practices and business models, Corporate Social Responsibility and Sustainable Development: Strategies, Practices and Business Models,* pp. 1-252.
6. Drozd, R., Wolniak, R. (2021). Metrisable assessment of the course of stream-systemic processes in vector form in industry 4.0. *Quality and Quantity,* 1-16, DOI: 10.1007/s11135-021-01106-w.

7. Drozd, R., Wolniak, R. (2021). Systematic assessment of product quality. *Journal of Open Innovation: Technology, Market, and Complexity, 7(4),* 1-12.
8. Fortino, A. (2023). *Data Mining and Predictive Analytics for Business Decisions*. New York: Mercury Learning and Information.
9. Gajdzik, B., Grebski, M., Grebski, W., Wolniak, R. (2022). *Human factor activity in lean management and quality management.* Toruń: Towarzystwo Naukowe Organizacji i Kierownictwa. Dom Organizatora.
10. Gajdzik, B., Jaciow, M., Wolniak, R., Wolny R., Grebski, W.W. (2023). Energy Behaviors of Prosumers in Example of Polish Households. *Energies, 16(7),* 3186; https://doi.org/10.3390/en16073186.
11. Gajdzik, B., Wolniak, R. (2021). Digitalisation and innovation in the steel industry in Poland - selected tools of ICT in an analysis of statistical data and a case study. *Energies, 14(11),* 1-25.
12. Gajdzik, B., Wolniak, R. (2021). Influence of the COVID-19 crisis on steel production in Poland compared to the financial crisis of 2009 and to boom periods in the market. *Resources, 10(1),* 1-17.
13. Gajdzik, B., Wolniak, R. (2021). Transitioning of steel producers to the steelworks 4.0 - literature review with case studies. *Energies, 14(14),* 1-22.
14. Gajdzik, B., Wolniak, R. (2022). Framework for R&D&I Activities in the Steel Industry in Popularizing the Idea of Industry 4.0. *Journal of Open Innovation: Technology, Market, and Complexity, 8(3),* 133.
15. Gajdzik, B., Wolniak, R. (2022). Influence of Industry 4.0 Projects on Business Operations: literature and empirical pilot studies based on case studies in Poland. *Journal of Open Innovation: Technology, Market, and Complexity, 8(1),* 1-20.
16. Gajdzik, B., Wolniak, R. (2022). Smart Production Workers in Terms of Creativity and Innovation: The Implication for Open Innovation. *Journal of Open Innovations: Technology, Market and Complexity, 8(1),* 68.
17. Gajdzik, B., Wolniak, R., Grebski, W.W. (2022). An econometric model of the operation of the steel industry in Poland in the context of process heat and energy consumption. *Energies, 15(21),* 1-26, 7909.
18. Gajdzik, B., Wolniak, R., Grebski, W.W. (2023). Electricity and heat demand in steel industry technological processes in Industry 4.0 conditions. *Energies, 16(2),* 1-29.
19. Gajdzik, B., Wolniak, R. Grebski, W.W. (2023). Process of Transformation to Net Zero Steelmaking: Decarbonisation Scenarios Based on the Analysis of the Polish Steel Industry. *Energies, 16(8),* 3384; https://doi.org/10.3390/en16083384.
20. Gębczyńska, A., Wolniak, R. (2018). *Process management level in local government.* Philadelphia: CreativeSpace.
21. George, G., Haas, M.R., Joshi, H., McGahan, A.M., Tracey, P. (2022). Handbook on the Business of Sustainability: The Organization, Implementation, and Practice of Sustainable

Growth. *Handbook on the Business of Sustainability: The Organization, Implementation, and Practice of Sustainable Growth*, pp. 1-584.

22. Grabowska, S., Saniuk S., Gajdzik, B. (2022). Industry 5.0: improving humanization and sustainability of Industry 4.0. *Scientometrics*, *127(6)*, 3117-3144, https://doi.org/10.1007/s11192-022-04370-1.
23. Grabowska, S., Grebski, M., Grebski, W., Saniuk, S., Wolniak, R. (2021). *Inżynier w gospodarce 4.0*. Toruń: Towarzystwo Naukowe Organizacji i Kierownictwa – Stowarzyszenie Wyższej Użyteczności "Dom Organizatora".
24. Grabowska, S., Grebski, M., Grebski, W., Wolniak, R. (2019). *Introduction to engineering concepts from a creativity and innovativeness perspective.* New York: KDP Publishing.
