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Navigating the intersection of sustainability and intelligent automation: Opportunities and challenges for entrepreneurs

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Abstract: The business world is currently undergoing a significant shift towards sustainability and intelligent automation, which presents both promising prospects and formidable hurdles for business owners. The increasing demand for sustainable goods and services, driven by pressing social and environmental issues, opens doors for entrepreneurs to establish companies that address these concerns. Moreover, automation and technological advancements have revolutionized the operational landscape of firms, providing entrepreneurs with novel opportunities to enhance efficiency and foster creativity. However, thriving in this dynamic environment necessitates a fresh skill set and innovative approaches. Entrepreneurs must actively acquire the requisite technological expertise to leverage the potential of intelligent automation while navigating the intricate legislative and social frameworks surrounding sustainability. Furthermore, they must demonstrate agility and adaptability, adept at pivoting strategies and offerings to align with the evolving business panorama. This study's exploration of the intersection of automation and entrepreneurship resonates deeply with the principles of sustainability. By dissecting the challenges and strategies entrepreneurs use to embrace automation, the research contributes valuable insights to the ongoing discourse on feasible business practices within the context of burgeoning sustainability. The findings will assist policymakers by providing useful information to cultivate an environment conducive to sustainable, technology-based entrepreneurship.

Keywords: entrepreneurship; sustainability; intelligent automation

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1. Introduction

Current trends in entrepreneurship have been marked by a paradigm shift towards sustainability, digital transformation, and the integration of artificial intelligence (AI). If until now entrepreneurs were inclined to create businesses that generate profit, now they are thinking about how to contribute positively to the needs of society and, primarily, they aim to increase wealth in the long term. During this time, the digital age ushered in a transformative era of digital transformation, forcing entrepreneurs to recalibrate their strategies to harness the vast potential of technology. This includes optimizing operations through digital tools, expanding market reach through e-commerce, and data-driven decision-making[1]. Moreover, the integration of AI, with its ability to process large volumes of data and obtain insights, has redefined the way companies innovate, optimize processes, and interact with customers.

The research contribution underlying this article lies in its holistic exploration of the challenges and opportunities arising from the confluence of sustainability, digital transformation, and AI in contemporary entrepreneurship. Recognizing the vital role that entrepreneurs play in driving innovation and economic growth, the paper highlights the need to navigate the complicated intersections between these trends. It recognizes the

multifaceted demands placed on entrepreneurs, who must not only master technological advances but also integrate sustainability principles into their businesses to remain relevant and competitive. The paper presents possible strategies entrepreneurs can use to embrace automation and sustainability, and additionally, it serves as a call to action, emphasizing the importance of acquiring the essential skills and perspectives needed to thrive in this dynamic landscape. Delving into the nuances of intelligent automation, sustainability strategies, and adaptive approaches, this paper not only sheds light on current challenges but also equips entrepreneurs and policymakers with valuable insights to build a sustainable and technological future.

The collaborative efforts of academia, entrepreneurship, and the corporate sector have fueled the remarkable technological advancements witnessed today. This paper aims to explore the intricate relationship between entrepreneurship, sustainability, and intelligent automation. It delves into the opportunities and challenges inherent in this dynamic landscape while emphasizing the essential skills and strategies young entrepreneurs need to master in order to thrive in the ever-evolving business realm. The paper offers insights and advice to entrepreneurs trying to thrive in this dynamic and rapidly changing environment, from creating and integrating sustainability principles into their sustainable business model to using automation for competitive advantage.

Developments in technology present a critical collection of concerns for upcoming philosophy development in entrepreneurial act, inventiveness, and decision-making exploration as the increasing complexity of AI's algorithms revolutionizes entrepreneurial behavior in uncertain situations. Modern AI systems are said to offer new approaches to overcoming the basic problems generated by modal uncertainty in business decision-making contexts. AI opens new avenues for potential entrepreneurial endeavors in the future[2,3].

2. Literature review

Over the course of industrialization's history, the assumption that growth is synonymous with prosperity and economic success has been deeply ingrained. The main problem was how to develop harmoniously and sustainably. In 2009, Kyrö argued that economics and sustainable development can provide a new solution to the debate between economics and well-being through entrepreneurship[4]. As a result, this research can be considered a starting point for alternative visions of development and sustainability in the era of intelligent automation.