25. Grabowska, S., Grebski, M., Grebski, W., Wolniak, R. (2020). *Inżynier – zawód przyszłości. Umiejętności i kompetencje inżynierskie w erze Przemysłu 4.0.* Warszawa: CeDeWu.
26. Hąbek, P., Wolniak, R. (2013). Analysis of approaches to CSR reporting in selected European Union countries. *International Journal of Economics and Research*, *4(6)*, 79-95.
27. Hąbek, P., Wolniak, R. (2016). Assessing the quality of corporate social responsibility reports: the case of reporting practices in selected European Union member states. *Quality & Quantity*, *50(1)*, 339-420.
28. Hąbek, P., Wolniak, R. (2016). Factors influencing the development of CSR reporting practices: experts' versus preparers' points of view. *Engineering Economy*, *26(5)*, 560-570.
29. Hąbek, P., Wolniak, R. (2016). Relationship between management practices and quality of CSR reports. *Procedia – Social and Behavioral Sciences*, *220*, 115-123.
30. Hys, K., Wolniak, R. (2018). Praktyki przedsiębiorstw przemysłu chemicznego w Polsce w zakresie CSR. *Przemysł Chemiczny*, *9*, 1000-1002.
31. Jananipriya, R., Usha, S. (2022). Green Brands Representation Through Colour Trademarks for Sustainable Business Practices and Environmental Concerns. *ECS Transactions, 107(1),* pp. 11479-11486.
32. Jonek-Kowalska, I., Wolniak, R. (2021). Economic opportunities for creating smart cities in Poland. Does wealth matter? *Cities*, *114*, 1-6.
33. Jonek-Kowalska, I., Wolniak, R. (2021). The influence of local economic conditions on start-ups and local open innovation system. *Journal of Open Innovations: Technology, Market and Complexity*, *7(2)*, 1-19.
34. Jonek-Kowalska, I., Wolniak, R. (2022). Sharing economies' initiatives in municipal authorities' perspective: research evidence from Poland in the context of smart cities' development. *Sustainability*, *14(4)*, 1-23.
35. Jonek-Kowalska, I., Wolniak, R., Marinina, O.A., Ponomarenko, T.V. (2022). *Stakeholders, Sustainable Development Policies and the Coal Mining Industry. Perspectives from Europe and the Commonwealth of Independent States*. London: Routledge.

36. Kordel, P., Wolniak, R. (2021). Technology entrepreneurship and the performance of enterprises in the conditions of Covid-19 pandemic: the fuzzy set analysis of waste to energy enterprises in Poland. *Energies, 14(13),* 1-22.
37. Kwiotkowska, A., Gajdzik, B., Wolniak, R., Vveinhardt, J., Gębczyńska, M. (2021). Leadership competencies in making Industry 4.0 effective: the case of Polish heat and power industry. *Energies, 14(14),* 1-22.
38. Kwiotkowska, A., Wolniak, R., Gajdzik, B., Gębczyńska, M. (2022). Configurational paths of leadership competency shortages and 4.0 leadership effectiveness: an fs/QCA study. *Sustainability, 14(5),* 1-21.
39. Lathabhavan, R. (2022). Sustainable business practices and challenges in Asia: a systematic review. *International Journal of Organizational Analysis, 30(3),* pp. 778-794.
40. Liu, R., Yue, Z., Ijaz, A., Lutfi, A., Mao, J. (2023). Sustainable Business Performance: Examining the Role of Green HRM Practices, Green Innovation and Responsible Leadership through the Lens of Pro-Environmental Behavior. *Sustainability (Switzerland), 15(9),* 7317.
41. Michalak A., Wolniak, R. (2023). The innovativeness of the country and the renewables and non-renewables in the energy mix on the example of European Union. *Journal of Open Innovation: Technology, Market, and Complexity, 9(2),* https://doi.org/10.1016/j.joitmc.2023.100061.
42. Moghrabi, I.A.R., Bhat, S.A., Szczuko, P., Al Khaled, R.A., Dar, M.A. (2023). Digital Transformation and Its Influence on Sustainable Manufacturing and Business Practices. *Sustainability (Switzerland), 15(4),* 3010.
43. Mohaghegh, M., Blasi, S., Größler, A. (2021). Dynamic capabilities linking lean practices and sustainable business performance. *Journal of Cleaner Production, 322,* 129073.