Gawel has maintained since 2012 that entrepreneurship and sustainable development are not incompatible, despite the fact that entrepreneurship is more of an approach to behavior and sustainability is a set of principles and objectives. The application of the pro-social and pro-ecological postulates of sustainability is now called to offer quantifiable advantages for an entrepreneurial environment and be included in a company's strategy for there to be a positive link between the two[5]. Two years later, in 2014, the present study observes that Zhang and Swanson claim that social entrepreneurship progresses ahead of social, economic, and environmental efficiency and effectiveness, influencing corporate viability. This statement is supported by all current studies[6].

In 2018, Schaltegger noted that sustainable entrepreneurship is now considered a potential strategy for finding creative solutions to challenging social, environmental, and economic problems. The strategy aims at three aspects:

a) The participation of different businessmen in entrepreneurial development;
b) Harmonization among sustainability matters and entrepreneurial addressing problems;

c) Collaboration across sectors between various types of entrepreneurship, including social entrepreneurship, sustainable entrepreneurship, and political entrepreneurship[7].

Consequently, it can be seen how sustainability raises the importance of entrepreneurial collaboration in these three approaches.

Later, in 2020, Johnson and Schaltegger asserted that entrepreneurship for sustainable progress is a multi-level circumstance that brings together social, environmental, and economic elements among new business activities, market transformations, and significant societal developments[8]. Certainly, references were also made to the impact of the implementation of automatic intelligence in most sectors of activity.

The present debates on sustainable development touch on crucial issues relating to the value of innovation and strong institutions for attaining sustainability[9]. Although entrepreneurship has grown significantly in recent decades in world economies, governments are concerned about its long-term stability. Entrepreneurship and innovation ecosystems have only recently become a research topic. The ability of entrepreneurs to successfully assume and handle a balanced direction to improve the excellence and exposure of entrepreneurship has increasingly emerged as one of the strategic goals of new businesses. Therefore, according to Audretsch, effective and growth-oriented entrepreneurial activity is influenced by institutional high standards and the administrations' sustainable orientation[10].

In the same line of research, in 2023, Hunjra assessed the effects of organizational effectiveness on sustainable development in 65 emerging countries in different geographic areas from 1984 to 2019. It considers net savings that have been adjusted for economic viability as indicators of sustainable development. The outcomes of this investigation demonstrate that institutional quality has a constructive effect on long-term economic stability[11]. The current research aligns with this result, arguing that political stability, administrative capacity, and the responsibility of the political system for sustainable development must be seen in all sectors of activity and at all levels.

The past ten years have seen significant growth in entrepreneurship research, which now covers a wide range of topics and issues. Advances in artificial intelligence are proving to have both good and bad effects on the pursuit of sustainable development[12]. The current discussion on sustainable development places a strong emphasis on the need for environmental protection, societal norms, and sound economic principles to achieve these goals, especially in developing nations. To achieve viable development objectives, experts have recently suggested the utilization of computations and patterns based on AI. This study intends to clarify the critical role that AI plays in promoting sustainable growth in this setting[13] and it signals the optimistic correlation between AI and world development and sustainable entrepreneurship.

Two of the largely dominant assumptions of dedicated choice in entrepreneurship are settled on the concepts of risk aversion[14], and balanced ability[15]. Explicitly, if entrepreneurship is a more hazardous enterprise than remunerated work and if people are different when it comes to their risk appetite, subsequently, it results that the smallest hazard aversion is the most likely to develop entrepreneurs. Even though the continued importance and impact of risk aversion and balanced ability concepts are undoubtedly combined. The research observed that a good number of psychology-grounded analyses have not succeeded in detecting slight differences among entrepreneurs and non-entrepreneurs when it comes to their risk mindsets[1,16,17]. Current research believes that the aptitude for risk, together with more developed skills and a high level of information and education, can be part of the competencies needed to become a successful entrepreneur. In the same line with the need for high skills to develop into an entrepreneur and to kick off a novel business project, in 1999, economists Teal and Carroll pointed out that entrepreneurs can show ethical perceptive skills at a

slightly higher level than general middle-level managers, based on current theory in the fields of business ethics, entrepreneurship, and psychology[18].