44. Olkiewicz, M., Olkiewicz, A., Wolniak, R., Wyszomirski, A. (2021). Effects of pro-ecological investments on an example of the heating industry - case study. *Energies, 14(18),* 1-24, 5959.
45. Orzeł, B., Wolniak, R. (2021). Clusters of elements for quality assurance of health worker protection measures in times of COVID-19 pandemic. *Administrative Science, 11(2),* 1-14, 46.
46. Orzeł, B., Wolniak, R. (2022). Digitization in the design and construction industry - remote work in the context of sustainability: a study from Poland. *Sustainability, 14(3),* 1-25.
47. Pietro, L.D., Renzi, M.F., Edvardsson, B. (2021). Sustainable business practices for transformative change: The case of Eataly. *Business Transformation for a Sustainable Future*, pp. 55-69.
48. Ponomarenko, T.V., Wolniak, R., Marinina, O.A. (2016). Corporate Social responsibility in coal industry (Practices of Russian and European companies). *Journal of Mining Institute, 222,* 882-891.

49. Rosak-Szyrocka, J., Żywiołek J., Wolniak, R. (2023). Main reasons for religious tourism - from a quantitative analysis to a model. *International Journal for Quality Research, 1(17),* 109-120.
50. Saini, A., Garg, V. (2023). Transformation for Sustainable Business and Management Practices: Exploring the Spectrum of Industry 5.0. *Transformation for Sustainable Business and Management Practices: Exploring the Spectrum of Industry 5.0*, pp. 1-338.
51. Sanchez-Planelles, J., Segarra-Oña, M., Peiro-Signes, A. (2022). Identifying different sustainable practices to help companies to contribute to the sustainable development: Holistic sustainability, sustainable business and operations models. *Corporate Social Responsibility and Environmental Management, 29(4),* pp. 904-917.
52. Singh, R.K., Kumar Mangla, S., Bhatia, M.S., Luthra, S. (20220. Integration of green and lean practices for sustainable business management. *Business Strategy and the Environment, 31(1),* pp. 353-370.
53. Stawiarska, E., Szwajca, D., Matusek, M., Wolniak, R. (2020). *Wdrażanie rozwiązań przemysłu 4.0 w wybranych funkcjonalnych obszarach zarządzania przedsiębiorstw branży motoryzacyjnej: próba diagnozy.* Warszawa: CeDeWu.
54. Stawiarska, E., Szwajca, D., Matusek, M., Wolniak, R. (2021). Diagnosis of the maturity level of implementing Industry 4.0 solutions in selected functional areas of management of automotive companies in Poland. *Sustainability, 13(9),* 1-38.
55. Steculа, K., Wolniak, R. (2022). Advantages and Disadvantages of E-Learning Innovations during COVID-19 Pandemic in Higher Education in Poland. *Journal of Open Innovation: Technology, Market, and Complexity, 8(3),* 159.
56. Steculа, K., Wolniak, R. (2022). Influence of COVID-19 Pandemic on Dissemination of Innovative E-Learning Tools in Higher Education in Poland. *Journal of Open Innovations: Technology, Market and Complexity, 8(1),* 89.
57. Sułkowski, M., Wolniak, R. (2016). Przegląd stosowanych metod oceny skuteczności i efektywności organizacji zorientowanych na ciągłe doskonalenie. *Zeszyty Naukowe Politechniki Śląskiej. Seria Organizacja i Zarzadzanie, 67*, 63-74.
58. Sułkowski, M., Wolniak, R. (2018). *Poziom wdrożenia instrumentów zarządzania jakością w przedsiębiorstwach branży obróbki metali.* Częstochowa: Oficyna Wydawnicza Stowarzyszenia Menedżerów Produkcji i Jakości.
59. Wolniak, R, Skotnicka-Zasadzień, B. (2014). The use of value stream mapping to introduction of organizational innovation in industry. *Metalurgija, 53(4),* 709-713.
60. Wolniak, R. (2011). *Parametryzacja kryteriów oceny poziomu dojrzałości systemu zarządzania jakością.* Gliwice: Wydawnictwo Politechniki Śląskiej.
61. Wolniak, R. (2013). A typology of organizational cultures in terms of improvement of the quality management. *Manager, 17(1),* 7-21.
62. Wolniak, R. (2013). Projakościowa typologia kultur organizacyjnych. *Przegląd Organizacji, 3,* 13-17.

63. Wolniak, R. (2014). Korzyści doskonalenia systemów zarządzania jakością opartych o wymagania normy ISO 9001:2009. *Problemy Jakości, 3,* 20-25.
64. Wolniak, R. (2016). Kulturowe aspekty zarządzania jakością. *Etyka biznesu i zrównoważony rozwój. Interdyscyplinarne studia teoretyczno-empiryczne, 1,* 109-122.
65. Wolniak, R. (2016). *Metoda QFD w zarządzaniu jakością. Teoria i praktyka*. Gliwice: Wydawnictwo Politechniki Śląskiej.
66. Wolniak, R. (2016). Relations between corporate social responsibility reporting and the concept of greenwashing. *Zeszyty Naukowe Politechniki Śląskiej. Seria Organizacji i Zarządzanie, 87,* 443-453.
67. Wolniak, R. (2016). The role of QFD method in creating innovation. *Systemy Wspomagania Inżynierii Produkcji, 3,* 127-134.
68. Wolniak, R. (2017). Analiza relacji pomiędzy wskaźnikiem innowacyjności a nasyceniem kraju certyfikatami ISO 9001, ISO 14001 oraz ISO/TS 16949. *Kwartalnik Organizacja i Kierowanie, 2,* 139-150.
69. Wolniak, R. (2017). Analiza wskaźników nasycenia certyfikatami ISO 9001, ISO 14001 oraz ISO/TS 16949 oraz zależności pomiędzy nimi. *Zeszyty Naukowe Politechniki Śląskiej. Seria Organizacji i Zarządzanie, 108,* 421-430.
70. Wolniak, R. (2017). The Corporate Social Responsibility practices in mining sector in Spain and in Poland – similarities and differences. *Zeszyty Naukowe Politechniki Śląskiej. Seria Organizacji i Zarządzanie, 111,* 111-120.
71. Wolniak, R. (2017). The Design Thinking method and its stages. *Systemy Wspomagania Inżynierii Produkcji, 6,* 247-255.
72. Wolniak, R. (2017). The use of constraint theory to improve organization of work. 4th International Multidisciplinary Scientific Conference on Social Sciences and Arts. SGEM 2017, 24-30 August 2017, Albena, Bulgaria. Conference proceedings. Book 1, *Modern science. Vol. 5, Business and management*. Sofia: STEF92 Technology, 1093-1100.
73. Wolniak, R. (2018). Functioning of social welfare on the example of the city of Łazy. *Zeszyty Naukowe Wyższej Szkoły, Humanitas. Zarządzanie, 3,* 159-176.
74. Wolniak, R. (2018). Methods of recruitment and selection of employees on the example of the automotive industry. *Zeszyty Naukowe Politechniki Śląskiej. Seria Organizacja i Zarządzanie, 128,* 475-483.
75. Wolniak, R. (2019). Context of the organization in ISO 9001:2015. *Silesian University of Technology Scientific Papers. Organization and Management Series, 133,* 121-136.
76. Wolniak, R. (2019). Downtime in the automotive industry production process - cause analysis. *Quality, Innovation, Prosperity, 2,* 101-118.
77. Wolniak, R. (2019). Leadership in ISO 9001:2015. *Silesian University of Technology Scientific Papers. Organization and Management Series, 133,* 137-150.

78. Wolniak, R. (2019). Support in ISO 9001:2015. *Silesian University of Technology Scientific Papers. Organization and Management Series, 137*, 247-261.
79. Wolniak, R. (2019). The level of maturity of quality management systems in Poland-results of empirical research. *Sustainability*, *15*, 1-17.
80. Wolniak, R. (2020). Design in ISO 9001:2015. *Silesian University of Technology Scientific Papers. Organization and Management Series*, *148*, 769-781.
81. Wolniak, R. (2020). Operations in ISO 9001:2015. *Silesian University of Technology Scientific Papers. Organization and Management Series*, *148*, 783-794.
82. Wolniak, R. (2020). Quantitative relations between the implementation of industry management systems in European Union countries. *Silesian University of Technology Scientific Papers. Organization and Management Series*, *142*, 33-44.
83. Wolniak, R. (2021). Internal audit and management review in ISO 9001:2015. *Silesian University of Technology Scientific Papers. Organization and Management Series, 151*, 724-608.
84. Wolniak, R. (2021). Performance evaluation in ISO 9001:2015. *Silesian University of Technology Scientific Papers. Organization and Management Series*, *151*, 725-734.