In his 2004 work Balanced Skills and Entrepreneurship, Lazear reaffirms the notion that, in addition to having a certain set of innate skills, entrepreneurs must also continually develop their capabilities by investing in human capital. According to Lazear, formal education is utilized to broaden the skill set of those who decide to become entrepreneurs[19]. The current research agrees with this statement, considering that through the process of personal development, participation in training courses, workshops, and other activities in the entrepreneur's field of interest increases access to information and his innovative ability.

Given the current social, financial, and economic difficulties faced by most nations, motivating entrepreneurship has become a key objective of economic support and growth. Numerous scholars have emphasized the magnitude of entrepreneurship for economic expansion, and the development of associated skills is now included in university education curricula as well. University education may be crucial in fostering aspiring entrepreneurs and helping established business owners improve their abilities so that they can expand and achieve greater levels of success.

Growing sustainable businesses increasingly involves digital skills and abilities in the modern economy. According to 2020 research by Tkachenko, an entrepreneur's willingness to adopt AI is positively influenced by performance expectations, openness, social influence, hedonistic motives, and generativity. Furthermore, interaction with AI influences the intention to adopt AI through attitude rather than having a direct link with it. According to this study, to which our research also adheres, the possibilities offered by the automation of intelligence are already recognized and studied to be used in creative entrepreneurial ideas[20]. According to Giuglielmo and Pellegrini in 2022 and current research, AI has significant effects on entrepreneurship. In particular, it benefits entrepreneurs in four different ways, through opportunity, decision-making, performance, education, and research[21].

3. Research methodology

3.1. Research design

For the significant transition towards sustainability and intelligent automation, a qualitative research methodology was considered suitable. Exploratory research aims to gain a deeper understanding of a particular phenomenon or topic, often in situations where limited previous research exists or when the subject is relatively new or evolving. By employing qualitative exploratory research methodology, researchers conduct in-depth interviews, focus groups, and literature in the field, and gather qualitative data from entrepreneurs, business owners, and experts in the field. This research approach would allow researchers to explore the experiences, perspectives, and strategies employed by entrepreneurs in addressing sustainability issues, harnessing intelligent automation, and adapting to the evolving business landscape.

3.2. Findings and discussions

The convergence and interaction of entrepreneurship, sustainability, and intelligent automation create a dynamic intersection that gives rise to new opportunities and challenges in the business landscape. This thriving entrepreneurial environment is fostered by the rapid and accessible flow of information and education, which is increasingly embraced across various industry sectors. How to make it sustainable is still the only problem. Entrepreneurship, sustainability, and intelligent automation are already intertwined, and this interaction will intensify even more as technology develops and consumer demand for sustainable company

practices increases. It can be found in a wide range of fields and businesses, from sustainable agriculture and renewable energy to smart cities and intelligent transport systems.

Researchers think that the new Industry 5.0 (also known as the fifth industrial revolution) has the potential to go beyond financial gain. Industry 5.0 is a new and developing stage of industrial development that involves individuals collaborating with cutting-edge technology and AI-powered robots to advance workplace procedures and emphasizes sustainable development objectives including human-centeredness, socio-environmental sustainability, and resilience while putting Industry 4.0 productivity on the front line. Industry 5.0 provides justifiable development standards with many functions, including but not limited to circular smart goods and utilities, employee technical support, intelligent automation, sustainable uncluttered novelty, incorporation of renewable sources, and sustainable entrepreneurship using automatic intelligence. The relationship between the new approach and the economic development of Industry 5.0, which is based on automatic intelligence, the sustainable growth of entrepreneurship and the business environment, and the essential ideals of sustainability, is shown in **Figure 1**[22].