85. Wolniak, R. (2022). Engineering ethics – main principles. *Silesian University of Technology Scientific Papers. Organization and Management Series*, *155*, 579-594.
86. Wolniak, R. (2022). Individual innovations. *Silesian University of Technology Scientific Papers. Organization and Management Series*, *166*, 861-876.
87. Wolniak, R. (2022). Management of engineering teams. *Silesian University of Technology Scientific Papers. Organization and Management Series*, *157*, 667-674.
88. Wolniak, R. (2022). Problems of Covid-19 influence on small and medium enterprises activities – organizing function. *Silesian University of Technology Scientific Papers. Organization and Management Series, 167*, 599-608.
89. Wolniak, R. (2022). Project management in engineering. *Silesian University of Technology Scientific Papers. Organization and Management Series*, *157*, 685-698.
90. Wolniak, R. (2022). Project management standards, Silesian University of Technology *Scientific Papers. Organization and Management Series*, *160*, 639-654.
91. Wolniak, R. (2022). Sustainable engineering, *Silesian University of Technology Scientific Papers. Organization and Management Series*, *160*, 655-667.
92. Wolniak, R. (2022). The role of the engineering profession in developing and implementing sustainable development principles. *Silesian University of Technology Scientific Papers. Organization and Management Series*, *155*, 595-608.
93. Wolniak, R. (2022). Traits of highly innovative people. *Silesian University of Technology Scientific Papers. Organization and Management Series*, *166*, 877-892.
94. Wolniak, R. (2023). Analiza danych w czasie rzeczywistym, *Zarządzanie i Jakość*, *2(5)*, 291-312.

95. Wolniak, R. (2023). Analysis of the Bicycle Roads System as an Element of a Smart Mobility on the Example of Poland Provinces. *Smart Cities, 6(1),* 368-391; https://doi.org/10.3390/smartcities6010018.
96. Wolniak, R. (2023). Design thinking and its use to boast innovativeness. *Silesian University of Technology Scientific Papers. Organization and Management Series, 170,* 647-662.
97. Wolniak, R. (2023). Deskryptywna analiza danych. *Zarządzanie i Jakość, 2(5),* 272-290.
98. Wolniak, R. (2023). European Union Smart Mobility - aspects connected with bike road systems extension and dissemination. *Smart Cities, 6,* 1-32.
99. Wolniak, R. (2023). European Union Smart Mobility–Aspects Connected with Bike Road System's Extension and Dissemination, *Smart Citie, 6(2),* 1009-1042; https://doi.org/10.3390/smartcities6020049.
100. Wolniak, R. (2023). Functioning of real-time analytics in business. *Silesian University of Technology Scientific Papers. Organization and Management Series, 172,* 659-677.
101. Wolniak, R. (2023). Industry 5.0 – characteristic, main principles, advantages and disadvantages. *Silesian University of Technology Scientific Papers. Organization and Management Series, 170,* 663-678.
102. Wolniak, R. (2023). Innovations in industry 4.0 conditions, *Silesian University of Technology Scientific Papers. Organization and Management Series, 169,* 725-742.
103. Wolniak, R. (2023). Smart biking w smart city. *Zarządzanie i Jakość, 2(5),* 313-328.
104. Wolniak, R. (2023). Smart mobility in a smart city concept *Silesian University of Technology Scientific Papers. Organization and Management Series, 170,* 679-692.
105. Wolniak, R. (2023). Smart mobility in smart city – Copenhagen and Barcelona comparision. *Silesian University of Technology Scientific Papers. Organization and Management Series, 172,* 678-697.
106. Wolniak, R. (2023). Smart mobility jako element koncepcji smart city. *Zarządzanie i Jakość, 1(5),* 208-222.
107. Wolniak, R. (2023). Team innovations, *Silesian University of Technology Scientific Papers. Organization and Management Series, 169,* 773-758.
108. Wolniak, R. (2023). The concept of descriptive analytics. *Silesian University of Technology Scientific Papers. Organization and Management Series, 172,* 698-715.
109. Wolniak, R. Sułkowski, M. (2015). Rozpowszechnienie stosowania Systemów Zarządzania Jakością w Europie na świecie – lata 2010-2012. *Problemy Jakości, 5,* 29-34.