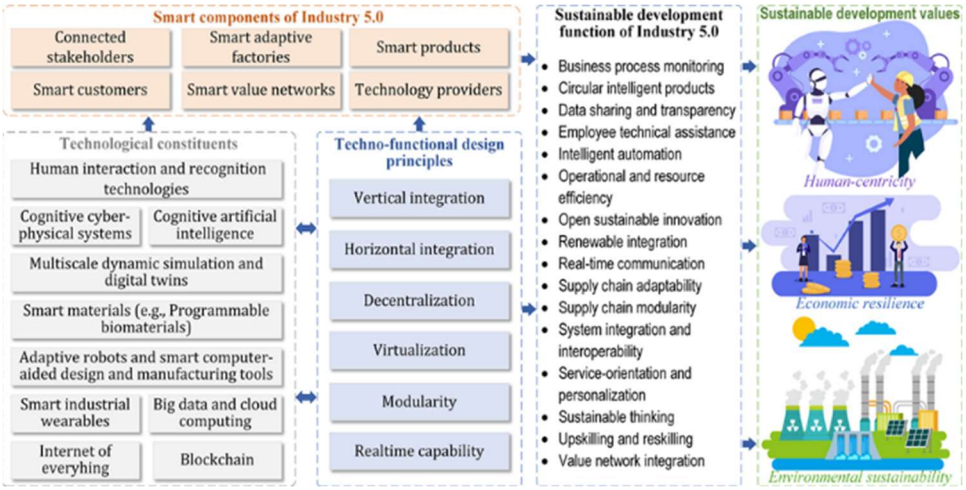

Figure 1. The intersection among intelligent automation, business and entrepreneurship, and sustainability[22].

In today's times, for small and new entrepreneurs, capitalizing on the importance of attributes such as the Internet of Everything (IoE), Big Data, and Cloud Computing can be essential in obtaining profit and ensuring long-term business sustainability. Thus, the IoE, which connects devices, data, people, and processes, empowers entrepreneurs to create innovative products and services that meet evolving customer demands. It facilitates the collection, analysis, and communication of real-time data, enabling companies to make informed decisions, improve the customer experience, and streamline operations. In addition, Big Data integration allows entrepreneurs to extract valuable insights from large volumes of information. This data-driven approach helps understand market trends, customer preferences, and operational inefficiencies, thereby guiding strategic planning and targeted marketing efforts. On the other hand, Cloud Computing plays a vital role by providing cost-effective and scalable infrastructure. It allows entrepreneurs to access and manage resources without significant upfront investment, enabling agility and flexibility in responding to market changes.

Cumulatively, these attributes provide a competitive advantage by driving innovation, agility, and data-driven decision-making. By leveraging IoE, Big Data, and Cloud Computing, entrepreneurs can optimize their operations, customize their offerings, and quickly adapt to market changes. This results in an improved profit margin, increased customer satisfaction, and increased business resilience, ultimately contributing to long-term success and sustainability in an ever-evolving business landscape.

Research can state that intelligent automation also synergizes efficiency and sustainability for entrepreneurship. By automating tasks through AI, companies reduce resource waste and operational costs, aligning with sustainable practices. This optimized use of resources empowers entrepreneurs to drive innovation and growth while reducing environmental impact, fostering a harmonious balance between business and sustainability.

In terms of social and environmental sustainability, business practices are already starting to change. Due to the development of rules for various sustainability-related fields, the high availability of impact investments, the quick, flexible, and financially accessible access to new informational technologies, and the nation's extensive entrepreneurial ecosystem, it is beginning to acquire appeal. The research conducted by Tunçalp and Yldrm highlighted the ways in which sustainable enterprises might contribute to the sociotechnical shift toward a sustainable future[23]. The regions covered by sustainable entrepreneurship from 2014 to 2020 are shown in **Figure 2**. After the Intelligence Automation boom in 2021 and present times, the present research tends to believe that entrepreneurship in the IT industry will also take a good share.

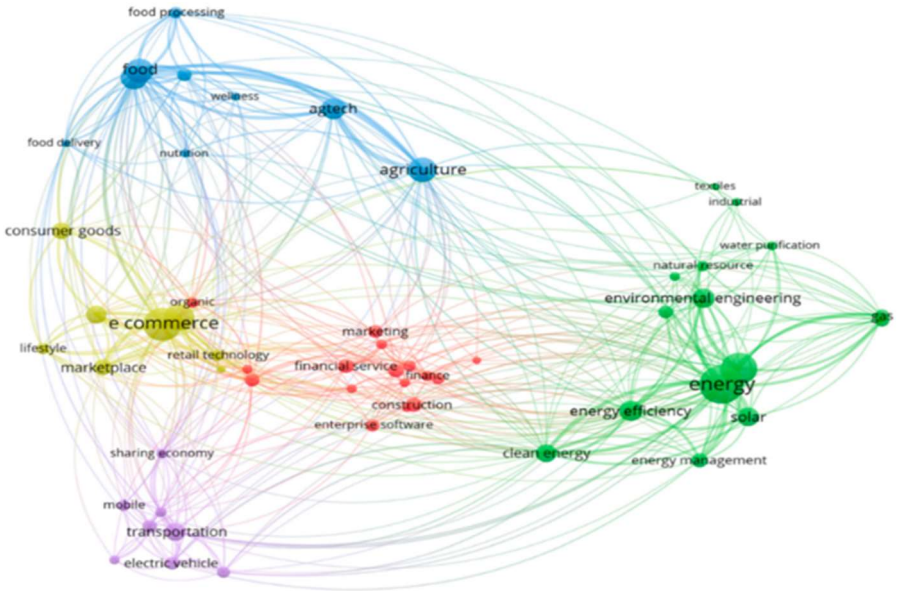

Figure 2. Areas covered by sustainable entrepreneurship, during 2014–2020[23].

The current study found that enterprises functioning in this environment face both possibilities and problems because of the junction of intelligent automation and sustainable entrepreneurship[12]. **Figure 3** presents both opportunities and challenges. New businesses that can successfully navigate these challenges and leverage the opportunities presented by intelligent automation are likely to be competitive, innovative, and sustainable in the long run.

The global health crisis caused by the COVID-19 pandemic has opened the door for the implementation of the digitization era in most sectors of activity. Digitization and the promotion of sustainable entrepreneurship have led to new areas of development, such as: (1) Reducing carbon emissions by implementing remote work, electronic commerce, and online services. However, the energy consumption of data centers and other digital infrastructure can also have a significant carbon footprint; (2) The protection and efficient use of sacred resources. Digital technologies can enable more circular business models, such as the sharing economy and product-as-a-service, that reduce waste and promote sustainability; (3) The development of safe and sustainable supply chains. Digital technologies can enable greater openness and accountability in supply chains, which can facilitate distinguishing and tackling sustainability issues; and (4) The development

and execution of alternative energy supplies. Digital technologies can support the enhancement and exploitation of renewable energy resources such as solar and wind power[24,25].

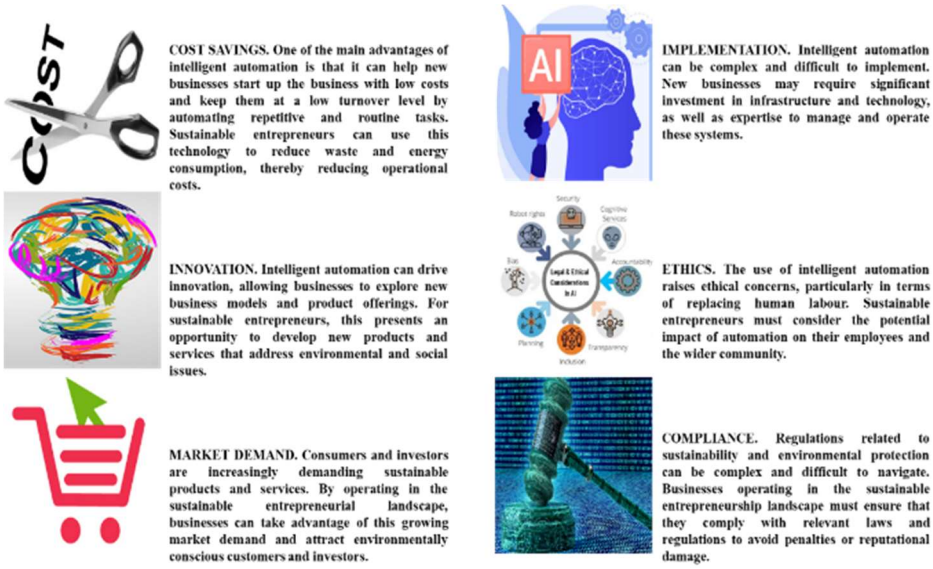

Figure 3. Opportunities and challenges in implementing intelligent automation for sustainable entrepreneurship.

This research could notice that intelligent automation offers quick access to information, data analysis, and saves our working time. At the same time, the new informational technologies also raise issues related to security, ethics, or the equity of access to information. Based on this perspective, the study has identified three significant challenges: (1) Cyber security. As businesses and individuals rely more on digital technologies, cybersecurity risks have increased, which can have serious implications for privacy and data protection; (2) Fair access to information sources. It seems that digitization has caught many municipalities off guard, so many geographical areas do not have access to the Internet, or not everyone has equal access to digital technologies, which can exacerbate existing social and economic inequalities; and (3) Challenges related to the ethics of using Artificial Intelligence. This is where bias, transparency, and accountability come in.