110. Wolniak, R., Grebski, M.E. (2018). Innovativeness and creativity as factors in workforce development – perspective of psychology. *Zeszyty Naukowe Politechniki Ślaskiej. Seria Organizacja i Zarządzanie, 116,* 203-214.
111. Wolniak, R., Grebski, M.E. (2018). Innovativeness and creativity as nature and nurture. *Zeszyty Naukowe Politechniki Ślaskiej. Seria Organizacja i* Zarządzanie, *116,* 215-226.

112. Wolniak, R., Grebski, M.E. (2018). Innovativeness and Creativity of the Workforce as Factors Stimulating Economic Growth in Modern Economies. *Zeszyty Naukowe Politechniki Ślaskiej. Seria Organizacja i Zarządzanie*, *116*, 227-240.
113. Wolniak, R., Grebski, M.E., Skotnicka-Zasadzień, B. (2019). Comparative analysis of the level of satisfaction with the services received at the business incubators (Hazleton, PA, USA and Gliwice, Poland). *Sustainability*, *10*, 1-22.
114. Wolniak, R., Hąbek, P. (2015). Quality management and corporate social responsibility. *Systemy Wspomagania w Inżynierii Produkcji*, *1*, 139-149.
115. Wolniak, R., Hąbek, P. (2016). Quality assessment of CSR reports – factor analysis. *Procedia – Social and Behavioral Sciences*, *220*, 541-547.
116. Wolniak, R., Jonek-Kowalska, I. (2021). The level of the quality of life in the city and its monitoring. *Innovation (Abingdon*), *34(3)*, 376-398.
117. Wolniak, R., Jonek-Kowalska, I. (2021). The quality of service to residents by public administration on the example of municipal offices in Poland. *Administration Management Public*, *37*, 132-150.
118. Wolniak, R., Jonek-Kowalska, I. (2022). The creative services sector in Polish cities. *Journal of Open Innovation: Technology, Market, and Complexity*, *8(1)*, 1-23.
119. Wolniak, R., Saniuk, S., Grabowska, S., Gajdzik, B. (2020). Identification of energy efficiency trends in the context of the development of industry 4.0 using the Polish steel sector as an example. *Energies*, *13(11)*, 1-16.
120. Wolniak, R., Skotnicka, B. (2011).: *Metody i narzędzia zarządzania jakością – Teoria i praktyka, cz. 1*. Gliwice: Wydawnictwo Naukowe Politechniki Śląskiej.
121. Wolniak, R., Skotnicka-Zasadzień, B. (2008). *Wybrane metody badania satysfakcji klienta i oceny dostawców w organizacjach.* Gliwice: Wydawnictwo Politechniki Śląskiej.
122. Wolniak, R., Skotnicka-Zasadzień, B. (2010). *Zarządzanie jakością dla inżynierów.* Gliwice: Wydawnictwo Politechniki Śląskiej.
123. Wolniak, R., Skotnicka-Zasadzień, B. (2018). Developing a model of factors influencing the quality of service for disabled customers in the condition s of sustainable development, illustrated by an example of the Silesian Voivodeship public administration. *Sustainability*, *7*, *1*-17.
124. Wolniak, R., Skotnicka-Zasadzień, B. (2022). Development of photovoltaic energy in EU countries as an alternative to fossil fuels. *Energies*, *15(2)*, 1-23.
125. Wolniak, R., Skotnicka-Zasadzień, B., Zasadzień, M. (2019). Problems of the functioning of e-administration in the Silesian region of Poland from the perspective of a person with disabilities. *Transylvanian Review of Public Administration*, *57E*, 137-155.
126. Wolniak, R., Sułkowski, M. (2015). Motywy wdrażanie certyfikowanych Systemów Zarządzania Jakością. *Problemy Jakości, 9,* 4-9.

127. Wolniak, R., Sułkowski, M. (2016). The reasons for the implementation of quality management systems in organizations. *Zeszyty Naukowe Politechniki Śląskiej. Seria Organizacji i Zarządzanie*, *92*, 443-455.
128. Wolniak, R., Wyszomirski, A., Olkiewicz, M., Olkiewicz, A. (2021). Environmental corporate social responsibility activities in heating industry - case study. *Energies*, *14(7)*, 1-19, 1930.
129. Yacob, P., Peter, D., Chin, K.S. (2022). Sustainable business practices in manufacturing SMEs: The mediating effect of dynamic capabilities. *International Social Science Journal*, *72(243)*, pp. 73-89.