In terms of competencies, the present research observes that entrepreneurship involves a dedicated range of skills and capabilities. Core entrepreneurial skills refer to DigiTech skills, leadership and business management skills, and innovative rationale. To develop and sustain productive project teams, there is a need to upgrade governance, supervision, management, and interpersonal skills. **Figure 4** shows the main skills needed by an entrepreneur, before the road to a successful business. An open and creative mind will help.

Successful entrepreneurs predominantly rely on their business acumen to effectively manage and promote their ventures. They must possess a genuine passion for entrepreneurship, demonstrate proficient management skills, exhibit multitasking abilities, delegate responsibilities to subordinates, and make informed decisions crucial to the success of their enterprises. Critical and strategic thinking are equally vital. To be a prosperous entrepreneur requires planning and the ability to think strategically, visualize the end goal, and also to have a roadmap. In this way, it will be easier to see the path needed to beat the competition, increase market share, or employ appropriate strategies. Analytical skills are crucial. The ability to look at and analyze challenges, circumstances, plans, and functions from different angles can help to make pertinent judgments, take appropriate verdicts, and solve issues. Critical thinking skills are beneficial and required for tactical projection and evaluation of methods employed to amend the strategy addressed. Entrepreneurs must be adaptable and able to turn quickly in response to modifying environmental conditions, regulations, and technological

advancements. Individuals who think about starting a new business must also have a good perception of sustainability issues, and trends and be capable of incorporating sustainable practices and principles into their business operations.

Figure 4. Entrepreneurial skills.

Proficiency in working in a team is also essential. As the owner of the business, the entrepreneur is the one who executes, controls and supervises, so it is good to have effective leadership capabilities to inspire your group. Lead by example. The way the message is sent to each other plays a key role too. Communication involves active listening skills in discussions during meetings and effective communication. Communication helps to construct and consolidate the new enterprise idea. Effective communication helps the business promote effective and clear messages, which can positively influence the way targeted stakeholders are reached. Client facility skills can lead to attracting and maintaining customers, opening partnerships, and conducting relevant market studies to ensure that the products or services created by the entrepreneur are the ones the market wants.

Thriving, innovative startups often exhibit exceptional systematic thinking and problem-solving abilities. Entrepreneurs must possess the capacity to make challenging decisions swiftly, even under stressful circumstances. Overcoming barriers and employing innovative thinking to enhance strategies and tactics can greatly facilitate the achievement of business goals.

Understanding the efficiency of financial and accounting processes is vital for entrepreneurs to optimize their profit model and achieve sustainable long-term wealth maximization. Beyond the creation of monetary value, effective financial management is critical to business success, especially in the initial stages of development. Using different programs (for financial analysis, planning, marketing, and other business processes), the development of technical capabilities seems to be imperative. In the era of intelligent automation, adept technological skills enable entrepreneurs to use software and digital tools, ensuring efficient project management and operational excellence. This holistic approach aligns financial acumen with technology, fostering a path to sustainable profitability and sustainable wealth creation.

Time management is an important skill as well. Currently, there are software or other digital tools that can help organize business files. Sustainable entrepreneurs must be agile and able to move quickly to capitalize on emerging opportunities or respond to new challenges.

Last but not least, another important ability refers to the ability to promote the newly created business. The ability to employ winning marketing tactics can be an essential point in growing into an entrepreneur. Innovation is critical to the sustainable entrepreneurship landscape. Entrepreneurs must be able to think innovatively and develop new solutions to address sustainability challenges. Nevertheless, the sustainable entrepreneurship landscape is complex and challenging, and entrepreneurs must be resilient in the face of setbacks and obstacles.

4. Conclusion

Entrepreneurship is a vital ingredient and process for ensuring sustainable development, because it safeguards the growth of the national economy and the well-being of the population[26,27]. The present research admits that there is an obvious line between entrepreneurship, sustainable economic development, population well-being, and taking advantage of intelligent automation as well.

The study reveals that business owners who want to use intelligent automation to spur sustainable development may accomplish so by using a variety of tactics. Utilizing AI's analytical capabilities, businesses may examine enormous data sets to find potential for green practices, optimize resource allocation, and foresee supply chain problems. Artificial intelligence integration into circular economy strategies promotes product reuse and lowers waste. Intelligent supply chains that follow AI insights reduce transportation inefficiencies and match output to current demand. Additionally, the efficiency of renewable energy systems boosted by artificial intelligence and modified with the aid of predictive algorithms increases, resulting in the production of cleaner energy.

The establishment of companies that give priority to social and environmental responsibility, increasing profit, and building sustainable and long-term wealth is the point where entrepreneurship and sustainability converge. In other words, it is the intersection of sustainable business practices, innovation, and creativity. Due to the urgent environmental and social issues the world is facing as well as the need for businesses to run more effectively and efficiently, the confluence of these prerogatives is becoming more and more significant. Entrepreneurs who are able to navigate this intersection are well-positioned to create long-term, successful, and sustainable businesses that not only generate short-term profits but also contribute to greater competency and competitiveness. Entrepreneurship plays a crucial role in achieving sustainable development, as it is an essential process and factor that contributes to the growth of both the national economy and the well-being of the population.

In the pursuit of sustainable entrepreneurship through intelligent automation, placing a high priority on the ethical and responsible use of technology emerges as a critical imperative. This entails a comprehensive consideration of the potential social and environmental impacts stemming from your business decisions, ensuring that the application of automation technology aligns with your values and meets the expectations of your stakeholders. Moreover, it is vital to engage in regular assessment and monitoring of the effects brought about by your automation initiatives and to adapt accordingly to mitigate any adverse consequences. By actively prioritizing ethical considerations, consistently evaluating impacts, and adapting as needed, entrepreneurs can foster sustainable practices and minimize negative effects throughout their automation projects.

The research concludes that entrepreneurs seeking to establish profitable and sustainable businesses must navigate a landscape where the intersection of intelligent automation and sustainability is paramount. This convergence provides an opportunity to optimize operations, conserve resources, and align business practices with ecological and societal needs. To capitalize on this synergy, entrepreneurs can adopt strategies such as

integrating AI-based systems to streamline processes, increase efficiency, and minimize waste. Embracing sustainable production practices, incorporating renewable energy sources, and implementing smart technologies for resource management further strengthens this connection. In addition, entrepreneurs can prioritize continuous learning to stay in line with evolving automation trends and sustainable practices. Collaboration with experts in the fields of AI and sustainability can drive innovative solutions. Ultimately, this merger empowers entrepreneurs to not only drive profitability but also contribute significantly to a greener and more socially responsible future.

Conflict of interest

The author declares no conflict of interest.

References

1. Moşteanu NR. Thriving in the entrepreneurial landscape of the sustainability and intelligent automation era. *Green and Low-Carbon Economy* 2023; 1–8. doi: 10.47852/bonviewGLCE32021335
2. Bizhanova K, Mamyrbekov A, Umarov I, et al. Impact of digital marketing development on entrepreneurship. *E3S Web of Conferences* 2019; 135: 04023. doi: 10.1051/e3sconf/201913504023
3. Kyrö P. To grow or not to grow? Entrepreneurship and sustainable development. *International Journal of Sustainable Development & World Ecology* 2001; 8(1): 15–28. doi: 10.1080/13504500109470059
4. Townsend DM, Hunt RA. Entrepreneurial action, creativity, & judgment in the age of artificial intelligence. *Journal of Business Venturing Insights* 2019; 11: e00126. doi: 10.1016/j.jbvi.2019.e00126
5. Gaweł A. Entrepreneurship and sustainability: Do they have anything in common? *Poznan University of Economics Review* 2012; 12(1): 5–16. doi: 10.18559/ebr.2012.1.565
6. Zhang DD, Swanson LA. Linking social entrepreneurship and sustainability. *Journal of Social Entrepreneurship* 2014; 5(2): 175–191. doi: 10.1080/19420676.2014.880503
7. Schaltegger S, Beckmann M, Hockerts K. Collaborative entrepreneurship for sustainability. Creating solutions in light of the UN sustainable development goals. *International Journal of Entrepreneurial Venturing* 2018; 10(2): 131–152. doi: 10.1504/IJEV.2018.092709
8. Johnson MP, Schaltegger S. Entrepreneurship for sustainable development: A review and multilevel causal mechanism framework. *Entrepreneurship Theory and Practice* 2019; 44(6): 1141–1173. doi: 10.1177/1042258719885368
9. Youssef AB, Boubaker S, Omri A. Entrepreneurship and sustainability: The need for innovative and institutional solutions. *Technological Forecasting and Social Change* 2018; 129: 232–241. doi: 10.1016/j.techfore.2017.11.003
10. Audretsch DB, Belitski M, Guerrero M. Sustainable orientation management and institutional quality: Looking into European entrepreneurial innovation ecosystems. *Technovation* 2023; 124: 102742. doi: 10.1016/j.technovation.2023.102742
11. Hunjra AI, Azam M, Bruna MG, Bouri E. A cross-regional investigation of institutional quality and sustainable development. *Journal of International Financial Markets, Institutions and Money* 2023; 84: 101758. doi: 10.1016/j.intfin.2023.101758
12. Moşteanu NR. Challenges for organizational structure and design as a result of digitalization and cybersecurity. *The Business & Management Review* 2020; 11(1): 278–286. doi: 10.24052/BMR/V11NU01/ART-29
13. Gupta BB, Gaurav A, Panigrahi PK, Arya V. Analysis of artificial intelligence-based technologies and approaches on sustainable entrepreneurship. *Technological Forecasting and Social Change* 2023; 186: 122152. doi: 10.1016/j.techfore.2022.122152
14. Kihlstrom RE, Laffont JJ. A general equilibrium entrepreneurial theory of firm formation based on risk aversion. *Journal of Political Economy* 1979; 87(4): 719–747.
15. Lazear EP. Entrepreneurship. *Journal of Labor Economics* 2005; 23(4): 649–680. doi: 10.1086/491605
16. Brockhaus RH. Risk taking propensity of entrepreneurs. *Academy of Management Journal* 2017; 23(3): 509–520. doi: 10.5465/255515
17. Shaver KG, Scott LR. Person, process, choice: The psychology of new venture creation. *Entrepreneurship Theory & Practice* 1992; 16(2): 23–45. doi: 10.1177/104225879201600204
18. Teal EJ, Carroll AB. Moral reasoning skills: Are entrepreneurs different? *Journal of Business Ethics* 1999; 19(3): 229–240. doi: 10.1023/A:1006037510932
19. Lazear EP. Balanced skills and entrepreneurship. *American Economic Review* 2004; 94(2): 208–211. doi: 10.1257/0002828041301425

20. Tkachenko V, Kuzior A, Kwilinski A. Introduction of artificial intelligence tools into the training methods of entrepreneurship activities. *Journal of Entrepreneurship Education* 2019; 22(6): 1–10.
21. Guglielmo G, Pellegrini MM. Artificial intelligence as an enabler for entrepreneurs: A systematic literature review and an agenda for future research. *International Journal of Entrepreneurial Behavior & Research* 2022; 29(4): 816–837. doi: 10.1108/IJEBR-05-2021-0426
22. Morteza G, Iranmanesh M, Mubarak MF, et al. Identifying industry 5.0 contributions to sustainable development: A strategy roadmap for delivering sustainability values. *Sustainable Production and Consumption* 2022; 33(1): 716–737. doi: 10.1016/j.spc.2022.08.003
23. Tunçalp D, Yıldırım N. Sustainable entrepreneurship: Mapping the business landscape for the last 20 years. *Sustainability* 2022; 14(7): 3864. doi: 10.3390/su14073864
24. Moşteanu NR. AI-driven transformation in the financial industry: Navigating change for sustainability. In: Proceedings of the 31st RSEP International Conference on Economics, Finance and Business; 22–23 June 2023; Paris, France. p. 28.
25. Moşteanu NR. Unleashing the potential of forex trading with intelligent automation and blockchain innovation through a dynamic transformation. In: Proceedings of the 31st RSEP International Conference on Economics, Finance and Business; 22–23 June 2023; Paris, France. pp. 16–27.
26. Filyppova S, Kovtunenko Y, Filippov V, et al. Sustainable development entrepreneurship formation: System-integrated management tools. *E3S Web of Conferences* 2021; 255: 01049. doi: 10.1051/e3sconf/202125501049
27. Moşteanu NR, Mesue ADMN. Strategic entrepreneurship approach for a sustainable African ecosystem. In: *Corporate Sustainability in Africa: Responsible Leadership, Opportunities, and Challenges*. Palgrave Macmillan, Cham; 2023. doi: 10.1007/978-3-031-29273-6_12